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AAA Submission to Inquiry into Aspects of Road Safety in Australia

The Australian Automobile Association (AAA) is the peak organisation representing Australia's motoring clubs. The AAA's constituent clubs are the NRMA Motoring and Services, RACV, RACQ, RAC (WA), RAA (SA), RACT, AANT and the RACA. Combined, these clubs represent more than seven million Australian members, and advocate on behalf of all road users.

The AAA welcomes the opportunity to provide a submission to the Rural and Regional Affairs and Transport References Committee regarding the Inquiry into Aspects of Road Safety in Australia.

The AAA is a strong supporter and advocate for road safety and is focused on reducing death and injury for all road users.



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Inquiry into Aspects of Road Safety in Australia

Submission by the Australian Automobile Association to the
Senate Rural and Regional Affairs and Transport References Committee

February 2015



Australia's Road Safety Problem

In 2008, 2009 and 2010 an average of 1,426 people were killed each year and 32,500 people were hospitalised each year as a result of crashes on Australian public roads. This is an average of around 4 deaths and 89 hospitalisations per day.

The National Road Safety Strategy 2011-2020 has set a target to reduce deaths and serious injuries by at least 30 per cent when compared to the average of 2008, 2009 and 2010.

In 2014, 1,153 lives were lost on Australia's roads, and Australia is currently on track to meet the fatality reduction target of the National Road Safety Strategy 2011-2020. However, despite these efforts, over the first four years of the National Road Safety Strategy 2011-2020, 4,827 people lost their lives. Over the ten-year term of the strategy we can expect that over 12,000 people will be killed on Australia's roads, despite achieving the targeted reduction in the overall road toll. It is also estimated that there are around 30,000 hospitalisations per year as a result of road crashes.

Road deaths and injuries are a terrible and tragic consequence of our road transport system. However, these deaths and injuries are preventable and we must not be complacent in allowing people to be killed on our roads. These levels of death and injury would be completely unacceptable in every other facet of Australian life. Such loss of life for airline passengers, train passengers or employees at work would be completely intolerable. Road trauma requires appropriate actions to be taken to prevent this needless loss and suffering. We can and must do more.

This is especially important given that, for every person who is killed or seriously injured in a road crash, there are usually many others who are also heavily affected. This 'ripple effect' of road crashes can have significant social and economic impacts on crash victims' families, friends, community groups and employers.

While the behaviour of road users has some influence on the likelihood of a road crash, we need to avoid placing all the blame on the driver. Appropriate design of road infrastructure and vehicles can prevent or reduce the likelihood of crashes, and reduce the injury severity of those crashes that do occur. This can minimise the level of road trauma suffered and reduce costs to society.

The financial impact of the road toll is significant to the Australian economy. The recent report from the Bureau of Infrastructure, Transport and Regional Economics (BITRE) *Impact of road trauma and measures to improve outcomes*, published in December 2014, estimates the cost of road crashes in Australia at \$27 billion per year. To put this into perspective – the annual cost of the road toll is comparable to Australia's 2014-15 Defence or Education budget (\$24.2 billion and \$29.6 billion respectively).

In the BITRE report, vulnerable road users (pedestrians, cyclists and motorcyclists) were identified as being at relatively high risk.

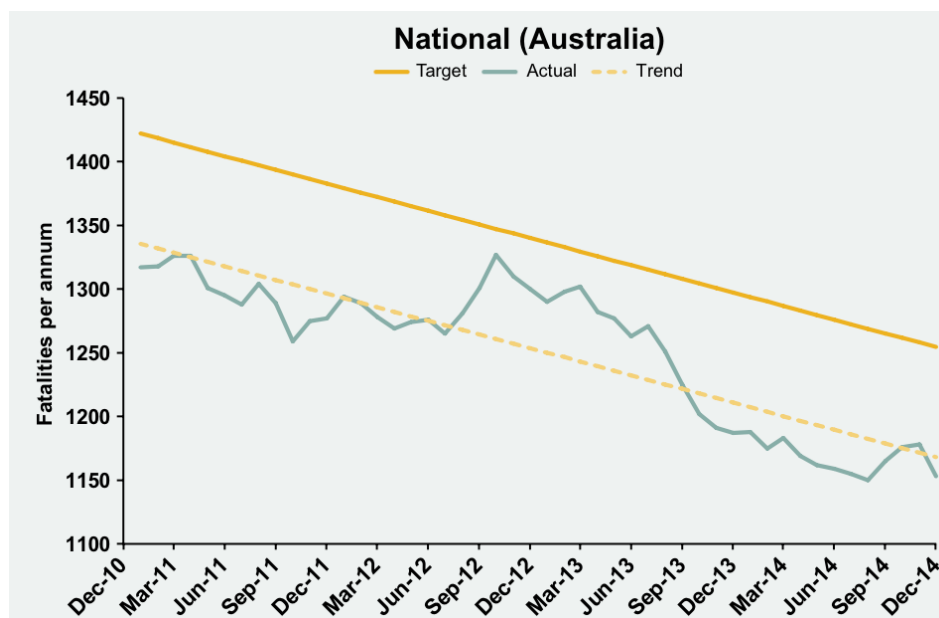
The report evaluated a number of potential measures to further reduce road trauma including infrastructure treatments, vehicle technology, reducing mobile phone distraction and actions to improve safety for vulnerable road users.

National Road Safety Strategy (NRSS)

In May 2011, the former Australian Transport Council (now Transport and Infrastructure Council) released the National Road Safety Strategy 2011-2020 (NRSS).

This National Road Safety Strategy specifies two targets, requiring a reduction of at least thirty per cent in the number of fatalities and the number of serious injuries.

According to the AAA's analysis of the road crash fatalities, the NRSS is currently on track to reduce fatalities by at least thirty per cent. Given that the 30% reduction is currently on track to be achieved, the AAA proposes that a more ambitious target should be set. The AAA believes that a 50% reduction in projected fatalities and serious injuries should be set for Australia, and actions reviewed to properly address road safety and achieve this target.



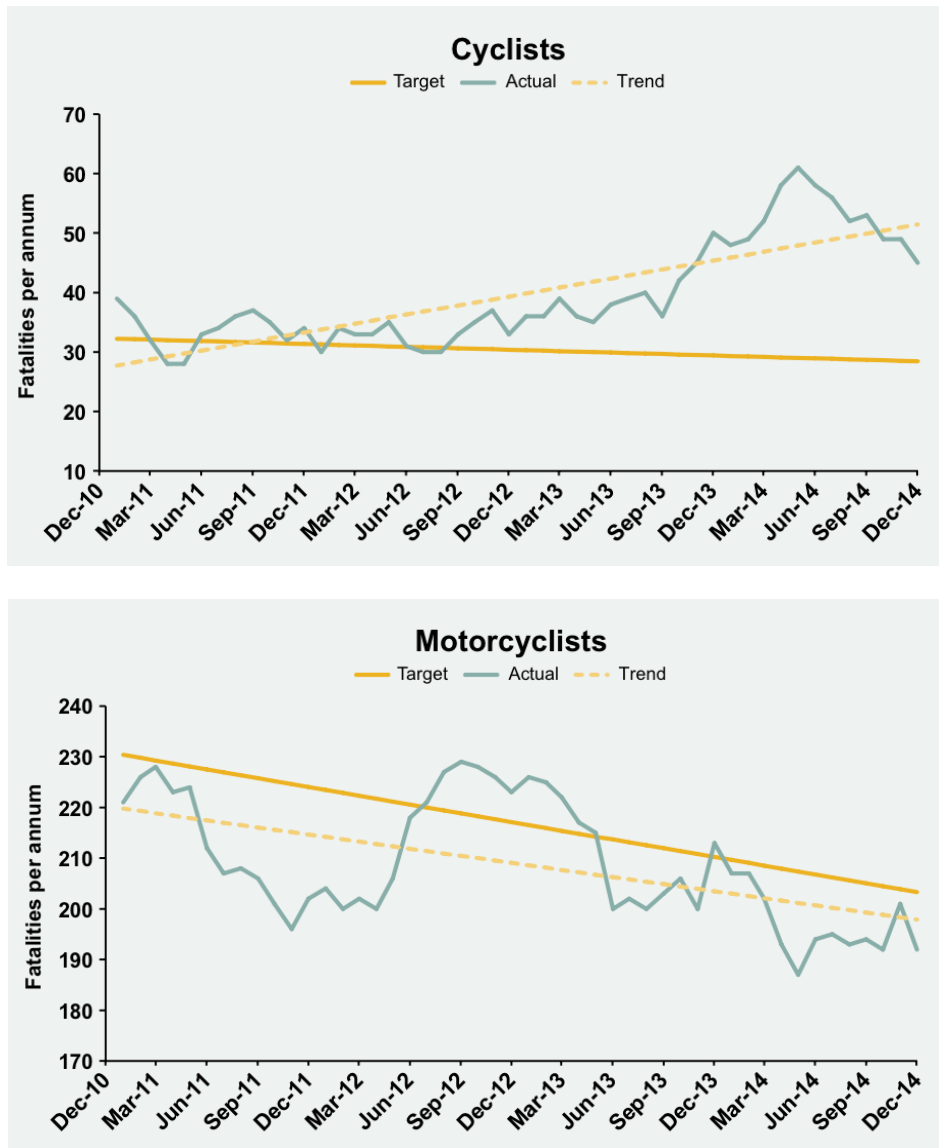
Progress on reducing the number of serious injuries is a major issue. Australia's State and Territory Governments have no common definition on what constitutes a serious injury. Without accurate data, there is no way to monitor the effects which safety measures have had on serious injuries. Four years into the current National Road Safety Strategy, we are still unable to even measure the number of serious injuries, let alone target a particular reduction.

The National Road Safety Strategy 2011-2020 was recently subjected to a review from which the National Road Safety Action Plan 2015-2017 was developed.

The review of the National Road Safety Strategy found that *“progress in reducing serious injury numbers was difficult to determine because of the lack of reliable, nationally consistent, non-fatal crash data. Available hospital data provided some evidence that serious injury levels had not declined in concert with the general downward trend in deaths”*. The measurement of serious injuries must be addressed

urgently in order to be able to assess the effectiveness of actions in reducing road trauma.

It is pleasing to see that the National Road Safety Action Plan 2015-2017 focuses on vulnerable road users, as the results to date show that safety improvements for vulnerable road users have been inadequate. In particular, the number of cyclists killed nationally has continued to increase and the trend in fatalities for motorcyclists is declining at a rate that is not sufficient to achieve a thirty per cent reduction in fatalities for this group of road users.



Recommendation 1: A more ambitious target of a 50% reduction in fatalities and serious injuries should be set for Australia.

Recommendation 2: The measurement of serious injuries must be addressed urgently in order to be able to assess the effectiveness of actions in reducing road trauma.

Infrastructure Investment

The Australian Road Assessment Program (AusRAP) is a program run by the Australian Automobile Association and State and Territory automobile clubs, dedicated to saving lives through advocating for safer road infrastructure.

In June 2013, the AAA released a report *Star Rating Australia's National Network of Highways* (see [http://aaa.asn.au/storage/ausrap-star-rating-report.original\(2\).pdf](http://aaa.asn.au/storage/ausrap-star-rating-report.original(2).pdf)). The Australian Government provided a funding contribution to this project through the Department of Infrastructure and Transport.

In the report, AusRAP assessed the safety risk on almost 22,000km of road on the National Land Transport Network with a speed limit of 90 km/h or greater.

The AusRAP Star Rating analysis measures the inherent safety of a road's infrastructure – that is, the degree to which built-in safety features prevent crashes from occurring and reduce the severity of those crashes that do occur. The network is analysed in 100m segments and well-established research data are used to calculate the risk associated with particular attributes of the road. For example, a divided road has a reduced risk of head-on collision when compared with an undivided road with two-way traffic; and lane width, curvature of bends and quality of line markings influence the likelihood of loss of control crashes. The risk is portrayed as a Star Rating, with 1 star the highest risk (worst rating) and 5 star the lowest risk.

Almost 40 per cent of the national network was rated as unacceptably dangerous, with nine per cent rated as 1-star and 30 per cent rated as 2-star.

Jurisdiction	Length (km)	Proportion in each Star Rating				
		1-Star	2-Star	3-Star	4-Star	5-Star
New South Wales	4,721.6	9%	42%	46%	2%	0%
Australia Capital Territory	16.9	0%	18%	60%	21%	0%
Victoria	2,363.4	1%	22%	62%	13%	2%
Queensland	5,108.5	1%	29%	63%	6%	0%
Western Australia	4,671.4	5%	22%	57%	16%	0%
South Australia	2,041.1	14%	23%	59%	4%	0%
Tasmania	366.6	20%	46%	32%	2%	0%
Northern Territory	2,632.2	29%	32%	34%	5%	0%
Total	21,921.7	9%	30%	53%	8%	0%

Importantly, through its Safer Roads Investment Plans, AusRAP also estimates the costs and benefits of a range of road safety treatments and can calculate the reduction in risk that would result, and hence the number of lives and injuries that could be saved.

An investment of \$4.7 billion would bring 85 per cent of the national highway network to a level of 3-star or above. This improvement is estimated to save more than 36,000 lives and serious injuries over 20 years, and save more than \$16.5 billion in road trauma with a benefit-cost ratio of 3.49:1.

AusRAP is also able to detail the types of cost-effective road safety treatment and the location/s at which they should be implemented.

Roadside barriers to prevent collisions with roadside obstacles such as trees and poles are recommended to reduce the risk for more than 8,000 km of road. Other recommended treatments are summarised in the table below.

Countermeasure	Length/Sites	Fatalities and Serious Injuries Saved	Safety Benefit (\$ million)	Estimated Cost (\$ million)	Program BCR
Roadside barriers	8,450 km	19,300	8,739	2,328	3.75
Central median barrier	1,328 km	5,700	2,582	522	4.95
Shoulder rumble strips	4,745 km	4,090	1,852	746	2.48
Skid resistance (paved road)	898 km	2,500	1,130	227	4.98
Protected turn lanes	1,782 sites	1,340	609	82	7.42
Additional lane (2 + 1 road with barrier)	98 km	950	432	361	1.20
Clear roadside hazards	2,213 km	750	341	68	5.00
Street lighting (intersection)	540 sites	520	235	125	1.88

Through Austroads, the state and territory governments have developed the Australian National Risk Assessment Model (ANRAM), which uses the same risk assessment methodology as AusRAP.

The BITRE has undertaken an evaluation of the AusRAP star rating report and the BITRE's analysis confirms that infrastructure measures can reduce road trauma.

The BITRE has found that *“the use of ANRAM with Australian parameters and traffic volumes, with programme BCR analysis, would help in prioritising infrastructure investments to achieve the best safety and benefit-cost outcomes”*.

The National Road Safety Action Plan 2015-2017 includes actions to prioritise and treat high-risk rural and urban roads using ANRAM as an analysis tool to assist in this work. The plan also includes completion of the ANRAM model and establishing a Memorandum of Understanding between road agencies and AusRAP on star ratings.

The AAA believes that governments should invest in road safety infrastructure treatments that are shown to have a positive benefit-cost ratio. This investment provides road safety benefits that are not dependent on the improved behaviour of road users or the purchase of safer vehicles by consumers, and that last for the life of the infrastructure.

The challenge for governments is that infrastructure investment is usually through the infrastructure or transport portfolio, but most of the benefits are realised through the health portfolio. Nonetheless, the economic case for investment in road safety is compelling and requires attention from governments.

As noted earlier, vulnerable road users, including pedestrians, cyclists and motorcyclists, have been identified as being at relatively high risk. Hence, any infrastructure investment in new roads or road upgrades should include consideration of design aspects to provide improved road safety for these road users.

***Recommendation 3:** Governments should invest in road safety infrastructure treatments that are shown to have a positive benefit-cost ratio. An investment of \$4.7 billion would bring 85 per cent of the national highway network to a level of 3-star or above, with a benefit-cost ratio of 3.49:1.*

***Recommendation 4:** The entire National Highway Network should have a minimum safety rating of 3-stars, with all new road sections to be 4-star.*

Improving Vehicle Safety

Australian Design Rules

The Australian Design Rules (ADRs) are mandatory national standards for new motor vehicles under the *Motor Vehicle Standards Act, 1989*. These vehicle standards apply to all new vehicles supplied to the Australian market, regardless of the country of origin.

The AAA supports the continuing use of the ADRs to control the minimum safety specification of all new motor vehicles sold in Australia. It is noted that, for light vehicles, the ADRs are largely harmonised with international standards of the United Nations, bringing this level of safety to Australian consumers at a lower cost due to the ability for manufacturers to amortise the cost over a larger numbers of vehicles.

The AAA acknowledges the work done by the Australian Government to lead the development of a Global Technical Regulation and United Nations Regulation on Pole Side Impact. The introduction of this standard as an ADR should provide increased protection for occupants of light vehicles in side impact crashes.

However, the time taken to examine new regulatory proposals and implement these as ADRs can be rather long. Noting that the development of United Nations regulations involves many other stakeholders, the Australian Government should consider what steps it may be able to take to expedite the processes for new and amended ADRs.

***Recommendation 5:** The use of the ADRs to control the minimum safety specification of all new motor vehicles sold in Australia should be continued, and ADRs should be harmonised as far as possible with international standards of the United Nations.*

***Recommendation 6:** The processes for the development of ADRs should have the shortest possible timeframes to provide the highest levels of safety to Australian consumers at the earliest possible time.*

Review of the Motor Vehicle Standards Act

The Australian Government is in the midst of a review of the Motor Vehicle Standards Act, for which more than 200 submissions were received in response to the initial discussion paper. Most of the submissions supported the continuation of national vehicle standards for vehicles supplied to the Australian market.

ANCAP

The Australasian New Car Assessment Program (ANCAP) has been a highly effective non-regulatory means to increase the safety of new vehicles in Australia. ANCAP is an independent organisation that undertakes testing of vehicles and awards safety ratings to new vehicle models. ANCAP's assessment criteria are more stringent than the regulatory criteria contained within the ADRs, but the ADRs cover a number of vehicle design aspects that are not addressed by ANCAP. The two systems are complementary.

ANCAP's safety rating was originally based on the protection of vehicle occupants in a crash, but has been extended to also include protection for pedestrians when struck by a vehicle, as well as considering collision avoidance technologies.

A number of vehicle manufacturers have incorporated the ANCAP safety rating in vehicle advertising and are striving to achieve 5-star safety ratings for new models. In conjunction with fleet-buying policies from government and private organisations that specify the purchase of 5-star cars, this has helped to improve the level of vehicle safety offered to Australian consumers.

Analysis of the ANCAP Safety Ratings for new cars sold in Australia shows that of the one million new light vehicles sold in 2014, 82 per cent had a 5-Star ANCAP Safety Rating. With a proven track record, there is strong justification for continuing funding for the Australasian New Car Assessment Program and promoting the purchase of vehicles based on safety ratings.

Recommendation 7: *Australian Government funding for the Australasian New Car Assessment Program should be continued and increased.*

Recommendation 8: *Continue to promote the purchase of vehicles based on safety ratings.*

USED CAR SAFETY RATINGS

The Used Car Safety Ratings (UCSR) provide information to consumers on the safety of second hand cars. These ratings are based on statistics collected from car crashes where someone was killed or seriously injured and provide an assessment of how well each vehicle protects its occupants and other road users from death or serious injury in a crash.

Whilst ANCAP has a level of influence over the new vehicles being offered to the market and purchased by Australian consumers, the UCSR can guide consumers when purchasing a second hand car from the existing pool of used vehicles.

The Used Car Safety Ratings are funded by the Australian Government, New Zealand Government, State and Territory Governments, Australian and New Zealand motoring clubs, and some compulsory third party insurers. It is important that stakeholders continue to fund this annual program to provide relevant safety information to consumers.

Recommendation 9: All stakeholders, including the Australian Government, should continue to fund the Used Car Safety Ratings to provide relevant safety information to consumers.

AEB

Autonomous Emergency Braking (AEB) is a vehicle technology that can detect an object in the path of a vehicle and automatically apply the vehicle brakes. Depending on the travel speed of the vehicle and object, autonomous braking may avoid the collision, or reduce the speed at which the vehicle and object collide, thus reducing injury severity.

This technology has only been available for a relatively short time, but studies show promising road safety benefits. The capabilities of AEB are also improving with each iteration of vehicle design. AEB systems can now detect and avoid collisions with other vehicles at urban speeds, as well as detecting and avoiding collisions with pedestrians and cyclists, and also operate in high speed environments.

ANCAP recognises and rewards vehicles fitted with AEB and Australian road safety advocates are also now promoting AEB.

Over time, AEB is anticipated to be required under mandatory vehicle standards. Until such time, consumers need to be encouraged to purchase vehicles fitted with this safety technology.

Recommendation 10: Consumers should be encouraged to purchase vehicles fitted with AEB.

Reversing Cameras and driveway safety

An issue that has increased in prominence in recent years is injury to children from motor vehicles around the home, often in the driveway. These are not counted as part of the road toll because the road toll only considers deaths resulting from crashes that occur on public roads.

However, the driveway incidents generally involve vehicles intended for use on public roads, and the vehicle-based safety measures that could be introduced would provide benefits on public roads and in driveways.

National collation of driveway safety incidents would be highly desirable and these data should be available to policy makers when considering vehicle safety initiatives.

Reversing cameras and systems to detect children around the vehicle and to automatically apply the brakes are available and their fitment and use should be encouraged. Education campaigns to remind drivers to be vigilant, along with practical suggestions regarding separation of play areas and driveways will also be of benefit in reducing driveway injuries and deaths.

Actions to improve driveway safety will be particularly relevant in 2015, as the United Nations Road Safety Collaboration has announced a global campaign for the third UN Global Road Safety Week, 4-10 May 2015, based on the theme of children and road safety: #SaveKidsLives.

***Recommendation 11:** Fitment and use of reversing cameras and systems to detect children should be encouraged.*

***Recommendation 12:** Education campaigns to remind parents about driveway safety should be promoted.*

Breakdown Safety

The AAA's constituent member clubs are providers of emergency roadside assistance for stranded motorists in the event of a vehicle breakdown.

However, the edge of the road is a high-risk environment for both the stranded motorist and the roadside assistance service provider. Clubs record an alarming number of near-misses, and tragically motorists and service providers have been struck by passing traffic and killed in recent years.

While most of the actions to address breakdown safety fall within the responsibilities of the state and territory authorities, there is a need for national leadership and coordination of these actions to ensure a level of national consistency. The AAA considers that the Commonwealth is best-placed to fulfill this role and is seeking assistance from the Australian Government in coordinating appropriate breakdown safety actions through the Transport and Infrastructure Council.

***Recommendation 13:** The Australian Government should provide leadership and coordination of actions to improve safety at vehicle breakdown incidents.*