

Understanding the dangers: Quad bikes and side-by-side vehicles

For many families, quad bikes and side-by-side vehicles are part of everyday life. But for children, they can be deadly.

Serious and fatal injuries on heavy and powerful quad bikes and side-by-sides are not rare but predictable and preventable.

- Since 2004, 23 children died from quad bike and side-by-side vehicle incidents in Queensland.
- Incidents involved rollovers, ejection, collisions and tipping.
- Head injury was the leading cause of death.
- All incidents occurred on private property.
- Most were using non-age appropriate vehicles.

Children are not safe on adult-sized quads



Adult supervision and establishing rules are critical



Helmets and restraints save lives



Most incidents happen in familiar environments



What the data tells us

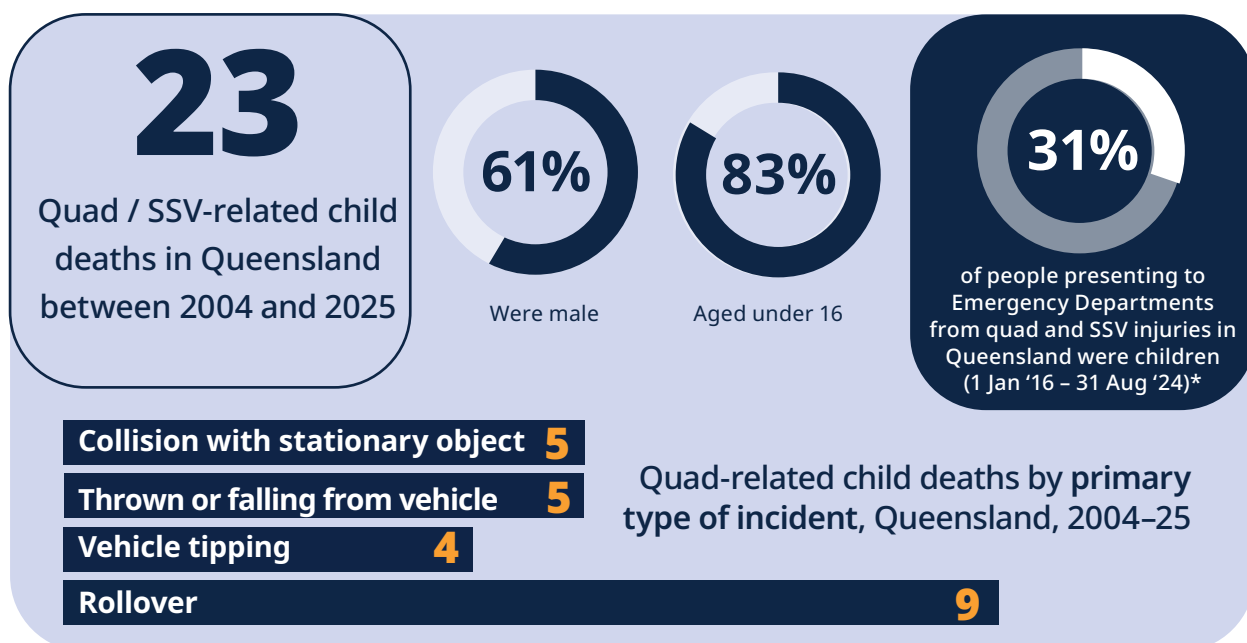
Over the past two decades, too many children in Queensland have continued to be seriously injured and killed while using youth and adult quad bikes and side-by-side vehicles.

Despite improvements in safety standards, regulations, training, and awareness, these incidents persist, particularly in private and recreational settings where formal controls are limited.

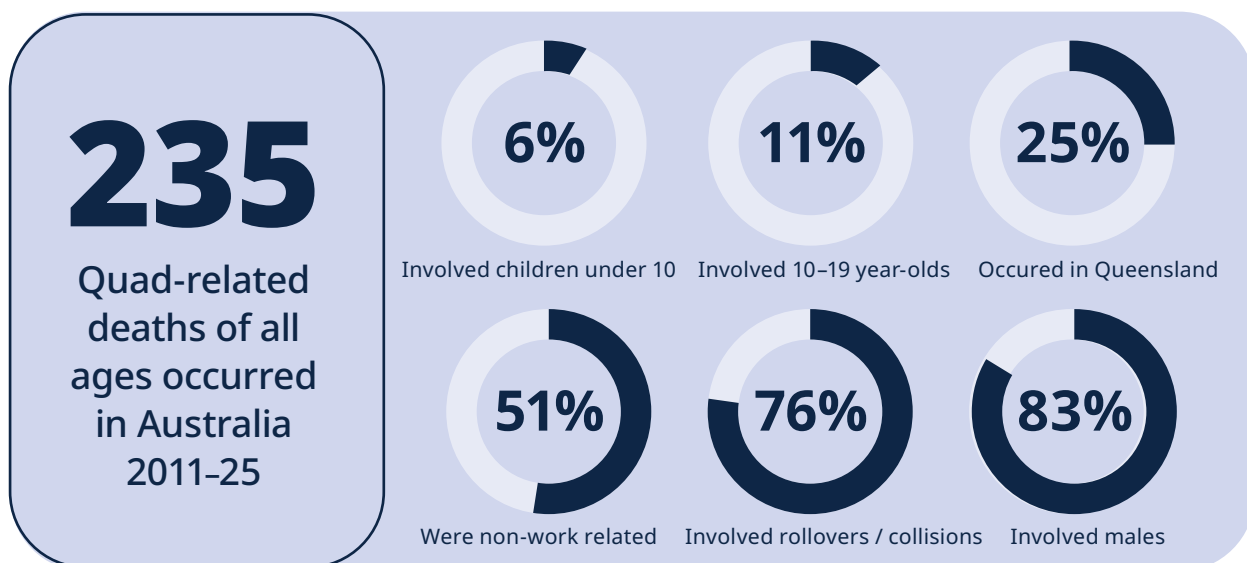
A different pattern of vehicle use has emerged, where the number of quad-related child deaths have decreased and side-by-side vehicle-related deaths have increased.

Children who have died are: often drivers, not passengers; frequently below the recommended age (as young as four); and without safeguards and the necessary skills or supervision.

Children are at greater risk because they do not yet have the physical strength, judgement or experience required to safely operate these vehicles.



Source: Queensland Child Death Register, 2026. *QISU, 2025



Source: Safe Work Australia, October 2026

How children are being injured

The following causes account for most serious and fatal incidents.

- **Rollovers and tipping:** full or partial rotation of the vehicle.
- **Falls or ejection:** children thrown from the vehicle.
- **Collisions:** with stationary or moving objects such as trees, fences, structures, and other vehicles.
- **Crush injuries:** children pinned or trapped under or between vehicles.

These causes are closely linked to vehicle design, terrain and rider capability.

Patterns in injury and exposure

- Primary injuries for children include head and abdominal injuries, and asphyxia (including drowning).
- Children are most often injured during informal or recreational use, not structured work.
- Many incidents occur during school holidays, when children are more likely to be using vehicles.



Before 2015

QUAD

SSV

After 2015

QUAD

SSV

Following safety reforms, quad-related child deaths declined. However, deaths involving side-by-side vehicles have increased, reflecting changing patterns of use and exposure.

Source: Queensland Child Death Register, 2026

Changing safety outcomes for quad bikes and side-by-side vehicles starts with shifting attitudes, beliefs and behaviours.

Vehicle design and inherent risk

Quad bikes and side-by-side vehicles are powerful machines designed for specific tasks and conditions.

- Quads have a high centre of gravity and narrow wheelbase, increasing rollover risk.
- They require active riding, where the driver shifts their body weight to maintain balance.
- Side-by-sides are heavier and have a wider wheelbase, but also pose serious risks.

These design features require skill, strength and quick decision-making, which children are still developing.

Child capability

Not all children have the same physical or cognitive ability to safely operate these vehicles.

- Varying strength, coordination and balance.
- Differences in ability to anticipate and respond to hazards.
- Developing judgement and impulse control.
- Differing impulse and risk-taking behaviours.

These vehicles exceed children's developmental capabilities.

Environment

All child deaths in Queensland occurred on private land, where risks are less regulated and often underestimated.

Common environmental factors include:

- slopes and uneven terrain
- loose gravel or soil
- obstacles such as trees, fences and structures.

Even familiar environments require constant awareness and adjustment to maintain control at all times.

Quad bike or 'ATV': Off-road, 1-2 passengers



Photo source: Australian Competition and Consumer Commission - Product Safety

Side-by-side: Off-road, 2-6 passengers



Behaviour and supervision

Adult decisions are a critical factor in many incidents:

- children accessing vehicles without adult knowledge
- use of vehicles not appropriate for the child's age
- inconsistent safety rules across households or properties
- low or inconsistent use of helmets and restraints.

In many cases, harm occurs not from a single factor, but from a combination of risk factors.

Important messages

For families and communities

1 Set clear and consistent rules

- Do not allow children to operate adult-sized quads.
- Establish property-specific rules for safe vehicle use.
- Keep keys out of reach and secured.

2 Use vehicles as designed

- No passengers unless the vehicle is designed for it.
- One person per seatbelt.
- Never carry children on laps or in cargo areas.

3 Supervise children around vehicles

- Ensure active supervision when children are near or using vehicles.
- Be aware of when and how vehicles are being used.

4 Use safety equipment every time

- Helmets.
- Seatbelts, where fitted, for side-by-sides.
- Wear personal protective clothing.

5 Additional safety measures

- never speed or drive intoxicated.
- Fit safety protection devices and keep vehicle well maintained.
- Have access to adequate methods of communication.

For policy-makers and systems

1 Strengthen awareness and education

- Target families, rural communities and high-risk environments.
- Reinforce clear, consistent safety messaging including imagery that reflects safe practices and behaviours.

2 Address risks in private settings

- Recognise that most incidents occur outside formal regulatory environments.
- Support community-led safety practices.

3 Support safer systems and design

- Continue improving vehicle safety standards.
- Promote uptake of safety features such as operator protection devices.

4 Align policy, messaging and practice

- Ensure consistency between regulation, guidance and real-world use.
- Reduce confusion about safe age use and responsibilities.

A preventable risk

Quad bikes and side-by-side vehicles are a normal part of life for many families, but the risks they pose to children are significant and underestimated.

Children continue to be exposed to these risks in ways that exceed their physical and developmental capabilities. These exposures are often shaped by everyday decisions about access, supervision and use.

What must change

Families: Make safe, informed decisions about when and how children interact with these vehicles, set clear expectations, and model safe riding behaviours.

Communities: Promote shared responsibility for child safety and reinforce safe practices across rural and regional settings.

Government and stakeholders: Strengthen prevention through coordinated policy, education, design and community engagement.

Preventing harm to children requires a collective effort. By acting on what we know about risk, child development and safe use, we can reduce injuries and prevent deaths.



For educational resources about keeping children safe on farms, including information about quads, visit:

www.kidsafensw.org/safety/home-community-safety/safety-on-farms/

For product safety information, visit:

www.productsafety.gov.au/consumers/drive-and-ride-safely/quad-bike-and-side-by-side-vehicle-guide

Queensland Family and Child Commission
enquiries@qfcc.qld.gov.au
www.qfcc.qld.gov.au