

Thought Leadership:

Quad Bike Safety – Exploring the Issues

Introduction

Quad bike safety has been an ongoing issue in Australia, gaining prominence recently after the ACCC proposed major changes to improve quad bike safety, including a new safety standard, operator protection devices and minimum stability standards. The ACCC has also highlighted improving the safety of quad bikes as a product safety priority for 2019.

This National Road Safety Partnership Program (NRSPP) thought leadership piece briefly outlines the key issues around quad bike safety in Australia, with a particular focus on vehicle use in the workplace, and brings together several stakeholders with a particular interest in quad bike safety.

Overview

It is difficult to estimate the number of quad bikes in Australia. However, tens of thousands are in daily use in workplaces, for recreation, adventure tours and competitive racing.

According to ACCC figures, the vehicles are responsible for an average of 16 deaths in Australia each year. Of the 126 deaths in Australia since 2011, more than three quarters occurred in Queensland, New South Wales and Victoria. Eighteen of those deaths were children under the age of 16.

CARRS-Q figures show that half of quad bike fatalities were work-related, and that half of all quad bike fatalities resulted from roll overs causing crush injuries or asphyxiation. For every quad bike fatality, CARRS-Q estimates there are 80 hospital and emergency department admissions. Quad bikes are the leading cause of death and injury on Australian farms.

Key issues around the quad bike safety debate in Australia include:

- There is broad agreement that a multi-faceted approach is needed to reduce quad bike-related death and injury in Australia, however there is debate on what those actions should be. Suggestions include encouraging use of alternate vehicles, safety ratings and minimum standards, improving quad bike stability, operator training, and use of devices that protect the operator in a roll over, including fitting crush protection devices and use of helmets.
- Many quad bike related deaths in workplaces, predominantly farms, are caused by operators being crushed by the vehicle or asphyxiation after a vehicle roll over, not injuries from the crash itself, and most incidents occur during normal work practices.
- Operator protector devices, such as roll over bars, can help prevent injury and death in a quad bike roll over.
- A shift is occurring away from quad bikes towards other alternatives, including side-by-side vehicles, and towards installing protective devices, driven in part by subsidy schemes.
- There is agreement that children should never be allowed on adult-sized quad bikes; many believe children should never be allowed on any quad bike.

PARTNERSHIP PROGRAM



Canvassing the issues

The key issue, for SafeWork NSW's Tony Williams is "how we turn around what are unacceptable fatality and serious injury figures".

At the strategic level, he says, a national star rating system similar to ANCAP testing for cars, which operates as a safety standard under the Australian Consumer Law, has the support of safety regulators, government agencies and farming and doctors' associations.

Such a system would provide purchasers, in particular farmers, information at the point of sale on how safe a quad bike or side-by-side vehicle is compared to others. Control measures Tony Williams believes will be driven through the introduction of a safety rating scheme include improving the design of quad bikes to increase stability and encouraging purchasers to consider whether a quad bike is the safest and most practical vehicle for the task or if there is an alternative, such as a side-by-side vehicle.

If a quad bike is the most appropriate vehicle, the next consideration is ensuring operators are safe. That includes increasing training, including for those who might consider themselves experienced operators, requiring the wearing of helmets, and considering the fitment of operator protection devices to protect people in a roll over incident.

"I don't think any regulator anywhere is anti-quad bike. We appreciate they are valuable, useful pieces of equipment on a farm or in a workplace," Tony Williams says. "All we're saying is first of all make sure it's the right vehicle and if you can, get a safer vehicle, like a side-by-side type vehicle. If you still want to use a quad bike, make it safer to use; put a bar on it, wear a helmet, get trained on it, and keep kids off."

Increasing community awareness is important to promote use of protective equipment and showing that, for example, quad bikes and children should not mix. There is also little awareness of the number of hospital admissions and 'life changing events' caused by major injuries, in addition to the fatalities that make news.

PARTNERSHIP PROGRAM

At the farm gate

One sector where there has been an increase in awareness around the risks of quad bike use, and a subsequent shift in attitudes, is among farmers.

Tony Williams points to the farming community as an example of how regulators can work with the community to change practices, taking a 'graduated approach' that strongly encourages better practices rather than punishing non-compliance in the first instance. Farmers have, for example, taken up inexpensive or free training courses provided by regulators, are retrofitting operator protection devices and are purchasing side-by-side vehicles in larger numbers.

In Victoria, more than 4000 farmers have accessed rebates that can be used towards the purchase of side-by-side vehicles or for retrofitting roll over protection bars to quad bikes, says David Jochinke, President of the Victorian Farmers Federation.

About 60 per cent of the \$6m set aside by the Victorian government has been allocated, split between side-by-side vehicles and roll over protection. A similar rebate scheme operates in NSW, but rebates in that state are tied to training.

David Jochinke says the rebates have been an effective way of encouraging farmers to transition to safer vehicles. However, that is just one part of the story. A multi-faceted approach, which also includes keeping children under the age of 16 off adult quad bikes, is required to reduce quad bike deaths and injuries.

Like many farming association and sector leaders, David is leading the way on the quad bikes issue by not using the vehicles in his farming operations.

"First of all, we need to look at the culture of quad bike use. How to handle them, and what we use them for," he says.

"The second part is how do we actually make quad bikes safer, be it choosing an alternative vehicle if possible, or if a quad bike is still the vehicle of choice, accessing the rebate to assist putting rider protection on them.

"On our farm here, we don't have quad bikes. I refuse to have one. We've got motorbikes and utes, but no quad bikes, purely because I didn't want to have that risk for our workers.

"The attitude still by some is 'look we can use quad bikes safely' and in certain applications, that's probably true, but the risk of a death or an injury, not only to somebody you employ but to yourself, is too high not to act."



PARTNERSHIP PROGRAM



A coordinated approach

Associate Professor Kirsten Vallmuur, who works across Queensland University of Technology and the Jamieson Trauma Institute, agrees effectively tackling the quad bike safety issue requires a multi-faceted approach. Her research has shown numbers of quad bike injuries and fatalities, as well as the severity of injuries, are high and have been rising over the past 15 years.

Kirsten Vallmuur says injury data suggests the 'biggest bang for buck' in preventing severe injuries and fatalities would be achieved by improving the design of quad bikes to prevent roll overs and by preventing vehicles causing crushing injuries to the operator.

While existing data clearly demonstrates the need for action, she also suggests a need for further research to evaluate and refine measures put in place to improve quad bike safety and to increase understanding of what happens in quad bike incidents.

"We have several valuable data sources in the health sector, which routinely capture information about circumstances of quad bike-related injuries, that we could be making better use of for monitoring and evaluation. Analysis of injury data shows the main injury mechanisms are falls from the quad bike, roll overs, and collisions with objects," Kirsten Vallmuur says.

"Roll over incidents are the ones that cause the most debate in terms of how often they occur and the triggers for these incidents, but roll overs are one of the leading mechanisms of injury when we look at ambulance and emergency department data.

"In terms of age group, there was a peak in the 10-24 year old age group in the data we have and another peak around middle age in the workplace/farming setting.

"There was certainly an overarching theme that people were just going about their everyday kinds of jobs when we reviewed the narrative descriptions of the incidents in the health data. The overwhelming majority were out doing the mustering, the spraying, doing the usual activities, at relatively low speeds when the incident happened."

PARTNERSHIP PROGRAM

Kids and quad bikes

The data is also showing similar patterns when children are being injured on quad bikes, simply being asked to complete everyday tasks, particularly on farms.

Kirsten Vallmuur believes keeping children off quad bikes should be a priority, because it's a measure that can be quickly and easily achieved and would have a significant impact on reducing injuries and fatalities.

"Even with children on quad bikes, the data shows patterns of fairly routine activities that they are doing at the time of incidents occurring. They're being asked in rural settings to do jobs for their parents – go down and get the mail or tend to the cattle – often again at reportedly low speeds and in relatively normal settings.

"While I understand it is part of the culture to let children ride quad bikes in these settings to assist with farming tasks, we see the catastrophic injuries that happen when innocuous activities go wrong. The simple intervention of putting children onto safer vehicles and not on quad bikes could save a lot of lives and serious injuries."

Children seriously injured on quad bikes in Victoria often end up at the Royal Children's Hospital (RCH).

An analysis undertaken by RCH showed that in Victoria 730 patients presented to hospital over a recent 10-year period, and the proportion of injuries and hospital presentations attributable to quad bikes was over-represented in children.

Nationally, there was 41 fatalities from quad bikes in children under 16 between 2001 and 2018, according to WorkSafe/ Australian Centre for Agricultural Health & Safety data. At least one child under 18 died from a quad bike incident in each of those years.

RCH Trauma Service Director Warwick Teague is another who believes children should not be allowed on quad bikes at all.

While he supports the universal introduction of measures suggested by the ACCC, such as helmets, training and roll over protection devices, the outcomes of coronial inquests show these measures would not be enough to prevent quad bike fatalities in children.

There are many quad bike deaths and injuries in children, where wearing a helmet would not have influenced the outcome, and in many cases injuries from the quad bike incident was not the cause of death; children died from drowning or asphyxiation because they were trapped under the quad bike. In addition, children under the age of 16 do not have the mental cognition to make providing training to children meaningful.

That is why Warwick Teague believes the 'extra step' of banning children from quad bikes needs to be taken.

He adds that it's also misleading to typecast quad bike safety as simply a farmer's problem. For example, when RCH and Ambulance Victoria mapped ambulance attendances for quad bike trauma in children in Victoria, more than half (58%) took place in 'inner regional' areas, indicating quad bike safety is a significant issue among those who have small properties on the outskirts of the city that they visit on weekends.



PARTNERSHIP PROGRAM

A comparable response

Warwick Teague believes quad bikes should be accompanied by a legal statement outlining the vehicles are not appropriate for children under the age of 16. Citing such precedents as child restraints and seat belts, such a legal statement would send a message to the community about the risks of quad bike use to children.

"I think a reasonable comparison with quad bike safety is the issue of children swallowing button batteries," he says. "In that same time period where 41 children under the age of 16 have died using quad bikes, two children have died from swallowing button batteries.

"Quite appropriately, there has been a social outcry at the loss of two young lives, and it's been accompanied by all manner of consumer protection legislation, industry engagement, and the community engaging alongside injury prevention groups to say 'it's unacceptable that a child dies playing with a button battery; what can we do to stop this?'

"One issue has generated a social outcry and community response and, while there has been some level of regulatory response from the ACCC, the other has not. Perhaps what has stopped us having that same level of outcry, is that we thought it was worth the risk?

"It's clearly not, when we've had 41 children's lives lost to quad bikes without the same level of community and regulatory response saying that this is an unacceptable loss of life."

The manufacturer's perspective

There is agreement among all interested parties that a multi-pronged approach is needed to address the quad bike issue, and that children's access to quad bikes should be limited. Where doctors and regulators, for example, recommend a complete ban, manufacturers suggest children under 16 should be kept off adult size quad bikes.

Australia's largest manufacturer of dedicated off-road vehicles was approached to contribute to this thought leadership piece. The position of manufacturers on the issue is reflected in submissions several manufacturers and their representative body, the Federal Chamber of Automotive Industries (FCAI), made to the ACCC.

According to the FCAI submission, the industry has long promoted 'known safety practices' through education and training, dealer advice, and recommending wearing protective riding gear and following manufacturer warnings and safe use recommendations.

The industry has instigated a number of initiatives to improve safety outcomes, including developing a free safety DVD, producing a safety guide to assist consumers to select the most appropriate vehicle, developing an online safety course for new and existing riders that outlines potential risks and strategies for reducing risks on farms, and development and release of an ATV-specific helmet.

"In summary, the ATV industry believes there is more safety benefit in ensuring that riders choose a 'fit for purpose' vehicle at the point of sale; this might not be an ATV depending on the tasks, terrain and people using it," the FCAI submission said.

"And also by ensuring that riders are educated in safe vehicle use, and follow the manufacturers' warnings and safety advice. The FCAI urges the [Quad Bike Safety] Taskforce to recommend strongly that the coronial recommendations of mandating helmets and training and of banning children under 16 years and passengers from riding on adult size and single seat ATVs are followed up by the respective state governments."

The ACCC has released its report and draft mandatory standard, and is accepting submissions until June 10.

For more information, visit <https://consultation.accc.gov.au/>