



Centre for Accident Research  
& Road Safety - Queensland  
(CARRS-Q)

# State of the Road

A fact sheet of the Centre for Accident Research & Road Safety - Queensland



*Tragically one child, often a toddler, is run over in the driveway of their own home every week in Australia.*

*In Queensland, 4 children under 5 die each year as a result of a low-speed run-over and 81 children present at hospital emergency departments with injuries, usually serious, with 60% requiring admission.<sup>1</sup>*

## THE FACTS

- A 3-year study completed in 2002 by the Queensland Ambulance Service and CARRS-Q<sup>2</sup> into pedestrian accidents in Queensland, revealed an increase in the incidence of parents reversing a vehicle over a child in the family driveway.
- Low-speed run-over is the third most frequent cause of injury or death in Queensland children aged between 1 and 4 years.<sup>1</sup>
- A slow moving vehicle reversing down a driveway can trap a child, causing fatal crush injuries.
- Young boys are at greatest risk.<sup>3</sup>
- Although only 2.3% of Australia's population is of Indigenous status, 10% of Australian driveway run-over fatalities involve Indigenous toddlers.
- Most incidents occur in home driveways. Shopping centres are the second most dangerous location for children to be struck by a reversing vehicle.
- In more than half the cases, the vehicle was driven in reverse by a relative or close family friend.<sup>1</sup> In 80% of Australian cases, the driver of the vehicle was male.<sup>3</sup>
- In Australia overall, two in three driveway fatalities occurred in non-metropolitan areas.<sup>3</sup>
- Queensland is responsible for a higher per capita death rate due to driveway run-overs than any other state in Australia.<sup>3</sup>
- In almost all cases, the environment provided no clear separation between the driveway, garage and rest of the yard where children played.<sup>3</sup>
- 4WD vehicles are over-represented and possible linkages are demonstrated between the increasing popularity of 4WDs and an increase in driveway accidents.<sup>2</sup> 4WDs have blind spots whereby a toddler less than 3 metres from the vehicle is not visible to the driver. In Queensland cases, 41% of vehicles were 4WDs<sup>1</sup>, despite 4WDs making up only 6% of passenger vehicles in the state. Utes, vans and trucks are also involved more often than sedans, due to poor visibility from them. In 2000, the Henderson Report<sup>4</sup>, commissioned by the Motor Accidents Authority of NSW, sparked a call to review safety for large vehicles.
- Most accidents occur in fine conditions.
- The majority of events occur during the day, particularly late afternoon (28% of fatalities occur between 3:00pm and 6:00pm). The most vulnerable period is late in the week—approaching and including the weekend. Queensland Injury Surveillance data cites the largest number of fatalities occur on Sundays.<sup>3</sup>
- Work-related drivers attending domestic residences, schools and shopping centres (e.g. tradesmen) are also a high risk group with approximately 14% of low speed vehicle runovers of young children involving a work vehicle during the period 2000/01 to 2006/07.<sup>5</sup>

Despite a robust body of knowledge, a number of key questions remain unanswered. A 2007 Queensland Parliamentary Travelsafe Committee report recommended further exploration of why certain groups: Indigenous children, boys, and rural residents are over-represented in driveway run-over injury statistics.<sup>3</sup> CARRS-Q, in association with the Queensland Ambulance Service is currently investigating these vulnerable groups and causal factors, with the aim of developing potential prevention strategies.

## TIPS FOR STAYING SAFE

Reversing incidents can be avoided by simply taking more care. For example, walk around behind your vehicle, and check that the reversing path is clear, before entering the vehicle. It only takes an extra 6-8 seconds.<sup>5</sup>

### Your vehicle

The driver should regularly check that:

- The windows are clean.
- Mirrors are clean and are positioned correctly for the driver's height.
- Reversing lights are functioning.
- No in-vehicle objects obstruct vision.
- The recommended vehicle devices for reducing the risk of driveway accidents are a combination of functioning proximity sensors and a video camera. Even if in use however, you may not notice a small child until late. Close supervision is the best precaution.

### The reversing task

- If unsure, ask for assistance.
- When reversing, always:
  - check behind your vehicle and the intended reversing path before reversing
  - reverse slowly
  - look both ways so that all areas of potential danger are visible
  - sound the horn in congested areas to alert others of your intention to reverse.
- Wherever possible, avoid reversing onto busy roads. It is safer to reverse out of traffic from the road into an intended car park.
- Extra care should be taken when reversing at night or when vision is limited by weather conditions or in-vehicle obstructions. If experiencing difficulty, get out of the vehicle and check the reversing path.
- Before reversing an unfamiliar vehicle, check reverse lights and mirror positioning. It is a good idea to practice reversing in a safe area to get familiar with the vehicle.

### Keeping children safe

- Children under 5 years, are more susceptible to driveway danger because of their low height and difficulty recognising hazards.
- Teach children about the dangers of reversing vehicles from a young age.
- Ensure adult supervision of children when vehicles are in use. Avoid asking

older children to supervise younger children. Primary aged children can have trouble determining distance, speed and consequences.

- If you are the only adult at home and need to move a vehicle, even only a small distance, place your child in the vehicle whilst you move it.
- Ensure housing and fencing designs limit a child's access to the driveway and garage and do not use driveways as play areas.

## CARRS-Q'S WORK IN THIS AREA

- Paediatric driveway injury: Vulnerable groups and prevention strategies.
- A 3-year study, in conjunction with the Queensland Ambulance Service investigating pedestrian accidents in Queensland.
- A comparison of driving performance and behaviour in 4WDs versus sedans.
- Development of intervention guidelines for work-related drivers targeting low-speed runovers of young children.

## FUTURE DIRECTIONS

The Queensland Parliamentary Travelsafe Committee (QPTC) has identified three key areas of intervention to prevent driveway run-over incidents<sup>3</sup>:

- Changes to vehicle design.
- Modifications to housing designs to separate driveway and play areas.
- Public awareness campaigns.

On 7 March 2008, The Queensland Government endorsed the findings of a QPTC Report into driveway deaths recommending that new home builders in Queensland be encouraged to install child-resistant fencing and self-closing gates and doors near driveways in a bid to cut the number of accidental deaths. The State Government reported that they will also lobby federal authorities to have reversing sensors installed in all new cars. Other future directions may include:

- Further research to understand why boys, Indigenous children and rural communities are more at-risk and to develop prevention strategies.
- Improved design safety standards for 4WDs and large vehicles.
- Further improvement of intelligent transport systems technology (i.e. monitors and sensors) to detect obstacles in the path of a vehicle.
- The development of culturally relevant education campaigns targeting

children, rural residents and parents and carers (especially of boys and Indigenous infants) to alert them of the potential hazards, the vision shortcomings of 4WDs and large vehicles, and how to protect children.

## REFERENCES

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4. Henderson, Michael (2000) *Child deaths and injuries in driveways: Response to the recommendations of the Child Death Review Team*. Motor Accidents Authority, NSW.
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## FOR MORE INFORMATION

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