



Look up

Keeping pedestrians safe.

Road Safety Series

June 2019



Smombie, noun:

A person walking around, unaware of his or her surroundings, entirely absorbed in their smart-phone.

About the NRMA

The NRMA represents over 2.6 million Australians in NSW and the ACT, making it one of the largest tourism and transport companies in Australia. We provide motoring, transport and tourism services to our Members and the community.

We've been focused on better transport infrastructure since the beginning, when our founders lobbied for improvements to Sydney's Parramatta Road back in 1920. Independent advocacy is the foundation activity of our organisation, and remains critical to who we are as we approach our first centenary.

Road Safety Series

The NRMA has prepared a series of reports with the aim of identifying the main factors involved in road crashes and initiatives that may help to reduce the risk of loss of life and injuries.

We acknowledge the next major tool to prevent and reduce loss of life will be driven by technology, as was seen with seatbelts and random breath testing. While we move towards an autonomous future, continued investment in road infrastructure, vehicle technology and public education campaigns are needed to improve the safety of motorists on our roads.



What the NRMA wants

- 1** More data to quantify the role of distracted walking in pedestrian crashes.
- 2** Extend education campaigns to highlight the dangers of distracted walking.
- 3** Improve awareness among licensees and patrons of licensed premises about the dangers of drunk walking.
- 4** Implement effective infrastructure treatments to improve pedestrian safety including installing more pedestrian countdown timers and the removal of green on green traffic lights.
- 5** All government vehicles should be fitted with the best available safety features and have a minimum five star ANCAP rating.
- 6** Encourage fleet owners and consumers to choose vehicles fitted with reverse autonomous emergency braking technology when buying a new car.

Introduction

Everybody is a pedestrian at some point in their day. Whether walking to work, taking the kids to school, or heading to the shops, we all complete journeys by foot. As our population grows, our cities and precincts become denser, causing pedestrians to fight for space.

Unfortunately pedestrians are one of our most vulnerable road users due to the lack of protection and the inability to withstand forces when hit. Pedestrian trauma accounts for around 17 percent of all deaths in NSW and nine percent of serious injuries. Since 2014, there has been a growing number of pedestrian fatalities across the state.

Traditionally our most at risk pedestrians are children, the elderly and those under the influence of alcohol, however distracted walking is now a growing phenomenon. People are increasingly walking along enthralled with their mobile phones and are oblivious to their surroundings.

To stop the rise in pedestrian fatalities, more action is required to ensure we have the best infrastructure treatments in place to mitigate the risks, the vehicles we drive are five star, and have the latest technology on board to help prevent or reduce the severity of crashes. We also need to educate people about the dangers of distracted walking.

Tread carefully

On average, more than

1,900

pedestrians are hit on NSW roads each year!¹

In 2018,

67

pedestrians lost their lives.²

Everybody is a pedestrian at some point in their day.

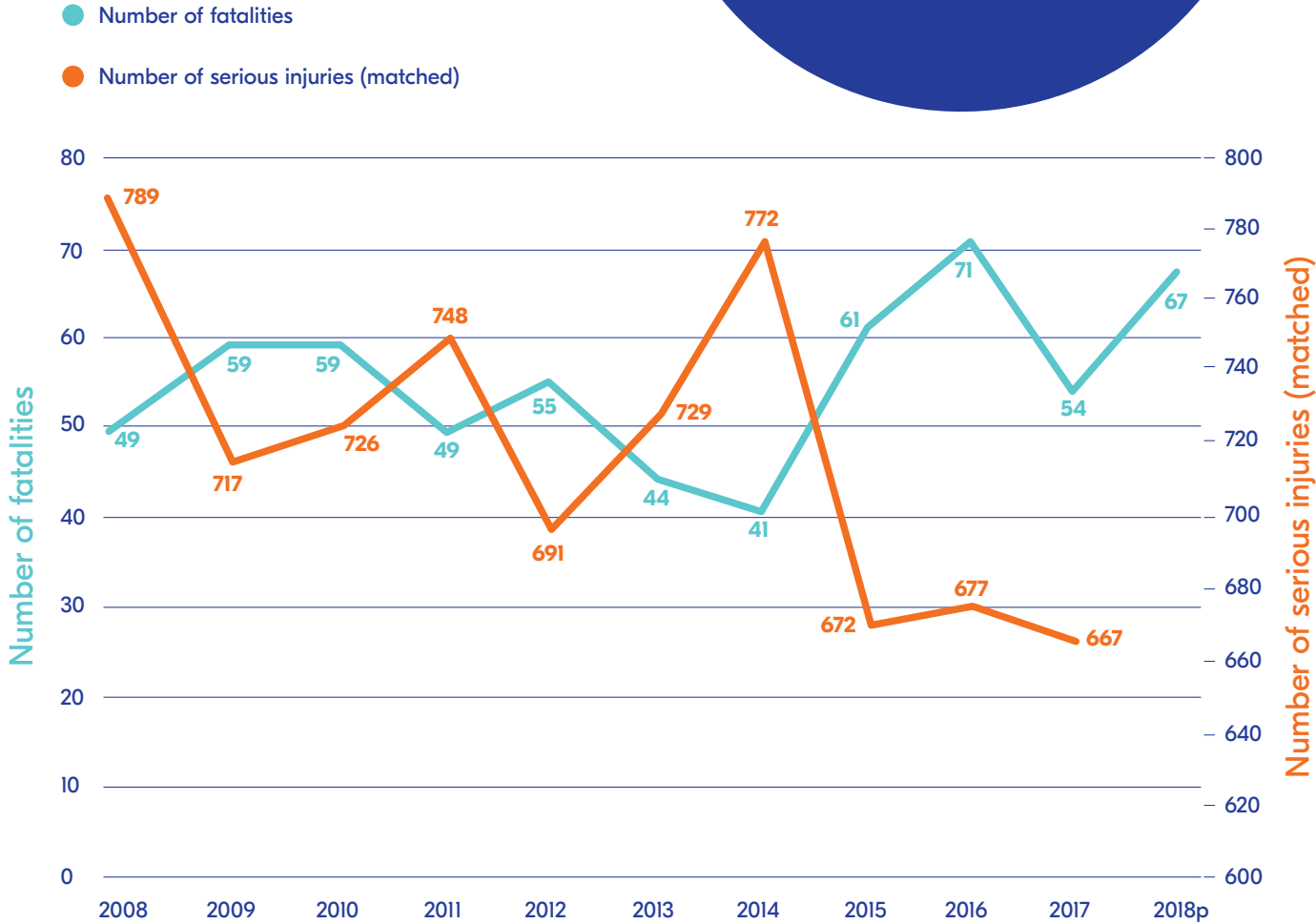


Figure 1. Pedestrian fatalities and matched serious injuries from 2008 to 2018 (as at 1 January 2019)
Source: Centre for Road Safety



Pedestrian trauma accounts for around

17%

of all deaths in NSW and 9% of serious injuries.

There was a

24%

increase in pedestrian fatalities since 2017.

Almost half

48%

of the pedestrians killed were aged 60 or more, although only 21 percent of the population is represented by people of this age.³



Distracted Walking: Observational Study

During April/May 2019, we conducted an observational study on pedestrian mobile phone use in metropolitan Sydney.⁴

26,390 pedestrians were observed over a 36 hour period.

Pedestrians were observed at four intersections

1. York Street/Margaret Streets, Sydney
2. Pitt Street/Park Street, Sydney
3. Pitt Street/Goulburn Streets, Sydney
4. Church Street/Argyle Street, Parramatta

Time of day observed

AM: 7:00am – 1:00pm

PM: 1:00pm - 7:00pm

Distracted pedestrians: results

36%

9,494 of the 26,390 pedestrians observed were using a mobile phone or wearing headphones

Correct crossing

33%

8,598 pedestrians correctly crossed the road and were using a mobile phone or were wearing headphones

57%

14,920 pedestrians correctly crossed the road and did not use a mobile phone or wear headphones

Illegally crossing

3.4%

896 pedestrians were observed illegally crossing the road while using a mobile phone or wearing headphones

7.5%

1,976 pedestrians illegally crossed the road but were not using a mobile phone or wearing headphones

Distracted behaviour together with crossing illegally is more likely to happen later in the day.

15%

crossed illegally later in the day compared to 8% in the morning.

Distracted walking phenomenon

Pedestrians are vulnerable due to the lack of protection and the inability to withstand forces when hit. Although children, the elderly and intoxicated pedestrians are the most vulnerable user groups, distracted walkers are now also a cause for concern.

Distracted walking is a form of inattentive blindness – when you focus hard on one thing such as texting you might not notice unexpected things entering your visual field such as an oncoming car. Distractions can impair pedestrians' awareness of their surroundings, resulting in slower crossing times and unsafe pedestrian behaviours.⁵

Research shows that 89 percent of surveyed Australians own a smartphone.⁶ With such a high penetration rate of smartphones, it is no surprise to see inattentive blindness occurring on footpaths.

Research examining distracted pedestrians is still growing. However, several observational studies have been conducted to investigate the incidence of distracted walking:

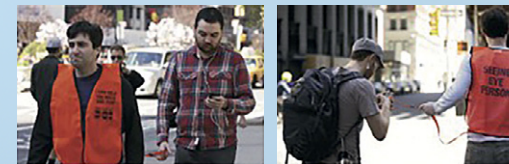
- In Seattle, an observational study found that a total of 29.8% of 1,102 pedestrians were using a mobile device during street crossing and 7.3% were texting.⁵

- A recent Hobart study found that 12.4% of 16,032 pedestrians were using their phone while crossing, 4.6% were reading or typing on their phone, 2.3% were talking and 5.5% were listening to headphones.⁷
- Research also conducted in Sydney found that 33% of 546 pedestrians crossing the road were on the phone, 27% were talking and 6% were texting.⁸

Young people are also more likely to be at risk. Research in Queensland showed that 32% of 18-30 year olds reported texting and 27% used the internet at high frequency levels while crossing the road.⁹

Our lives are becoming increasingly connected through technology, meaning the incidence of distracted walking is likely to increase. More data is needed to quantify the role of distracted walking in pedestrian crashes. Educating people of the dangers of distracted walking through education campaigns is also needed.

Texting and Walking Service What is the world coming to?



In 2013, a prank in New York City provided a solution to distracted walkers.¹⁰ A team of people posed as Department of Transportation pilot workers wore safety vests labelled with 'I can help you walk and text' and 'Seeing Eye Person'. People texting and walking were connected to the 'Seeing Eye People' via leashes. The 'Seeing Eye Person' service was then offered to real people to help them text and walk safely and to gauge community reactions.

Distracted Walking Law

Due to the proliferation of smartphone use across the world, many jurisdictions are grappling with the role distraction plays in pedestrian safety. Some have even gone further by introducing a distracted walking law.

Honolulu, Hawaii: In October 2017, became the first city to fine pedestrians for using an electronic device when crossing the road.¹¹

Montclair, California: Introduced a ban in January 2018 on using a mobile phone while crossing the road.¹²

Until more data is obtained to quantify the role of distracted walking in pedestrian crashes, the NRMA does not believe such a law is warranted, but the above provides an interesting perspective on how other jurisdictions are tackling the issue.

Vulnerable Pedestrians

As well as distracted walkers, there are three pedestrian user groups that are most at risk of being involved in a crash – children, the elderly and intoxicated pedestrians.

Walking safely as we age

In 2017, almost half (48 percent) of the pedestrians killed were aged 60 or more, although only 21 percent of the population is represented by people of this age.³ Older pedestrians are more likely to be involved in a crash due to their declining function in traffic and their frailty. They take longer to cross the road and once involved in a crash they are less likely to survive due to their injuries.

Drunk walking

The risk of a pedestrian being involved in a crash increases with alcohol consumption. Alcohol impairs judgment, reaction time, vigilance and visual acuity.

The NRMA believes that improved awareness among licensees and patrons of licensed premises about the dangers of walking intoxicated is needed. Community awareness should be conducted on the risks of drink walking through publicity programs.

Kids and traffic

Children are more at risk of being involved in a crash due to their unpredictability and short stature. They do not naturally use their peripheral vision when approaching a road and do not make safe judgments.

Teaching kids how to cross the road safely

The NRMA Science and Road Safety program is delivered free of charge to schools in Sydney, the ACT and regional NSW. We have visited over 650 schools and educated over 270,000 children across NSW and ACT since the program launched in February 2014. The education program not only helps teach children how to cross the road safely but also educates children about inattentional blindness as they are becoming increasingly independent.

Crossing safely

- Always hold the hands of children when crossing the road
- Where possible, cross at a pedestrian crossing, traffic signal or pedestrian refuge
- Never assume a driver has seen you or intends to stop
- Look up from mobile devices and remove earphones when crossing the road
- If you cannot cross the whole road in one go, wait on the pedestrian refuge or median strip

Stop

and wait one step back from the kerb



Look

in all directions



Listen

for approaching traffic in every direction around you



Think

about whether it's safe to cross the road





Catching jaywalkers

Jaywalking is dangerous and illegal. Pedestrian offences are often detected through police enforcement operations conducted to curb dangerous crossing behaviours. These often involve highly visible police officers stationed at high risk or high traffic pedestrian intersections to detect pedestrians illegally crossing the road. This visible police enforcement also acts as a deterrent to prevent others from not safely crossing the road. The Sydney CBD Motorcycle Response Team, a group of highway patrol officers dedicated to improving pedestrian safety undertake targeted operations in the city.

During the 2017-2018 financial year, a total of 6,597 people in NSW were fined for crossing the road when the pedestrian lights were not green.¹⁶

Given the increase in pedestrian fatalities, the NRMA believes that police enforcement operations targeting jaywalking need to be conducted on a regular basis in known high risk locations.

Engineering solutions

Crossings and pedestrian areas in general can be made safer. All levels of government need to work together to ensure that a coordinated approach to infrastructure design and delivery is undertaken to ensure pedestrian safety. Some of the engineering measures that should be considered include:

- Refuge islands on large streets and raised medians to protect pedestrians when crossing the road
- Narrow roadways with traffic calming techniques
- Longer walk times at pedestrian crossings for slower-paced pedestrians
- Installation of overpasses and underpasses
- Reflective pavement markings to increase visibility

The NRMA also believes that pedestrian infrastructure improvements, such as the installation of pedestrian fencing should also be made around known nightlife precincts to stop spill over onto the road.

Countdown timers

Pedestrian countdown timers provide people with information on how long they have left to cross the road. Pedestrians are less likely to cross the road when there is not enough time to finish crossing, making it safer for everybody. The NRMA believes that more pedestrian countdown timers should be installed at intersections where they are most effective.

Waiting at the lights

Reducing the waiting time for pedestrians to cross at a signalised intersections can help to reduce the risk of jaywalking and pedestrian crashes, with minimal impact on traffic congestion. From 7 January 2018, Transport for NSW with the Roads and Maritime Services introduced 90 second pedestrian cycle times across the Sydney CBD. Monitoring was undertaken for a three month period to assess impacts across the network and the wait time was tweaked for certain streets. The change in cycle times has reduced waiting times for pedestrians at signals, meaning more frequent safe crossing opportunities.¹⁴

Green on green removal

Pedestrians need protection from turning vehicles at intersections. Improvements should be made when pedestrians and motorists have a green signal at the same time. By providing pedestrians with their own green light or more time to cross before traffic starts turning will help to improve pedestrian safety. Therefore, the NRMA believes that green on green removal is required in order to reduce pedestrian crashes. There should also be an ongoing review of new technology and signal changes that could lead to safer pedestrian movement.

Lifesaving technology

Safety features in a vehicle can prevent or reduce the impact of crashes. To reduce pedestrian road trauma, not only is the design of the vehicle critical but also the active safety system technologies on-board.

As part of the Australasian New Car Assessment Program (ANCAP) pedestrian safety tests are conducted on vehicles. The design of the front vehicle is assessed as to whether its design minimises injury risk to a struck pedestrian. Vehicles are also assessed for their ability to actively avoid or mitigate impacts with vulnerable road users such as pedestrians and cyclists. By striving for a minimum five star ANCAP rating for all new cars we could help reduce the severity of crashes involving pedestrians.

Fleet vehicles play an important role in influencing the new vehicle market and the broader Australian fleet once these vehicles enter the second-hand market. Governments, major corporations and business that adopt a five star vehicle purchasing policy can have a positive effect on road safety, in particular pedestrian trauma.

It is also pleasing that ride share platforms are taking vehicle safety seriously. From 1 October 2019, Uber Australia will require all vehicles which sign up to the Uber Australia rides platform to have a five star ANCAP safety rating or meet specific safety requirements.

The NRMA believes that all government vehicles should be fitted with the best available safety features and with a minimum five star ANCAP rating.



Autonomous Emergency Braking (AEB)

Vehicles with Autonomous Emergency Braking with pedestrian detection have sensors that detect the speed and distance of objects in the vehicle's path. If the sensors detect a risk of collision with a pedestrian, vehicle or object ahead and the driver does not respond, the brakes are automatically applied. Reverse autonomous emergency braking technology is also now available in new cars. The NRMA believes that fleet buyers and consumers should be encouraged to purchase vehicles fitted with reverse autonomous emergency braking technology when buying a new car.

Reversing aids

Seventy percent of back over crashes happen when people are parking or reversing from a driveway.¹⁵ Reversing collision avoidance systems such as reversing cameras help drivers to detect pedestrians and objects that are behind the vehicle. This is important for safety of children around driveways.

A study of 3,172 pedestrian injuries in Australia and New Zealand found that vehicles with a reversing camera are 41 percent less likely to be involved in a back-over crash.¹² Many new vehicles on the market now come with reversing cameras and sensors however older cars can be retro-fitted with reversing cameras to improve pedestrian safety.

Quieter vehicles

From electric vehicles to trams, vehicles are getting quieter. That is great news for noise pollution but not so good for pedestrian safety.

EV's

Electric vehicles can barely be heard when travelling at low speeds, especially if pedestrians are wearing headphones.

We have seen global action from the United States and Europe to combat this safety issue with regulations passed on minimum noise standards. Recently the European Union issued a directive that requires all new electric and hybrid vehicles to emit a sound when travelling at low speeds by 2021. As more electric vehicles enter the Australian fleet, policy makers will need to turn their attention to how Australia will tackle this issue.

Light Rail

People think that light rail is loud – it isn't according to Transport for NSW. Light rail is quiet and they can't stop easily or quickly. This highlights the importance of awareness campaigns that educate pedestrians around light rail safety. Pedestrians should always look in both directions before they step out, and remove headphones when around light rail tracks.



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