Parliament of Victoria
Legislative Assembly Economy and Infrastructure Committee
Parliament House, Spring Street
EAST MELBOURNE VIC 3002

19 May 2023

Submission – Inquiry into the impact of road safety behaviours on vulnerable road users

Submission summary

Victoria Walks has developed this submission in response to the ongoing number of people who have tragically lost their lives or suffered injuries while walking on Victoria's road network. Despite being a mode of transportation utilised by nearly everyone, people walking are highly vulnerable on the transport network compared to people in vehicles.

The COVID-19 pandemic saw an immediate increase in people walking for exercise. It reinvigorated many Victorians' love of walking, and introduced many more to this simple and accessible way to improve mental and physical health. As restrictions eased, and people began to travel beyond their 5km radius, the allure of a fresh-air transport mode with ample social distance was great.

During the COVID-19 pandemic (between 2020 and 2022), there were 103 pedestrians killed and another 1,157 seriously injured on the transport network. Unfortunately, our transport system has many deficiencies for people walking. The upsurge in walking behaviour sparked by the pandemic has simply accelerated the number of Victorians exposed to the transport network's deficiencies.

Data from the TAC searchable data shows that over the past decade, over 24% of all transport-related fatalities within metro-Melbourne were from people walking. Further, within this time period 272 people were killed walking; of which people aged 70+ made up 37% of the cohort. The Victorian Government within its Road Safety Strategy has committed to halving road deaths by 2030. The crash data analysis suggests pedestrian trauma has plateaued and is not going down. In order for the Victorian Government to meet its targets, the safety of pedestrians needs to be prioritised; the need for action has only increased over the past three years.

This submission examines how the COVID-19 pandemic has altered behaviours on our transport network, reviews the vulnerability of pedestrians and acknowledges the long-term trend that pedestrians in older age groups are over-represented in transport crashes. Further, this submission reflects on the Victorian Government's endorsed Road Safety Strategy and lists opportunities to bolster the Safe System commitment. Finally, a range of tangible recommendations are provided aimed at creating a safer transport network for people walking.

This submission has been prepared in collaboration with Safe System Solutions Pty Ltd.

Consolidated recommendations

These are Victoria Walks' priorities for reducing the number of people killed and injured on our roads, particularly the most vulnerable.

In relation to the road safety strategy:

- Develop a pedestrian-specific road safety action plan
- Improve road design to better protect the most vulnerable road users.
- Establish a significant and ongoing fund for pedestrian specific road safety and infrastructure, with $100 million per annum as a minimum starting point.
- Continue to prohibit vehicles capable of high speeds, including bicycles and e-scooters, from being used on the footpath, to protect pedestrians' actual and perceived safety.
- Invest in modal shift from driving to walking, cycling and using public transport to improve safety of vulnerable road users, including:
  - Invest in walking to train stations, with $100m over four years to improve walking routes within 800 metres of train stations.
  - Locate new housing within 800 metres of activity centres and train stations and 400 metres of tram and high frequency bus stops.
  - Review planning provisions relating to access around activity centres, including arterial road design and car parking requirements, with a view to reducing car parking requirements and vehicle dominance to create more pedestrian-friendly environments that encourage people to walk.
  - Avoid creating substantial new, free car parking at suburban train stations. Instead, encourage people to walk or cycle short distances and improve bus services for longer distances.

In relation to speed management:

- Update the 'Traffic Engineering Manual: Speed Zoning Guidelines' to provide more options for lower speed limits, including 30 km/h in locations where there are high volumes of people walking.
- Review whether existing speed limits are appropriate, including arterial roads speed limits and the default urban speed limit of 50 km/h.

In relation to road standards:

- Improve state guidance for implementation of national standards and guidelines, such as VicRoads Road Design Notes.
- Improve design standards, particularly at crossing points and intersections to improve pedestrian safety and priority.
- Create a new standard or guideline for the design of raised threshold treatments which is a continuous level, consistent in colour and material and sufficiently steep to slow drivers.

In relation to road collision data collection:

- Review Victoria Police crash reporting processes to ensure reports for crashes involving pedestrians are sufficiently detailed and accurate.
- Improve DCA codes to provide better information about crashes involving pedestrians.
- Include all pedestrians injured or killed on the road network in the road safety statistics, even when no vehicle is involved.
- Collect data about pedestrian crashes in car parks.

Other recommendations:

- Ensure reporting and campaigns about pedestrian safety are impartial and do not result in victim blaming.
- Review the road rules to provide consistent pedestrian priority at intersections and in car parks.
- Establish driver education campaigns to improve understanding of road rules, particularly the situations where pedestrians have priority.
- Undertake driver centred, pedestrian road safety operations and better enforce existing road rules protecting pedestrians.
- Review penalties for drivers who break laws which endanger or kill others.

Contents

1 Inquiry submission

1.1 The surge in people walking since the pandemic

The COVID-19 pandemic resulted in strict lockdowns in Victoria, Australia, which limited individuals to a 5km radius from their homes. This restriction led to significant behavior changes among the population, with many individuals taking up new hobbies such as learning new languages or musical instruments, developing new skills, and focusing on their health. Walking, in particular, became a popular choice due to its accessibility, simplicity, and physical and mental health benefits. People enjoyed connecting with their community and neighbors from a safe distance of 1.5 meters and experiencing nature while walking.

Victoria Walks analysed the data from the Victorian Integrated Survey of Travel and Activity (VISTA) and concludes people walking has increased to 22.9% of trips in 2020/21, surpassing vehicle passenger as the second most common way of getting around (after vehicle driver).[1] The increasing proportion of trips made by walking is a longer term trend that pre-dates the pandemic.

The lockdown period created lasting habits for many Victorians, including increased physical activity and in some cases active transport. However, despite the positive impact on walking habits, the transport system for pedestrians remained unchanged. While the pandemic had some upsides, the lack of safe transport for pedestrians remains a significant concern.

Currently, more people are walking in Victoria than before the pandemic. However, the transport system for people walking has not evolved or developed with this increased demand. Therefore, there is a need to address this issue to ensure the safety of those walking and to encourage more people to adopt active transport.

1.2 Factors continuing to influence road safety behaviours

The COVID-19 pandemic served as a circuit-breaker for many people, causing them to change their lifestyles and focus on what truly matters. However, the transport system did not experience the same circuit-breaker and remains a concern for people walking, as the system is inherently unsafe. The pandemic only served to accelerate the trauma experienced by Victorian walkers and heighten the urgency to address pedestrian risk.

At a strategic land use planning level, there is a mix of high-speed vehicles with areas of pedestrian activity, and communities are segregated by urban arterials (major vehicle thoroughfares). Moreover, activity centres are designed to prioritise driving as the preferred transport mode. At a local planning level, vehicle movements are prioritised at most locations on the road network, including areas of high pedestrian activity. Antiquated rules require high levels of car parking in developments, but not public transport, pedestrian safety, or other healthy modes.

Victoria Walks has highlighted deficiencies in the transport system for people walking for a number of years, including providing a submission to the 2020 Parliamentary Inquiry into the increase in Victoria's Road Toll. The committee final report, and subsequent actions by the Victorian Government, have not seen significant action to address pedestrian road trauma.

1.3 The rise of micro-mobility devices

Victoria has recently legalised the use of privately owned e-scooters. It is estimated there are over 100,000 of these devices within the state. While it is illegal to ride these on footpaths, Victoria Walks contends this in practice is very difficult to enforce and significantly impacts the safety of people walking. Victoria Walks expects e-scooter use on footpaths has many parallels with footpath cycling. In a study conducted by Victoria Walks, approximately 40% of seniors identified cyclists on shared walking and cycling paths to be a factor which discouraged them from walking. Victoria Walks expects with the proliferation of micro-mobility devices, senior Victorian's perception of

[1] VISTA captures recreational trips as well as transport, so in this context walking trips include some trips such as 'walking the dog'

walking safely will only deteriorate further.

Moreover, legally e-scooters cannot travel above 20km/h. Victoria Walks notes several issues with this approach:

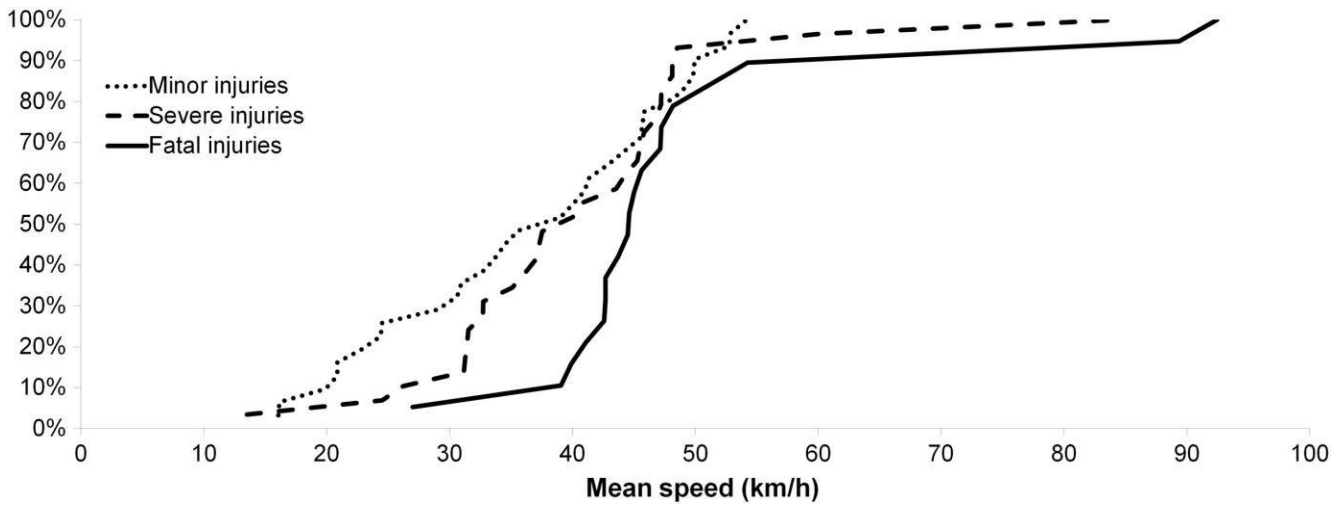
i. There is no requirement for micro-mobility devices to have a speedometer; rendering the monitoring of speed a subjective estimate;
ii. Micro-mobility devices capable of much higher speeds are still available for purchase in Australia; and
iii. It is not realistic to expect Victoria Police to be able to enforce this speed limit across Victoria

The research around e-scooters suggests that they are unsafe for users in the current infrastructure environment, both on-road and on footpaths.

1.4 Pedestrians are the most vulnerable road users

The concept of how much force the human body can withstand in a crash is well researched and understood. Pedestrians are not protected the way vehicle occupants are and are four times more likely to be injured than other road users as a result of a crash, according to a 2009 study by Elvik (cited in Oxley, Stephan, & O'Hern, 2020). Figure 1 shows that when a driver travelling at less than 40 km/h hits a person walking, the risk of death is significantly lower than at 50 km/h. The risk of serious injury to the pedestrian is considerably reduced at speeds below 30 km/h.

Figure 1: At vehicle speeds less than 30 km/h, the risk of serious injuries to pedestrians is significantly reduced (Source: Kröyer, 2015)



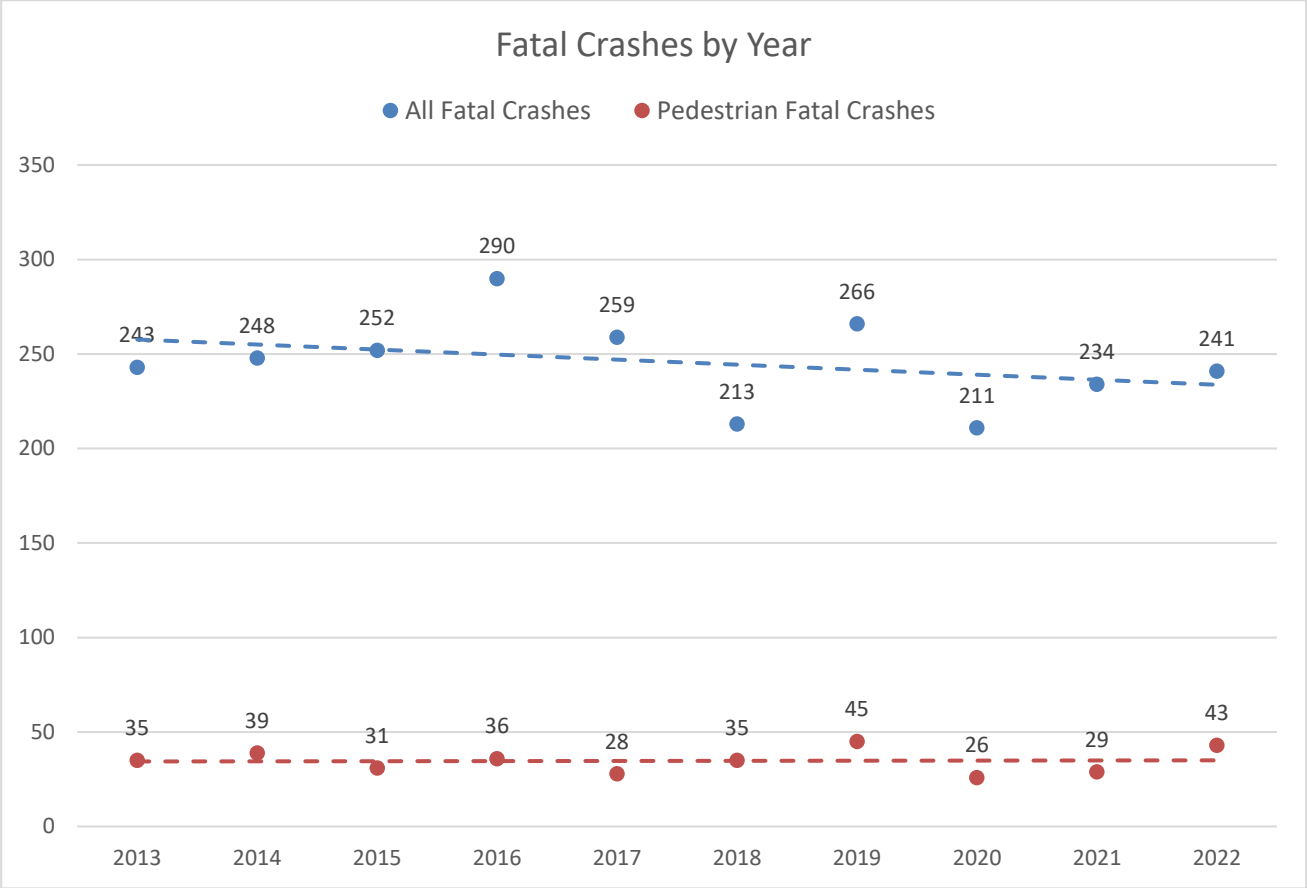
Creating a Safe System transport network for pedestrians involves either eliminating exposure to risks through separation from vehicles, or to manage the forces at conflict points to within tolerable levels. Vehicle speed is pivotal in managing forces at conflict points. The higher the speed of a vehicle, the less time a driver has to stop and the higher the impact speed if they don't. The probability and severity of injury increases exponentially with vehicle speed. It is estimated that, for every 1 km/h increase in average vehicle speed, the number of injury crashes will rise by around three percent.

1.5 Pedestrians represent an increasing proportion of people killed

Data from the TAC searchable data shows that over the past decade, the total number of people losing their lives on Victorian roads has trended downwards. However, the number of pedestrians killed remains relatively unchanged over this period. Figure 2 shows the number of fatal crashes occurring over this period and trendlines calculated for 'All Crashes' and 'Pedestrian Crashes'. The trendlines demonstrate that pedestrian trauma is not decreasing. Furthermore, last year saw the second highest recorded pedestrian deaths within this period (43 people).

In summary, we have made negligible progress 'Toward Zero' over the last decade.

Figure 2: Fatalities on Victorian roads for the past 10 years



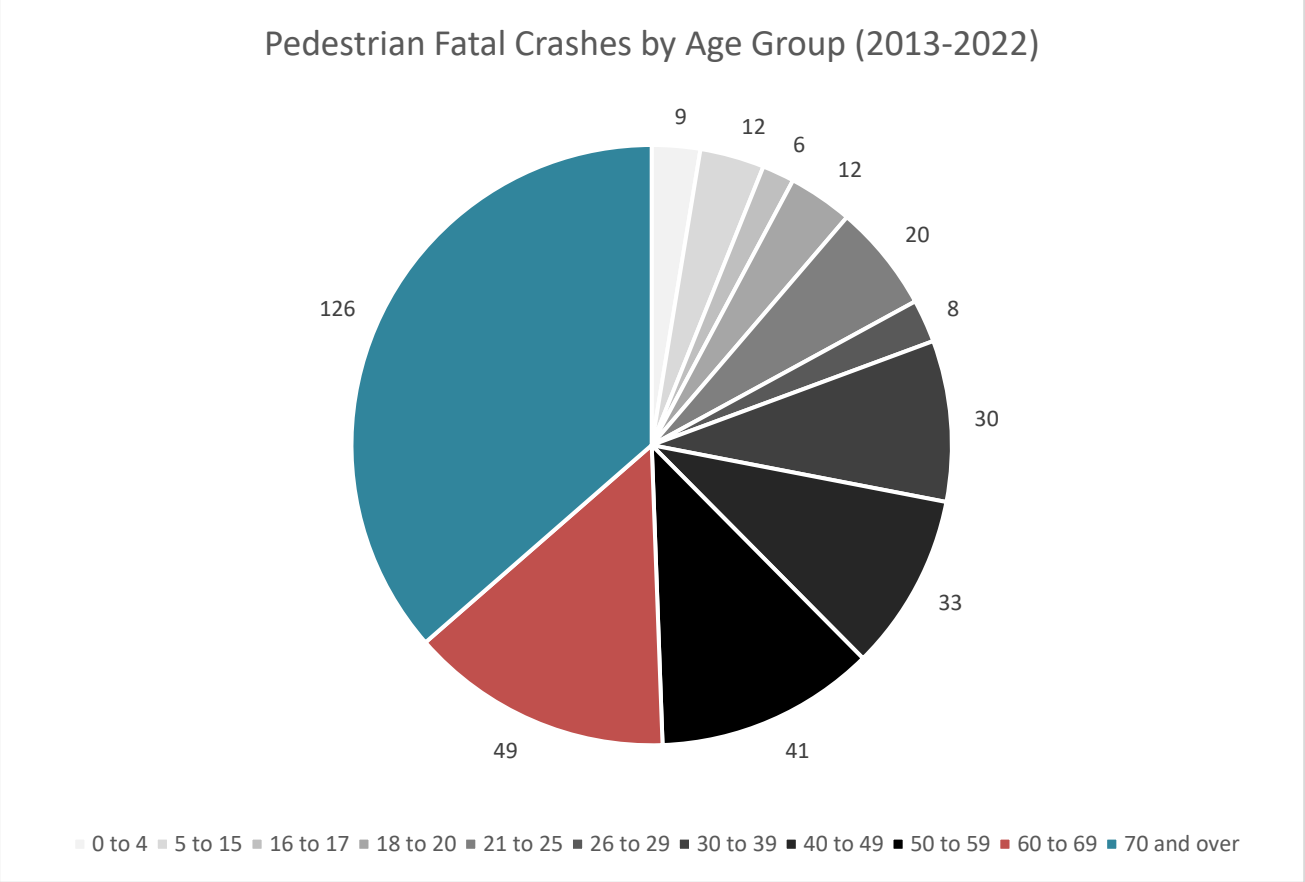
1.6 Older age groups are more at risk of being killed

Interrogating the 10-year pedestrian fatal crash data by age group, people aged 70+ make up 36% of all pedestrians killed. Yet only 11.9% of the Victorian population are within this age bracket (2021 Census). Additionally, people aged 60+ make up half of all pedestrians killed. Figure 3 shows the relationship between older age groups and the number of people walking being killed.

In addition, older pedestrians are at even higher risk of injury, with people aged 70 or older approximately 1.6 times more likely to be injured than people aged 16 to 39 years (Oxley, Stephan, & O'Hern, 2020). They are more likely to sustain an injury if involved in a crash and it is harder for them to recover once injured. For older people who fracture a hip, between 25 and 40 per cent die within 12 months and for the remainder an increased risk of death persists for years afterwards (Oxley, O'Hern, Burtt, & Rossiter, 2016).

In Victoria Walks' 2020 Parliamentary Submission for the inquiry into the increase in Victoria's Road Toll an analysis into the pedestrian trauma and age was conducted. It was noted that the proportion of older pedestrians killed has been steadily increasing over the last 20 years. This increase is in contrast to the overall trend of pedestrian trauma remaining relatively unchanged Figure 2. With the ageing of the population, the over-representation of older age groups is likely to get worse.

Figure 3: Pedestrian Fatal Crashes by Age Group (2013-2022)



1.7 The economic argument

Although this inquiry focuses on road user behaviours, it is important to note the cost of road trauma to society. Road injuries cost Australia $13.6 billion (41% of crash costs) compared to $10.2 billion for fatalities and $9.4 billion for property damage, according to a 2016 estimate by Litchfield (2017). The personal impact of road crashes, both deaths and serious injuries, is impossible to measure.

Walking is a good investment. Evidence from 20 different studies has suggested that the benefit cost ratio of walking interventions is typically 13:1 – $13 of benefit for every $1 of expenditure. A recent study of active transport infrastructure in New Zealand found a $15 million investment in walking paths, cycling paths, education and promotion generated $160 million in health benefits, injury reduction and reduced greenhouse gas emissions. For communities with relatively low physical activity levels the benefits are even higher. In 2008, the total annual economic cost of physical inactivity in Australia, including healthcare, productivity and mortality costs, was estimated at $13.8 billion. Even a 10% reduction in physical inactivity through walking would result in 2,000 fewer deaths and 6,000 fewer incidents of disease each year.

1.8 The global picture

In 2019, Victoria Walks developed a report summarising how other jurisdictions (USA, UK, Germany, Denmark and the Netherlands) are addressing pedestrian trauma. The report notes The Netherlands, Denmark and Germany use proven strategies to make streets safe for people walking, such as providing high quality walking infrastructure, implementing safe speed limits, and enforcing the law. Australia's performance in reducing drink driving fares better than the US, but poor in comparison to Europe. On vehicle size, Australia is clearly following the US with larger, heavier vehicles becoming the norm. Australia still has a long way to go to achieve the '*Towards Zero*' aims but could learn from European nations.

2 Road safety strategy

The Victorian Road Safety Strategy is based on the internationally regarded safe system philosophy. This framework is underpinned by four pillars:

- Safer roads
- Safer speeds
- Safer vehicles
- Safer road users

2.1 Safer roads

To make roads safer for pedestrians, walking routes should be direct, connected and separated from vehicles with space to walk, sit and interact.

A similar direct, connected and safe network should be established for cycling, e-scooters and other mobility devices. As walking and cycling have different needs, the networks should be totally separate. Footpaths should be places for people, not vehicles capable of high speeds like bicycles and electric scooters. Low speed vehicles used by people with disability are the only vehicles Victoria Walks supports in using the footpath.

Recommendation: Improve road design to better protect the most vulnerable road users.

There is no regular ongoing funding stream dedicated to walking for transport or pedestrian road safety. With walking either grouped with cycling or part of broader projects in the state budget, the exact level of investment in walking projects is uncertain. What is clear, however, is that investment in walking is very limited, and miniscule when compared with spending on roads.

The $100 million over four years previously committed by the first Andrews Government through the Safer Cyclists and Pedestrians Fund provided some funding for pedestrian safety improvements, however much of it was focussed on cycling safety. After a gap of several years this fund has only very recently been replaced with the announcement of the Safe Local Roads and Streets Program in April 2023. This will provide $200M over four years, but while the initial announcements suggest something of a focus on pedestrian safety the scope is clearly broader and it is not clear what proportion of the funding will be dedicated to safer walking.

Associated with the issue of investment is the need for dedicated pedestrian expertise within the key government agencies. Too often walking is lost when left to more generalist staff.

The type of improvements required for pedestrian safety are outlined later in this submission under ‘Road standards’. This requires a fund dedicated to improving infrastructure to make roads safer for pedestrians. The same is needed for cycling, but this should be totally separate.

Recommendation: Establish a significant and ongoing fund for pedestrian specific road safety and infrastructure, with $100 million per annum as a minimum starting point.

Victoria Walks strongly opposes the use of the footpath by vehicles capable of high speeds like bicycles and e-scooters. The footpath should be a place where people feel safe and comfortable to walk. This is particularly important for the most vulnerable pedestrians; older people and those with disability. It is not only crashes that concern these groups. For many older adults, walking is a complex task and requires coordination of multiple visual, cognitive, and psychomotor skills which often decline with age. Having to focus on what others are doing as well means they are not able to concentrate on the path, increasing the risk of falls as well as the

fear of falling. This fear of falling can in turn deter them from walking, limiting their mobility, health, independence and social connections (Garrard, 2013).

Recommendation: Continue to prohibit vehicles capable of high speeds, including bicycles and e-scooters, from being used on the footpath to protect pedestrians' actual and perceived safety.

2.2 Safer road users

The Towards Zero concept in Victoria's current strategy is well-founded. It acknowledges the vulnerability of the human body and the importance speeds play in the level of trauma sustained. However, it focuses on reducing road deaths assuming the status quo will continue; that is people will continue driving at current rates and must be accommodated. It doesn't challenge this assumption or try to reduce the risk by reducing the number and distance of driving trips.

Research has found that when more people walk and cycle, the safety of these modes increases (Robinson, 2005). The pedestrian fatality rate in the United States, for example (9.7 per 100 million km), is much higher than in other countries with significantly more walking, with rates per 100 million km of 1.9 in Germany, 1.2 in the Netherlands, 2.5 in Denmark and 2.7 in the UK (Buehler & Pucher, 2017). Research suggests that as more people walk and ride, drivers expect to see them and so change their behaviour (Jacobsen, 2003). It is likely that as more people walk or cycle, this includes people who also drive, increasing their awareness of these modes.

It should be noted also that public transport is the safest form of travel. In developed countries, cities with high levels of public transport, walking and cycling and low levels of driving have the lowest levels of road trauma.

A shift away from driving aligns with changes to people's preferences with respect to how they travel. Research suggests it is only Australians aged 65 and over that value 'car accessibility and parking' in town centres more than 'walking, cycling or public transport options' (Place Score, 2019, unpublished). Ironically, this group are most at risk of being killed or injured by a vehicle while walking.

The current road safety strategy approach has not succeeded in significantly reducing the number of people killed on our roads. An alternative is to consider road safety as part of mobility for all people, whether they drive or not, and transport as part of the bigger liveability picture. A road safety strategy framed around modal shift would improve safety for the most vulnerable users and could be the 'game changer' that allows us to make substantive progress in reducing road trauma. The initial focus could be on short trips such as from home to train stations, activity centres and schools. It could also focus on people new to an area or changing routines such as when a child starts school, or a person starts a new job. Shifting from driving to walking has significant health benefits to the individual and multiple broader community benefits (Badawi, Maclean, & Mason, 2018).

The two key ways to achieve mode shift are 1) to make walking, cycling and public transport more attractive and convenient and 2) to make driving less attractive and convenient.

Recommendation: Invest in modal shift from driving to walking, cycling and using public transport to improve safety of vulnerable road users.

Walking and public transport are complimentary, with some walking involved in 81% of trips to a train station and nearly all trips to bus and tram stops in Melbourne (Eady & Burtt, 2019). Improving the coverage and frequency of public transport and providing a convenient alternative to driving has the potential to significantly reduce the number of vehicle trips, making roads safer.

Recommendation: Invest in walking to train stations, with $100m over four years to improve walking routes within 800 metres of train stations.

New housing that is located within walking distance of activity centres and high frequency public transport will also encourage walking rather than driving. This is likely to be within 800 metres of activity centres and train stations and 400 metres of tram and high frequency bus stops.

Recommendation: Locate new housing within 800 metres of activity centres and train stations and 400 metres of tram and high frequency bus stops.

Another way road space is used is to store private vehicles in on-street parking. In order to make it convenient to drive, a disproportionately large amount of space is dedicated to vehicles. In a study of Lygon Street, 67% of public space was allocated to cars but only 39% of people arrived in a car. This pattern is repeated in the suburbs of Melbourne. Moreland City Council found that 24% of the total ground area within 200 m of Coburg station is dedicated to ground level parking (Sheko 2018).

Large, ground level car parks in shopping areas also encourage driving. Of people travelling to main street type shopping centres in middle and outer Melbourne, 27% walk, ride or take public transport compared to only 8% of people travelling to similar-sized shopping centres surrounded by car parks (Eady & Burtt, 2019).

Recommendation: Review planning provisions relating to access around activity centres, including arterial road design and car parking requirements, with a view to reducing car parking requirements and vehicle dominance to create more pedestrian-friendly environments that encourage people to walk.

Car parking at train stations and activity centres takes up a lot of space but is an inefficient use of the space. The Victorian Department of Environment, Land, Water and Planning should review planning provisions relating to access around activity centres with a view to reducing car parking requirements. This would reduce the vehicle dominance of an area and create more pedestrian-friendly environments that encourage people to walk. Substantial, new, free car parking at suburban train stations encourages people to drive what is often a short distance. Instead, improvements to walking, cycling and bus options would encourage other modes of travel to stations. This would also improve road safety directly by reducing vehicle traffic around railway stations.

Recommendation: Avoid creating substantial new, free car parking at suburban train stations. Instead, encourage people to walk or cycle short distances and improve bus services for longer distances.

2.3 Safer speeds

Vehicle speed impacts safety for all road users. Changes to speed limits are quick, easy and cheap compared to infrastructure changes.

Best practice is to reduce vehicle speeds to 30 km/h where both vehicles and pedestrians are present to minimise the risk and severity of pedestrian injuries (Oxley, Stephan, & O'Hern, 2020). Lower speeds may be appropriate for CBDs, areas of high pedestrian activity or residential streets with low traffic volumes. However, the VicRoads Traffic Engineering Manual does not contemplate a reduction in speed limit to less than 40 km/h on public roads unless they are signed as shared zones (VicRoads, 2017). Under the guidelines, 30km/h speed limits are effectively not an option available to road managers. The guidelines also require that the majority of traffic *already* travels below the speed of a proposed, lower limit.

Recommendation: Update the 'Traffic Engineering Manual: Speed Zoning Guidelines' to provide more options for lower speed limits, including 30 km/h in appropriate locations.

Historically speed limits have been set based almost solely on the road designation. As such, all local roads in urban areas default to the 50 km/h speed limit and all regional roads default to 100 km/h (VicRoads, 2017). Applications for adjusting the speed limit can then be made for approval by the state government and Roads Minister. Factors such as vulnerable road users and the road environment are considered on a case-by-case basis.

The higher limits on arterial and collector roads appear to be a legacy from before the introduction of a default urban speed limit of 50 km/h in 2001. Analysis of the most recent ten years of crash data available found pedestrian injuries cluster along major arterial roads, with 31% of pedestrian injuries occurring on roads with a posted speed of 60 km/h; the highest proportion of injuries in any one speed zone (Oxley, Stephan, & O'Hern, 2020).

The default urban speed limit on local roads remains at 50 km/h today. This speed is significantly higher than the best practice recommended speed of 30 km/h. A person hit by a vehicle travelling at 50 km/h is likely to be killed. Thirty per cent of pedestrians killed in Victoria occurred on roads with a 50 km/h speed limit (Oxley, Stephan, & O'Hern, 2020). By comparison, a person hit by a vehicle travelling at 40 km/h is four times less likely to be killed than if the vehicle was travelling at 50 km/h. In the absence of state government leadership in making roads safer by reducing the default urban speed limit from 50 km/h, many local governments have implemented area wide 40 km/h limits in residential areas. This improves the safety for everyone using the roads; people driving home, people walking their dogs, older people, children playing. There is currently an appetite for lower speed limits among many Victorian local councils:

- City of Yarra has completed a 12-month trial of 30 km/h area wide speed limits for parts of Fitzroy and Collingwood. Evaluation of the trial found speeding had reduced and resident support had increased. In December 2019, Council endorsed a proposal for a permanent 30 km/h speed limit for the area (City of Yarra; TAC, 2019).
- Mildura Rural City Council have reduced the speed limit to 30km/h within the CBD for a 12-month trial (Mildura Rural City Council, 2023).
- City of Darebin currently have blanket 40 km/h speed limits on local roads in the southern part of the municipality, with plans to extend this significantly throughout the municipality (City of Darebin, 2019).
- City of Port Phillip have a long-term goal to lower the speed limit to 40 km/h in residential areas. They have implemented a 40 km/h limit across at least seven activity centres and have a plan for more than two-thirds of the road network to be limited to 40 km/h (Allaoui, 2016).
- City of Maribyrnong councillors unanimously supported a proposal in 2017 to introduce a 40 km/h speed limit on all residential streets. It is being rolled out in stages by area (Millar, 2017).
- Mildura Rural City Council have reduced the speed limit to 40 km/h across 19 residential areas (Mildura Rural City Council, 2018).

Recommendation: Review whether existing speed limits are appropriate, including arterial roads speed limits of 60 km/h and above and the default urban speed limit of 50 km/h.

2.4 Road standards

Australian Standards and Austroads Guidelines generally outline design standards and requirements for road infrastructure. The design standards for pedestrian signals, zebras, kerb extensions and median islands are generally sufficient for pedestrians. It is state guidelines such as Road Design Notes which usually dictate *where and how* particular pedestrian infrastructure such as pedestrian crossings can be used. In discussions with state

government representatives, Victoria Walks has been told that warrants outlined in Victorian guidance are only guidance and minimum thresholds do not need to be met in order to install crossings. However, discussions with local councils suggest that so long as these minimum values are included in the guidance, councils interpret them as requirements and so do not consider crossings where the warrants aren't met.

Raised crossing points (wombat crossings, raised intersections, raised thresholds) generally offer the greatest level of safety for pedestrians. However, Victoria Walks has been advised by road safety practitioners that the existing design guidelines for these infrastructure treatments are lacking and somewhat convoluted. Thus, there is a degree of apprehension within industry to implement these devices.

The practical implementation of standards and guidelines is an issue. The design of good infrastructure for pedestrians relies heavily on getting the detail right. Poor design of new infrastructure for pedestrians may actually make it more difficult for pedestrians to negotiate, especially those who are older or have a disability. An example of poor implementation is a raised threshold without a smooth transition from the footpath level (dips to the gutter level) on both sides of the road. The intention is to improve pedestrian safety by slowing vehicles, but the constant changes in grade may create new tripping hazards. By comparison, a well-designed raised threshold is one which has a constant grade level with the footpath and can reduce both crashes and falls.

Standards and guidelines tend to favour people in vehicles over other modes. The design of roads for high volumes of high-speed traffic results in wide expanses of pavement hostile to people walking, riding and accessing public transport.

Problematic locations for pedestrian safety can occur anywhere pedestrians share space with motor vehicles. This is most commonly in getting across the road, but also anywhere people cross driveways, walk in car parks and places where there is no footpath, common in outer suburbs and rural areas. Safety can be improved in a variety of ways, such as:

- Providing footpaths and regular crossing opportunities. Crossings can be either formal such as signals or zebras, or informal such as median breaks.
- Upgrading roundabouts, slip lanes and intersections to provide (or reflect existing) pedestrian priority. Options include providing signals or zebra crossings, reducing the crossing distance or complexity, slowing approaching vehicles, making pedestrians more conspicuous or closing slip lanes to remove conflict points altogether.
- Better accommodating pedestrians in traffic signal operations. Signals generally prioritise vehicles over other road users, resulting in long wait times and short crossing times for pedestrians, and then only if they have pressed the button in time to get a signal at all. Signal cycles should be short to allow more crossing opportunities, but also long enough for everyone to get across. New technologies which distinguish between pedestrians and vehicles at signals and adjust crossing times accordingly should be rolled out to ensure every person has sufficient crossing time.

Even places where pedestrians don't mix with vehicles can be problematic locations. This can be due to others such as cyclists or dogs whose path is unpredictable. It can also be due to the design of the path itself, which can be problematic and cause trips, particularly for older people.

Garrard (2013) also reported findings from Li et al. (2006) that many outdoor falls could be prevented by better design of paths, kerbs, roads and car parks. "*Many of the problems stem from the fact that the system is generally designed for vehicles, and mainly for fit and healthy road users and is therefore often unforgiving of the needs and capabilities of older road users.*"

Design standards need to ensure footpaths:

- provide level surfaces free from tripping hazards;
- are non-slip;
- are adequately wide for all users including those with mobility aids and prams as well as seating where appropriate;
- are well lit; and
- have pram ramps in line with the desired crossing point to reduce the need to negotiate kerbs (Oxley, O'Hern, Burtt, & Rossiter, 2016; Mantilla & Burtt, 2016)

Recommendation: Improve state guidance for implementation of national standards and guidelines, such as VicRoads Road Design Notes.

Standards and guidelines should be updated so that design reflects priority. Across driveways and where drivers are turning at intersections pedestrians have priority, however drivers are often unaware and the physical cues usually suggest the opposite. Updated infrastructure can coincide with driver education campaigns to improve understanding of road rules, particularly the situations where pedestrians have priority.

Recommendation: Update design to reflect priority, particularly at crossing points and intersections to improve pedestrian safety and priority.

One area where the existing Australian Standards provide inadequate design in relation to pedestrians is raised threshold treatments - an intersection where a side street is raised adjacent to a main road and in line with the footpath. Currently there is no Australian or Victorian guidelines which addresses the specific situation, although we understand the Department of Transport are in the process of developing one. Victoria Walks believes that a raised threshold treatment installed at or near where pedestrians cross a side street should not simply be a traffic calming device but also be designed with pedestrians in mind. Even if it not a formal crossing, people will use it to cross the road, so the design should take pedestrian amenity into consideration. To achieve this, raised thresholds should:

- Extend kerb to kerb, be flat, continuous and convenient for pedestrians.
- Be consistent in colour and material, suggesting pedestrian priority across the whole crossing.
- Have sufficiently steep grades to ensure drivers slow. Victoria Walks believes a minimum ramp grade of 1:6 is appropriate, irrespective of the speed limit.

Recommendation: Create a new standard or guideline for the design of raised threshold treatments which is a continuous level, consistent in colour and material and sufficiently steep to slow drivers.

3 Data

3.1 Accuracy of crash report data

Victoria Walks has concerns about the way information is collected after a crash and how this translates into road safety statistics.

The most commonly referred to statistics are the ‘road toll’ statistics generated through Police reports on crashes that are reported to them, and the resulting statistics are reported by TAC after some refining by DTP. If a crash is not reported to Police, it does not flow into the statistics.

The other source of information that is not as accessible and less frequently discussed is hospital data – both admissions and emergency department presentations. The hospital data consistently captures a higher number of pedestrian injuries than road safety statistics.

The police and hospital datasets are best thought of as different groups of crash records that only partially overlap. Looking at all the datasets together better illustrates the extent of the recorded crashes and injuries.

Similar to findings across Australia and the world, the accuracy of crash data in Victoria increases in line with the seriousness of the injury. Crashes in which pedestrians are killed are well captured in the road toll. However, with respect to injury crashes, 30.2% of pedestrian injuries resulting in a hospital admission could not be linked to the police data. No Victorian data was available on the proportion of Emergency Department (ED) cases that could be matched to police data. However, a 2015 study from Queensland found that between 63.7% and 70.2% of ED cases for all road users, not only pedestrians, could not be matched to police data.

There is a further, unknown, group of pedestrian crashes and (probably lesser) injuries that are not captured in either group of statistics. Findings of an earlier study suggest there may be up to three times as many minor injuries that require medical attention as officially recorded across all road users.

The overall implication is that the scale of pedestrian trauma is much more substantial than generally thought, even amongst road safety professionals. It is certainly much higher than the commonly used road safety statistics based on police reported crashes indicate.

Projects underway to link police data and hospital data will further improve the information available about serious injury crashes, but will not better quantify the true number of crashes or capture less serious injuries.

A pedestrian who is injured or killed may be unable to relate their statement to the Police, which can result in only one side of the story being recorded and a biased crash report. Evidence also suggests that the way crashes are reported can lead to victim blaming (Goddard, Ralph, Thigpen, & Lacobucci, 2019). In Victoria, the crash report is only available to people involved if they apply to Victoria Police and pay an application fee.

As an example of the potential bias in crash reporting, Victoria Walks was contacted by a person who was hit while crossing a road. A driver turning into the street hit her, breaking the law requiring the driver to give way in this situation. The driver then got out of the car and instead of offering assistance, blamed the pedestrian for the crash and demanded she move so he could continue driving. The pedestrian was transported to hospital in an ambulance and spent a total of 12 days in hospital for surgery and inpatient rehab as a result of the crash.

After the pedestrian recovered, she contacted the Police to find out about the investigation but was refused details. She eventually found out she could apply and pay a fee for a copy of the crash report, and upon purchasing it found that:

- The driver was the only one interviewed. No statements were taken from witnesses at the scene or the pedestrian once she had recovered.
- The report recorded that she was on her phone, when she was not.
- The report falsely recorded that she was not admitted to hospital.
- The driver was issued with a penalty, but there were no details about what that involved.

As a result of the crash which occurred one year prior, the pedestrian must still attend physio and can no longer work full time.

Recommendation: Review crash reporting processes to ensure reports for crashes involving pedestrians are sufficiently detailed and statistics capture the highest possible proportion of injuries.

Another concern in relation to the usefulness of crash report data is the Definition for classifying accidents (DCA) codes used by road agencies and Victoria Police in crash reporting. The codes for crashes involving

pedestrians do not provide any real detail to indicate the circumstances of the crash. The vast majority of pedestrian crashes are simply classified as 'near side' or 'far side,' referring to the side of the road on which the pedestrian was hit. As a result, it is impossible to gain a useful understanding of the general circumstances of crashes from the basic statistics. We would have a much better understanding of pedestrian crashes if the DCA codes specified the location and circumstances of the crash. This would better inform road safety responses.

Recommendation: Improve DCA codes to provide better information about crashes involving pedestrians.

3.2 Pedestrians injured or killed on the road network

Walking is considered a mode of transport; footpaths are part of the road reserve under various Acts and pedestrians must obey road rules. However, a pedestrian killed or injured on a public road without the involvement of a vehicle (motor vehicle, bicycle, tram) is not included in road crash statistics. Examples are people who slip or fall while walking, or people killed by a wall collapsing onto the footpath. Single vehicle crashes are included in crash data, meaning another person in exactly the same situation but on a bicycle would be included.

There is little research about pedestrian deaths that do not involve vehicles. However, pedestrian falls while walking in the Victorian road network resulted in an average 1,680 hospital admissions and 3,545 emergency department presentations each year between 2009 and 2014. This was much more than the annual 1600 pedestrian injuries recorded in road crashes (Oxley, O'Hern, Burtt, & Rossiter, 2016). The most common injury as a result of a fall was a fracture. Falls in the street are not reported to police and only appear in hospital data.

In addition, the crash statistics don't include crashes that occur in car parks because most are considered private property. Collecting data about pedestrian crashes in car parks would enable them to be considered and addressed.

Government decision making and investment are often based on road crash statistics. Including pedestrians injured and killed where no vehicle was involved broadens the discussion of road safety and encourages strategies and funding to address this issue. Without an accurate understanding of the causes and situations that lead to these deaths, there will be no change.

4 Other

The following are additional issues which are important in understanding and reducing the number of people killed on our roads.

4.1 'Blaming the victim'

Victoria Walks is concerned that responses to pedestrian road trauma often focus on the behaviour of people walking rather than drivers, who are often at fault. Focusing on the behaviour of victims tends to result in victim blaming.

Older people represent an increasing proportion of the pedestrians killed on our roads. Previous analysis of 5 years for official crash statistics found senior pedestrians were not at fault in the vast majority of crashes in which they are injured or killed. Whereas some senior walkers may make mistakes, the key causes are bad road design and poor driver behaviour (Mantilla & Burtt, 2016).

The focus on pedestrian distraction provides a good example of victim blaming. Claims made in some articles and campaigns about pedestrians being distracted by mobile phones are not supported by evidence. Information on who was at fault in these more recent deaths is not publicly available. However older people, who largely account for the increasing number of pedestrian deaths, are less likely to own or use a mobile phone. Studies have found that older adults are more cautious, careful and law-abiding than younger people (Garrard, 2013). Moreover, Victoria Walks analysis of police data has revealed that Police consider drivers to be at fault in a majority of crashes with pedestrians (Eady and Burtt 2022).

A recent study by the New York City Department of Transportation, looking at both local and nationwide data, concluded that mobile phone use was not a significant cause of pedestrian trauma, causing less than 1% of crashes.

A finding from Austroads 2016 report that "up to 40% of pedestrians may be distracted by mobile phones when crossing the road" was ultimately found to be unsubstantiated (Mepham, 2016). The study included people talking and listening to music while crossing the road; behaviour accepted amongst drivers. Groups responsible for road safety appear to set different standards for pedestrians, even though distracted drivers are a risk not only to themselves but to others.

The victim blaming mentality is seen in some media reports on crashes and "pedestrian safety" campaigns and tips focused solely on pedestrians, including from Victoria Police and the Victorian government. Those involved in road safety have a responsibility to provide balanced reporting and real solutions for people who are obeying the law and not endangering others.[1] Focussing on pedestrian distraction can be a distraction from addressing the causes of the vast majority of pedestrian road trauma (Rossiter, 2019).

Police operations in the City of Casey recently demonstrated an example of positive messaging in an enforcement program. A recent spike in pedestrian trauma and several near-misses reported around schools in Casey led to a new pedestrian safety initiative. Victoria Police is teaming up with local council and road safety partners to make pedestrian safety a priority around schools and kindergartens in Casey by targeting motorists who exceed the 40km/h speed limit in school zones, and who are distracted behind the wheel using their mobile phones.

Recommendation: Ensure reporting and campaigns about pedestrian safety are impartial and do not result in victim blaming.

4.2 Road rules

Some road rules related to pedestrians are inconsistent with physical cues and drivers' understanding.

One rule relates to giving way at unsignalised intersections. Currently drivers must give way to pedestrians when turning into a street, but not when turning out. This creates a legal situation where the pedestrian can cross half the street, but then must stop to give way to a vehicle in the other half. Changing this to provide pedestrian priority across the entire street would be consistent and clearer to both people walking and driving.

The second rule relates to car parks. While the applicable rules are not at all clear, the interpretation by Victoria Police is that car parks are road related areas and so the usual road rules apply (Victoria Police, 2009). However, most car parks are not designed as roads and usually do not include footpaths. This means pedestrians, including people walking to and from their car, have little priority or safe space to walk. Car parks effectively operate as shared spaces and the rules should reflect that.

Recommendation: Review the road rules to provide consistent pedestrian priority at intersections and classify car parks as shared zones.

Engagement with VicRoads social media suggests that large numbers of drivers are unaware of their obligations under the current road rules to give way, particularly when turning. Driver education campaigns to inform drivers of their responsibilities should be conducted at the same time as any changes to the road rules.

Recommendation: Establish driver education campaigns to improve understanding of road rules, particularly the situations where pedestrians have priority.

4.3 Penalties

Driving is an inherently dangerous activity which also puts others at risk. When a driver kills another person, there are several charges available for prosecution. Culpable driving causing death carries the highest maximum penalty of 20 years imprisonment. In 2017-18, 87 people were killed on the roads while walking, riding a bicycle or travelling as a passenger. However, in that time only 15 people were charged with culpable driving causing death and the average imprisonment sentence for that specific charge was 7 years and 8 months (Sentencing Advisory Council, 2019). The number of people charged with the lesser charge of dangerous driving causing death is not known for that period, although the Sentencing Advisory Council reports there were a total of 109 of these charges over the five years to July 2018. This means the majority of people who kill others while driving are not charged with a serious driving offence.

When a person hit by a driver does not die but instead suffers serious injury, the driver faces a maximum sentence of only five years for the charge of dangerous driving causing serious injury. Whether or not this is an appropriate penalty should be investigated.

Victoria Walks is not alone in calling for increased penalties for people who kill or injure others while driving:

- the Director of Public Prosecutions and Court of Appeal found that sentences for dangerous driving causing death are inadequate and should be increased (Office of Public Prosecutions Victoria, 2016).
- Bicycle Network have called for every driver who kills someone else while using a mobile phone to be charged with the higher crime of culpable driving causing death (Bicycle Network, 2019).
- Victoria Police want an increased penalty for those using a mobile phone while driving (Eddie, 2019).

Referring to a 2015 study of factors involved in major driving offences, Sentencing Advisory Council Director Carmel Arthur said "w*hile an offender's remorse is important, the community is tired of hearing, "I didn't mean it"..... Drivers need to understand the causes and consequences of road trauma and act accordingly*" (Sentencing Advisory Council, 2015).

Better sentencing and penalties could not only be used as a punitive measure to encourage better behaviour but as a pro-active way of preventing dangerous drivers from driving. In particular, the current system seems to be unduly tolerant of people who are caught driving while disqualified. This is a common offence found during road policing operations.

Recommendation: Review penalties for drivers who break laws which endanger or kill others.

If you have any queries regarding this submission please contact Ben Rossiter, Executive Officer on brossiter@victoriawalks.org.au or 9662 3975.

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