Government of **Western Australia**
Road Safety Commission

ROAD SAFETY COUNCIL

Your ref: A710639

Ref: F18-10: F18-177; D18-9201; D18-9011

3 October 2018

Hon Aaron Stonehouse MLC
Chairman
Select Committee on Personal Choice and Community Safety
Parliament House
4 Harvest Terrace
WEST PERTH WA 6005

Dear Chairman

RE: Inquiry on Personal Choice and Community Safety

Thank you for the invitation to provide a written submission to the Inquiry on Personal Choice and Community Safety.

According to the Terms of Reference provided in your letter, the submission of the Road Safety Council, addresses Terms of Reference 2 and 3.

Please find attached submission.

Yours sincerely

Iain Cameron
ROAD SAFETY COUNCIL CHAIRMAN

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The Hon Aaron Stonehouse MLC
Chairman- Select Committee on Personal Choice and Community Safety
Legislative Council, Parliament of Western Australia

Road Safety Council Submission

Dear Hon Aaron Stonehouse

Thank you for the invitation to provide a submission on matters relevant for the Select Committee on Personal Choice and Community Safety.

The legislated functions of the Road Safety Council include recommending measures to improve the safety of roads and to reduce the deaths of people and injuries to people resulting from incidents.

Road trauma is a significant public health issue with about 180 deaths and 2200 serious injuries annually in WA, 1200 deaths and 37,000 serious injuries nationally and 1.25m deaths and 50 million serious injuries globally.

Western Australia is currently the second worst performing State when it comes to serious road trauma having been the best performing State in the late 1980's.

The scale and variety of factors involved in crashes require a multitude of responses. Internationally, the safe system approach involving managing the road system for safe behavior, safe vehicles, safe speeds, safe roads and roadsides and effective post crash care is agreed as leading practice.

Australia is regarded internationally as a leader and very successful in reducing serious road trauma with legislation requiring people to take actions for their own and other's safety including seatbelt wearing, random breath testing, alcohol limits, helmet wearing and requirements for novice drivers.

Decisions by elected members of our community to remove these measures without alternatives will almost certainly result in an increase in serious injury and deaths for our community.

The so called "ripple effect" describes how the impact of road injury and death extends far beyond the individual and their personal decisions to families, friends, first responders and carers and costs the WA community about $2.4bn annually creating a significant opportunity cost for money that could be spent elsewhere for community benefit.

Myself and subject matter experts from the Council welcome the opportunity to appear before the Committee to elaborate on any aspects of this submission.

Yours sincerely

Iain Cameron
Chairman Road Safety Council
1 October 2018

Road Safety Council Submission

Select Committee on Personal Choice and Community Safety

Legislative Council, Parliament of Western Australia

Terms of Reference 2: outdoor recreation such as cycling and aquatic leisure including any impact on the well being, employment and finances of users and non-users; and

Terms of References 3: any other measures intended to restrict personal choice as a means of preventing harm to themselves.

Every century comes with a major public health warning about the harm we inflict on ourselves. In Britain in the nineteenth century it was the diseases we spread by tolerating open sewers. In the twentieth century it was tobacco that we slowly learned to love then fear. In the 21st century it is the way we tolerate how cars are allowed to travel on our roads.

- Danny Dorling, The 21st Westminster Lecture on Transport Safety November 2010.

Road Injury Trends

The standard of health we enjoy today in Australia owes much to public health initiatives over the past 100 or more years, including controlling communicable diseases, the safety of food and water, and reducing risk-taking behaviours, such as smoking, drink driving and speeding.

Road safety or road injury prevention within public health is a stunning story of success for our community.

In Australia between 1975 and 2013:

- the population increased by 66%;
- vehicle registrations increased by 174%;
- road crash deaths decreased by 68%; and
- road deaths population rates decreased from 26.6 to 5.1 deaths per 100,000 population. (BITRE 2014a)

However, road trauma still costs the Australian community about $27bn per annum, equivalent to the national Defence or education budgets. In Western Australia, road trauma costs about $2.4bn per annum.

Despite the success to date, road trauma still imposes a substantial burden on individuals, families, workplaces and our community.

Today, there are about 180 people killed and 2200 seriously injured each year on Western Australian roads, 1200 killed and 37,000 seriously injured nationally and 1.25 million killed and 50 million seriously injured worldwide.

Growing up in a motorised country, we have become used to a “road toll”, an annual count of people killed, and accepted that road trauma is a daily and expected event. However, it does not have to be this way, as, in public health terms, this is an epidemic that is largely preventable.

Comparatively, Australia performs slightly better than the median of OECD countries with 5.34 deaths per 100,000 population in 2016 compared to the 5.38 median, but well behind leading countries Norway (2.59), Sweden, (2.74) and the UK (2.79) and ahead of the United States (11.59).

Western Australia (7.55 in 2016) is the second worst performing state in Australia.

Since 2008, when Western Australia embarked upon an ambitious improvement journey under its Towards Zero strategy to reduce serious road trauma by 40% by 2020, there has been a 28% reduction in the number of people killed and seriously injured each year.

The biggest improvements (60% reduction) have come for young people aged 17-20 years, which is largely due to safer vehicles, random breath testing, speed enforcement and mandatory supervised driving hours and restrictions for novice drivers.

There has been a large decrease (40%) for vehicle occupants due to safer vehicles, random breath testing, speed enforcement and safer roads.

A more modest 12 % reduction has occurred for pedestrians and increases of 31% for motorcyclists and 38% for pedal cyclists have occurred.

The above trends are consistent with national and international trends.

Road trauma prevention is a public health Issue

Western society places importance upon individual choice, autonomy and self-reliance. Personal choice is important; however, what should be the limits to our personal autonomy, particularly where it may adversely impact on others?

Many of the problems in road safety are hidden or less obvious to the general public. This impacts on what choices people make when they use the roads, and what they are prepared to accept as safety interventions.

A culture of “blame the other person” exists with repeated surveys showing that almost everyone rates themselves as an above normal driver.

Our appreciation of risk at an individual level does not align with the level of harm that occurs for our community. People are often neither aware nor informed about the level of risk present in road traffic situations. Personal

choice must come with individual responsibility for being fully aware of the risk of personal choices to self and others.

Speeding behavior is one example. There is a vast body of scientific literature available that demonstrates serious road trauma is reduced whenever prevailing speeds across the road network are moderated.

Campaigns to “drop 5 save lives” drew upon research showing that crash risk in 60km/h zones doubles at 5km/h above the limit. This is the same relative crash risk as having a blood alcohol limit of 0.05 BAC and the same crash risk accrues from being awake for 17 hours and driving. For every 1 per cent reduction in the mean speeds of vehicles on the road network, there is a corresponding 3 per cent reduction in serious crashes and a 4 per cent reduction in fatal crashes.

Individuals may choose to speed for immediate personal gains, such as passing other traffic, catching a green light, or getting to their destination quicker. Depending upon the increase in speed above the limit, the increase in crash risk to the individual may be quite small and is, therefore, frequently assessed as not dangerous by individuals.

A large number of drivers, all taking a small additional risk, results in a collective increase in risk across all traffic, which results in more serious crashes occurring. This classic public health dilemma was well illustrated in an analysis of speeding related crashes on Perth 60km/h roads.

The analysis showed that one third of the collective risk came from a relatively few drivers exceeding the speed limit by more than 20km/h, one third came from a larger number of drivers travelling between 10 and 20 km/h over the limit, and one third of the problem came from a much larger number of drivers travelling up to 10km/h over the limit (Holman 2011).

It is not surprising that a large number of drivers exceed speed limits relatively frequently. Most police forces apply a tolerance to their enforcement of speed limits, which contributes to the unintended consequence of reinforcing a belief that the signed limit is indicative only.

Proposals by governments to mandate safe behaviours, such as seatbelt wearing, helmet wearing by motorcyclists and cyclists; to proscribe certain behaviours, such as drink and drug driving, and the use of speed cameras to enforce speed limits, are often opposed on the grounds of personal choice.

Given driving behaviour is viewed as a matter of personal choice, and that most people regard themselves as above average drivers, many falsely believe that death and serious injury on the roads is the fault of the aberrant few who are in some way deficient in driving ability.

Media reporting often exacerbates this view. Often reporting focuses on sensationalised crashes involving high speed by an intoxicated young man in a high- powered car. The reporting of the woman in her 60’s who quietly falls asleep momentarily and runs off the side of a country road into a tree receives little attention. This helps to distort the understanding and view of most people

as to what causes traffic crashes.

It is a difficult to communicate and ensure understanding of the concept that each of us must forgo an immediate benefit or a personal choice in order that others (including ourselves) will benefit in the long run overall.

In Western Australia, after many years of successful education, enforcement and legislation, there have been large reductions in the number of crashes involving risk taking.

Today, only one in every four (25%) serious crashes involves a person speeding, drunk or not wearing a seatbelt or a restraint. Three in every four are an otherwise compliant person making a mistake, lapsing in concentration or being tired.

Public policy setting in road safety can be controversial. Despite the evidence, the advent of seatbelt wearing laws was preceded by public opposition.

The former Chairman of the Road Safety Council, Mr Grant Dorrington described his father's opposition to the laws. "Dad was a Rat of Tobruk in the Second World War and said that he fought for our freedom and way of life, which includes freedom to choose. No one can make laws to make me wear a seatbelt, it's my life and my choice. His wife added - shut up you old fool, it is not just about you, take yourself out and your family suffers, - put the belt on".

Now 40 years later, about 98% of the population wear seatbelts and it is just part of our driving experience. Similarly changes to drink driving laws, controversial at the time are now accepted for community safety.

Lower speed limits with enforcement, however, remains controversial among some. About 40% of people surveyed said they occasionally or regularly exceed the speed limit.

However, speed limit compliance is improving as travel speeds continue to fall and about 99% of all people monitored through speed cameras in Western Australia do not receive an infringement.

Eliminating road trauma substantially is possible. It is not per se a technical problem; it is a cultural problem that can be solved with the community understanding that support for measures which enable a safe road system, that accepts people are fallible, guides safe behaviour and provides protection so the outcomes of road crashes are no longer serious, will further reduce death and injuries.[1]

[1] *Johnston, Muir and Howard (2014), Eliminating Serious Injury and Death from Road Transport; A Crisis of Complacency.*

What Measures Have Worked in Road Safety?

1. General Measures

Around the world including Australia, seat belt wearing has been the largest and most consistent factor contributing to reduced road fatalities identified in a review of 25 countries conducted by the Australian Bureau of Infrastructure, Transport and Regional Economics (BITRE 2014a).

Blood alcohol legislation and enforcement through random breath testing has also been one of the biggest contributors since the 1990's. Lowering the blood alcohol limit in Australia from 0.8 to 0.5 grams per litre of blood contributed to reducing road deaths by 10% in Australia (BITRE 2014b).

In Western Australia, random breath testing has contributed about 8% per year to reducing fatal crashes since 2008 (Road Safety Council 2018).

Speed limit legislation and enforcement have lowered the road fatality rate further in Australia and overseas since 2000.

In France, the introduction of a 50km/h urban speed limit resulted in the road fatality rate dropping by 12% (BITRE 2014b). In Denmark, Victoria and Western Australia, road deaths dropped by 20% following the introduction of a 50km/h urban speed limit. The biggest beneficiaries were cyclists, pedestrians and motorcyclists.

In Western Australia, compared to 2008, automated speed enforcement cameras have contributed an 8-10% reduction in fatalities each year, particularly since 2010 when additional enforcement was applied (Road Safety Council 2018).

Road improvement and vehicle safety improvements have contributed steadily in the background with vehicle safety estimated to have contributed up to 35% of the total improvement in the last 20 years nationally.

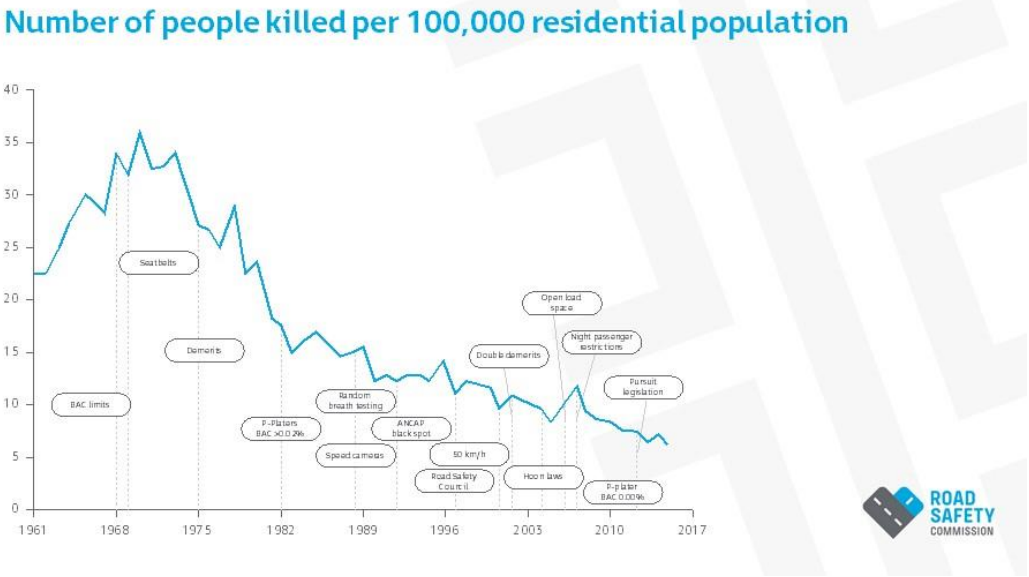
Single vehicle run off the road crashes are the most common serious crash on WA regional roads making up 70% of all serious crashes. Sealing the road shoulders and applying audible edge-lining was found to have saved up to 70 people from serious injury over a three year period with the treatment providing a benefit cost of $2.10 for every $1 invested (Chow et al 2016).

Most serious crashes occur at intersections in urban areas with engineering treatment and speed and red-light cameras proving very effective.

Graduated licensing programs for novice drivers have been shown to be very effective in Western Australia, Australia, New Zealand, the USA and Canada contributing to up to a 30% reduction in fatal crashes. These programs typically include requirements for mandatory hours of supervised driving experience, night time and passenger restrictions, bans on mobile phone use and reduced demerit points.

There is strong evidence that legislation requiring the wearing of seat belts, limits on speed and blood alcohol levels and the road-side monitoring and enforcement of these laws, are effective measures to reduce serious road trauma. The effectiveness of laws in increasing helmet use and decreasing head injury is supported by evidence that helmets reduce the risk of death and head injury (Department of Health, WA 2015).

The diagram below summarises the impact of major road safety initiatives and their contribution to reducing road trauma.



2. Bicycle Helmets

Mandatory bicycle helmet wearing is contentious.

Proponents of helmet wearing, including the medical profession and other public health professionals, cite studies showing the protective benefits and stating that the evidence of a negative impact of helmet wearing on cycling rates is either based on dated research or poor quality and inconclusive research.

Other groups argue for individual choice, claiming there is limited protective benefits of helmets and that cycling rates have been negatively affected by mandatory wearing requirements.

There have been several parliamentary reviews of bicycle helmets in Australia, the latest being the Senate Economic References Committee of the Australian Parliament in 2016 (Comm of Australia 2016).

The Senate Committee recognised that the efficacy of bicycle helmets is contentious and that a lack of comprehensive data adds to the contention. The Committee recommended that a consistent and comprehensive national

data set be developed and then a national assessment of mandatory bicycle helmet laws once a national data set of sufficient quality is established.

The requirement for the use of bicycle helmets is included in the Australian Road Rules, national model legislation which is adopted into law by all Australian States and Territories. All States and territories introduced the laws progressively during the 1990's as part of nationally agreed 10-point road safety plan by the Prime Minister. Australia was one of the first in the world to enact mandatory bicycle helmet laws and was followed by New Zealand and the United Arab Emirates.

The Dutch research institute SWOV is one of the world's leading and most respected road transport research organisations. The Netherlands is often quoted as an example of a bicycle friendly country without helmet laws.

SWOV publishes research fact sheets on road safety. A summary of the SWOV fact sheet on bicycle helmets is produced below as it quotes a range of research that did not feature in the recent Australian review.

SWOV notes the range of research on the topic of helmet wearing and the benefits for reducing head injury among children and older adults.

Some argue that compulsory helmets should only apply to children but the evidence from SWOV and also WA data shows that adults are at risk also. Crash data analysed by the Road Safety Commission shows that, in WA in 2016, children aged 0-16 years were the largest group of people killed or seriously injured as cyclists. This is followed by people aged 40-49 and 50-59 potentially reflecting bicycle usage patterns of exposure.

Expressed as a rate per 100,000 population, people in the middle age groups are killed and seriously injured at a rate almost double those of children.

SWOV Fact Sheet on Bicycle Helmets (SWOV 2018a)

Nearly one third of all cyclists in the Netherlands who are severely injured in a bicycle crash sustain head and/or brain injury. More than 800 cyclists per year sustain head and/or brain injury in a collision with a motor vehicle. More than 2500 cyclists per year suffer from head and/or brain injury after a crash or a fall not involving a motor vehicle (bicycle-only crash).

In 86% of the cases the head injury of a cyclist is (also) brain injury. A bicycle helmet offers the best possible protection against head injury for impact speeds up to approximately 20 km/h. The use of a bicycle helmet reduces the risk of severe head injury by more than 65%. The more the impact speed exceeds 20 km/h, the more the protective effect of the helmet declines. SWOV has calculated that a mandatory bicycle helmet use for young children in the Netherlands can lead to annual savings of 5 road deaths and 140 serious road injuries.

For older cyclists mandatory helmet use can lead to annual savings of also 5 road deaths and 220 serious road injuries. On the other hand, such a compulsory measure may reduce bicycle use, which could be negative for public health and the ambitions in the area of accessibility, liveability and sustainability.

Mandatory helmet use will increase helmet use and will protect more cyclists against head and/or brain injury in a bicycle crash. Yet there is almost no support for mandatory helmet use in the Netherlands, not even from traffic organisations (Aarts et al., 2014b). For specific target groups that run a slightly more risk in traffic, such as children and the elderly, SWOV has made an estimate of possible injury reductions due to mandatory helmet use.

SWOV expects that a mandatory bicycle helmet for young children (0-11 years) in the Netherlands can lead to annual savings of 5 deaths and 140 serious road injuries. Mandatory helmet use for the elderly can lead to annual savings of 5 deaths and 220 serious road injuries (Aarts et al., 2014a).

A possible downside is that mandatory helmet use reduces bicycle use, which can be negative for public health. De Jong (2012) calculated that this outweighs the potential benefits of more bicycle safety. Sieg (2014) also concludes that bicycle helmet legislation for Germany leads to more costs than benefits. Newbold (2012), who extended the calculation model of De Jong, concludes that mandatory helmet use in the United States will indeed result in an improvement in public health.

Berenbaum et al. (2015) conclude that there are mixed results about the effects of bicycle helmet legislation on bicycle use.

Olivier et al. (2014; 2016) conclude that there is no convincing evidence that that bicycle helmet legislation would lead to less cycling.

3. Motorcycle and Moped Helmets

Wearing a crash helmet is an important contribution to road safety. If a helmet is worn, the risk of being killed in a motorcycle crash decreases by about 42% (SWOV 2018b).

A helmet that meets standards offers good protection for moped riders and motorcyclists. A crash helmet prevents or reduces the severity of head and neck injury in a crash.

An international survey of 61 studies shows that wearing a motorcycle helmet decreases the number of fatal crashes by about 42% and the risk of severe head injury by about 69% (Liu et al., 2007).

By comparison to Australia and many developed countries, motorcycle helmet wearing in the United States is very low and provides a useful case study. The example of Florida, in the box below, illustrates the impact of low helmet wearing on personal and public health.

> In Florida in 2000, motorcycle riders over the age of 20 and with at least $10,000 of medical insurance were exempted from the law.
>
> The President of a Florida motorcycle rights group was quoted as saying " *We want it left up the individual. I only wear a helmet when it is cold or raining*".
>
> In 1999, when helmet wearing was still compulsory 22 un-helmeted riders died, by 2004 the number killed not wearing a helmet had risen to 250.
>
> The power of individual choice over riding community benefit is dramatic. (Johnston, Muir and Howard 2014).

Market forces do not operate fully in road safety. Individuals are largely not charged the full cost of their exposure to risk and the cost of medical treatment. The wider pool of road users subsidises the costs of motoring, so that it is affordable for individuals. The relative risk of being injured in a motorcycle crash is many times higher than that for vehicle occupants but the full costs of insuring a motorcycle rider is averaged out across the insurance pool of personal injury funds. In return, it is necessary for individuals to take measures for their own and others' safety.

4. Children and Young People

Children and young people represent a particularly vulnerable group of people in our community using our roads as drivers, motorcyclists, passengers, pedestrians, cyclists and users of small wheeled vehicles like scooters or

skateboards. Young people have been traditionally over-represented in fatalities and serious injuries on Western Australia's roads. Encouragingly, in recent years, the rate of improvement in the safety of children and young people is improving at a faster rate than the population generally.

This higher rate of improvement reflects the high value our community places on the safety of children and young people and the community support for measures implemented including:

- child car restraint legislation;
- bicycle helmet legislation;
- changes to cycling legislation to permit all cyclists to ride on all footpaths;
- the Graduated Rider Training and Licensing system (GDT&L system) including zero BAC for supervising drivers;
- the Learner Approved Motorcycle Scheme (LAMS);
- compulsory wearing of seat belts;
- traffic-warden controlled school crossings; and
- school zones.

The state government funds the School Drug Education and Road Aware program to assist in the implementation of road safety in school communities. The highly successful school-based Keys for Life pre-driver education program along with the GDT&L system and LAMS were implemented in 2004 to reduce the number of young people involved in crashes.

These are working as the rate of improvement in the safety of children and young people exceeds the rate of reduction for the population overall.

Looking Ahead for Further Improvement in Road Safety

Internationally, nationally and locally there is increasing commitment by Governments and international organisations to further reduce the unacceptable burden of preventable road trauma.

At meetings hosted by the WHO in Geneva in November 2017, 60 governments with UN agencies drafted targets, which will provide the basis for measuring and guiding progress towards the SDG road safety objectives.

Sustainable Development Goals (SDG) target 3.6 seeks to halve road traffic deaths and injuries by 2020 and SDG target 11.2 includes a focus on providing safe, sustainable transport systems for all, improving road safety and with special attention to key groups such as children and the vulnerable.

The agreed targets are also in line with the Decade of Action for Road Safety and it's five pillars - road safety management, safer roads and mobility, safer vehicles, safer road users, and post-crash response.

WHO Director General Dr Tedros Adhanom Ghebreyesus emphasised the importance of the work, particularly for children and young people. "Road injuries are the top cause of death for young people. It is simply not possible

to improve child and adolescent health if we don't address road crashes".

"By making roads and vehicles safer, and by improving the behaviour of road users, we can prevent road traffic crashes from happening in the first place."

Of the 12 targets, 11 are aimed at 2030. They include: all new roads to achieve technical standards for road safety or meet a minimum three star road assessment rating; halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities; increase the proportion of motorcycle riders correctly using standard helmets to close to 100%; and halve the number of road traffic injuries and fatalities related to drivers using alcohol.

A target for all countries to establish a comprehensive national road safety action plan is set for 2020. (FIA Foundation 2017)

In Australia a review into the recent stalling progress in national road safety has made 12 recommendations:

1. create strong national leadership by appointing a Cabinet Minister;

2. Establish a national road safety entity reporting to the Cabinet Ministers;

3. commit to a minimum $3bn a year road safety fund;

4. Set a vision zero target for 2050 with an interim target of zero for all major city CBD areas ad high volume highways by 2030;

5. establish and commit to key performance indicators;

6. Undertake a national road safety governance review by March 2019;

7. Implement rapid deployment and accelerated uptake of proven vehicle safety technology and innovation;

8. accelerate the adoption of speed management initiatives that support harm elimination;

9. invest in road safety focused infrastructure to accelerate the elimination of high-risk roads;

10. make road safety a genuine part of business as usual for all levels of government;

11. resource key road safety enablers and road safety innovation initiatives; and

12. implement life saving partnerships with countries in the Indo pacific and globally as appropriate to reduce road trauma. (Inquiry into the National Road Safety Strategy 2011-2020).

In a 2014 review, the Australian Bureau of Infrastructure, Transport and Regional Economics noted that vehicle safety technology are set to take over from the three main measures that have reduced road trauma so far (seatbelts, blood alcohol testing and speed enforcement) to deliver further reductions in the road fatality rate. (BITRE 2014a)

BITRE also noted that drug limit legislation and enforcement- random drug testing are also set to have a major impact as testing becomes more common. In Norway, the introduction of drug legislation in 2011 was associated with the road fatality rate dropping by 22%. In 2010, New Zealand introduced measures for young drivers, along with measures affecting drug users. The combined effect was to reduce the road fatality rate by 30 percent.

In Western Australia, the current Towards Zero road safety strategy is reaching the end of its life.

In early 2019, the Road Safety Council will be engaging with the community in the development of a new strategy to inform and guide road safety directions beyond 2020.

For people using Western Australian roads to enjoy the same safety levels as people in other Australian states and territories, more will need to be done.

How much road safety we get depends upon what we as a community are prepared to support.

Leading practice in road safety policy and strategy is quite clear that, to get further gains in reducing serious trauma, we need a paradigm shift in our approach to viewing and tackling the problem. We need to move beyond blaming errant and non-compliant individuals through law and order responses to a safe system response that accepts everyone make mistakes and some take risks in traffic.

Changing the culture of the way we view our roads and how we travel is vital to achieving further gains in safety for our community.

Conclusion

Public health advocates for improved traffic safety are criticised for unwanted social engineering. However, change is justified when an individual's actions can be shown to have an adverse impact on others. It is difficult in road safety to find examples of where personal choice decision making to take a risk does not impose a burden on the collective community.

There is no doubt that the boundary or balance that must be found between individual responsibility and choice and collective responsibility and burden is culturally determined. As our understanding grows and information about crash risks becomes widely available our community advances in safety culture and accepts further change.

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