3 Transport-related deaths

Transport-related incidents were the leading external cause of death for children. Motor vehicle crashes accounted for over half of the deaths, followed by pedestrian-related incidents, then bicycle and quad bike incidents. Of all causes of death, transport incidents were among the top 3 leading causes for each age category from 1–17 years.

In October 2024, we published *Seatbelt and child restraint use in children 0–12 years*, containing our analysis of road crash child passenger deaths. The data it contains highlights a critical gap between legal compliance and optimal safety, suggesting shifts in children's seat type, location and orientation may be taking place prematurely, before the child outgrows their existing restraint.

This research received extensive national media coverage and led to an invitation for the Commission to sit as a member of the Child Restraint Review Expert Advisory Group, National Transport Commission. We continue to provide information and advice to members to inform national safety improvements to child restraints.

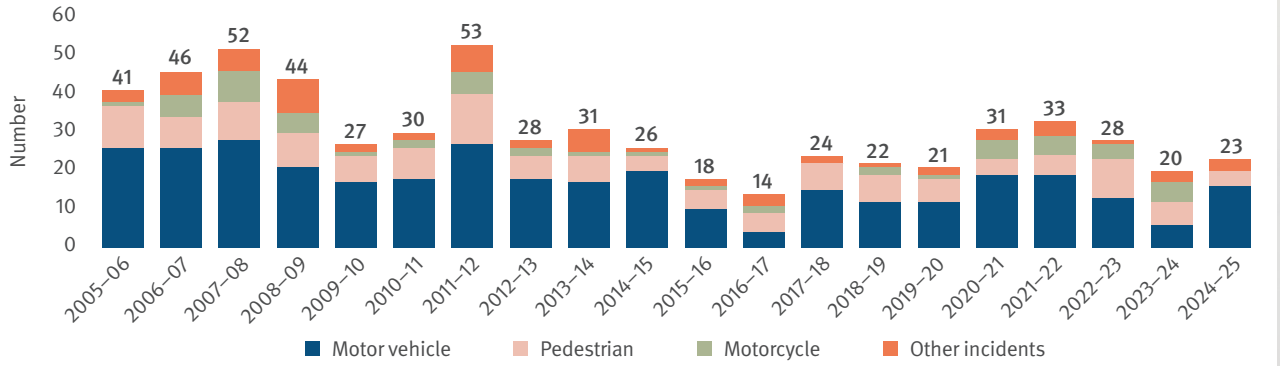
Concerned about observed rises in e-scooter and e-bike related fatalities, we investigated the safety issues and published *Improving safety when young people ride e-scooters and e-bikes Insights Paper*. This paper compiles the evidence around injuries and fatalities in e-scooter and e-bike incidents, risk factors, and how Queensland's road rules and laws surrounding their use compare to other jurisdictions. The Commission's paper makes a number of recommendations to improve safety outcomes, including the introduction of a minimum age of 16 years to lawfully ride these devices in Queensland.

We provided this paper alongside our submission to the state government's inquiry into e-mobility safety and use. Information from this paper has been mentioned across several media platforms and continues to contribute to robust policy discussions to ensure the safety of young e-mobility users and reduce preventable injuries and deaths.

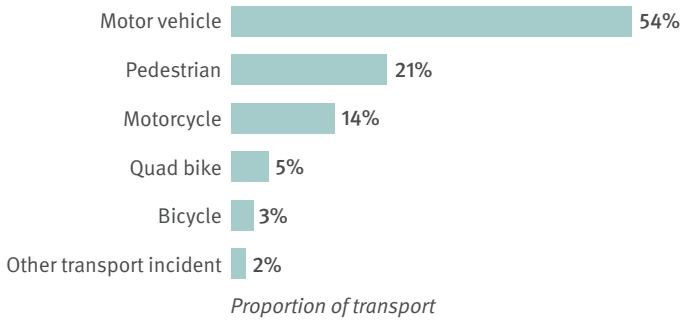
This year, data from the Register on rail crossings and e-scooter use was used to inform and strengthen the online road safety education program, *Journi*. Designed for children in Years 5 and 6 with the help of education experts and students, *Journi* is hosted by the Department of Transport and Main Roads. Data was used to provide insights on emerging road safety issues and update concepts in the online learning activity.

Key facts on child deaths from transport

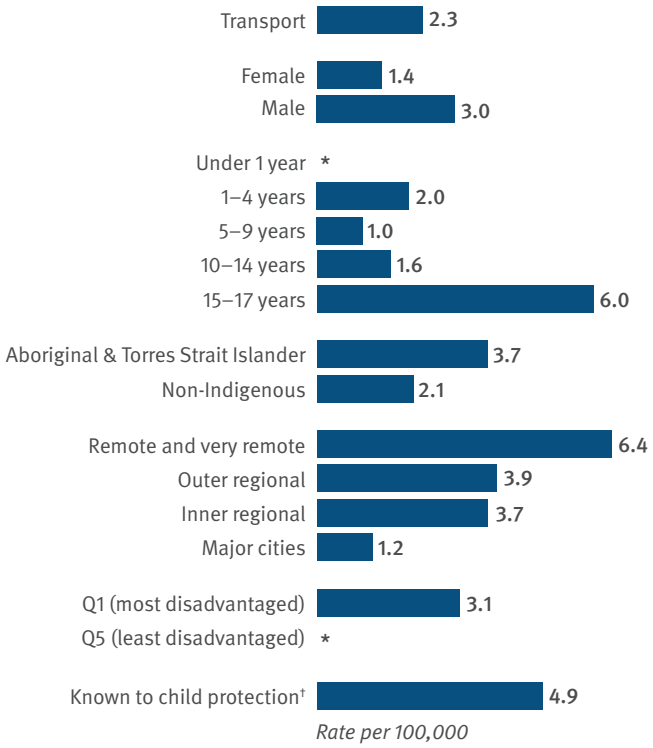
2005 to 2025



5-year summary (2020–2025) | Incident type



Demographics



Risk factors in fatal motor vehicle crashes

53% excessive speed

34% no or inappropriate restraint

31% failure to follow road rules

29% alcohol and/or substance use

29% inexperienced driver

28% reckless driving

Notes: Counting is by date of death registration. Percentages may not add to 100 due to rounding.
** rate not calculated for numbers less than 4.*
† in the 12 months prior to death

Key findings

During 2024–25, 23 children and young people died from transport-related incidents in Queensland. This represents a 5-year average rate of 2.3 deaths per 100,000 children aged 0–17 years. **Table A.5** in **Appendix A** provides summary data and key characteristics for transport-related deaths in the last 5 years.[39]

Although there has been an overall decrease in the transport mortality rate since 2004, dropping by 3.7% per year on average (see Figure 1.2), transport remained the leading external causes of death for children and young people in Queensland in the last 5 years.

Nature of transport incidents

In 2024–25, 16 children and young people died from motor vehicle crashes, 4 from pedestrian-related incidents, 2 from bicycle and one from quad bike incidents.

Over the last 5 years, the majority of the 135 transport-related fatalities were motor vehicle deaths (73 or 54%), followed by pedestrian deaths (29 or 21%) and motorcycle incidents (19 or 14%).

Sex

Fourteen male children died from transport-related incidents in 2024–25, compared with 9 female children.

Over the last 5 years, the average annual transport-related mortality rate for males was twice the rate for females (3.0 per 100,000 males and 1.4 per 100,000 females). The pattern of male over-representation in transport mortality has been attributed to, in part, greater risk-taking behaviours displayed by young males, including young male drivers.[40]

Age

Of the 23 transport-related fatalities during 2024–25, 11 were aged 15–17 years, 5 were aged 5–9 years, 3 each were aged 1–4 years and 10–14 years, and one was under 1 year.

The highest rate of transport deaths was among young people aged 15–17 years (6.0 per 100,000) which was 3 times the rate for the 1–4-year age group, which had the next highest rate (2.0 per 100,000) (5-year averages).

While risk taking in adolescent drivers may contribute to the higher rates of death in the 15–17 age group, driver inexperience, without an intention to drive recklessly, may also contribute. Relatively new drivers may lack critical driving skills such as hazard perception, attentional control, and the ability to manage multiple driving tasks.[41]

39 Tables with data for 2004–2025 are available online at **www.qfcc.qld.gov.au/sector/child-death/child-death-reports-and-data**

40 AIHW (Australian Institute of Health and Welfare) (2011) *Young Australians: Their health and wellbeing*, cat. no: PHE 140, Australian Government, **www.aihw.gov.au/reports/children-youth/young-australians-their-health-and-wellbeing-2011/report-editions**

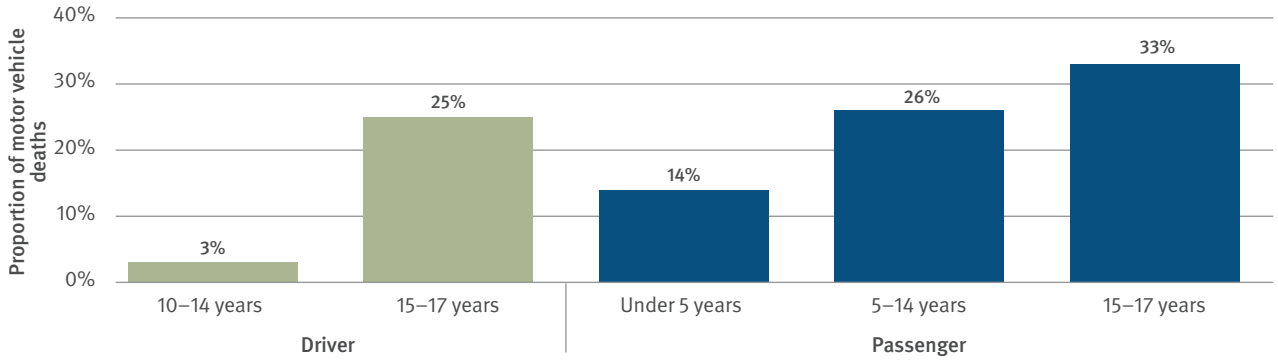
41 Centre for Accident Research and Road Safety Queensland (2019) *Adolescent risk-taking*, **https://research.qut.edu.au/carrs-q/wp-content/uploads/sites/296/2020/06/Adolescent-risk-taking.pdf**

Transport-related characteristics

Motor vehicle incidents

Figure 3.1 illustrates the role of the child or young person in motor vehicle fatalities over the last 5 years. Of the 73 children and young people who died in motor vehicle incidents between 2020–21 and 2024–25, 27% (20) were driving at the time of the incident while 73% (53) were passengers.

Figure 3.1: Motor vehicle fatalities by role and age category (proportion), 2020–21 to 2024–25



Notes: Percentages may not add to 100 due to rounding.

Multiple fatalities

Multiple child, or child and adult, fatalities were recorded in 7 motor vehicle incidents in 2024–25. In the past 5 years, there was a total of 73 child deaths in 68 motor vehicle crashes. Five incidents involved multiple child fatalities, and 21 incidents involved adult fatalities.

Roadway type

Of the 16 children and young people who died in motor vehicle incidents in 2024–25, 4 died in crashes on highways (roadways with a speed limit equal to or greater than 100km/hr), 6 on a major road (speed limit between 60 and 100km/hr), and 3 each on residential street (speed limit under 60km/hr) and rural roadway. Over the last 5 years, 36% (26 out of 73) of child deaths in motor vehicle crashes occurred on major roads, 33% were on highways, 16% on rural roadways and 11% on residential streets. Three deaths (4%) in the last 5 years occurred in off-road settings (i.e. not on public roadways).

Risk factors associated with motor vehicle crashes

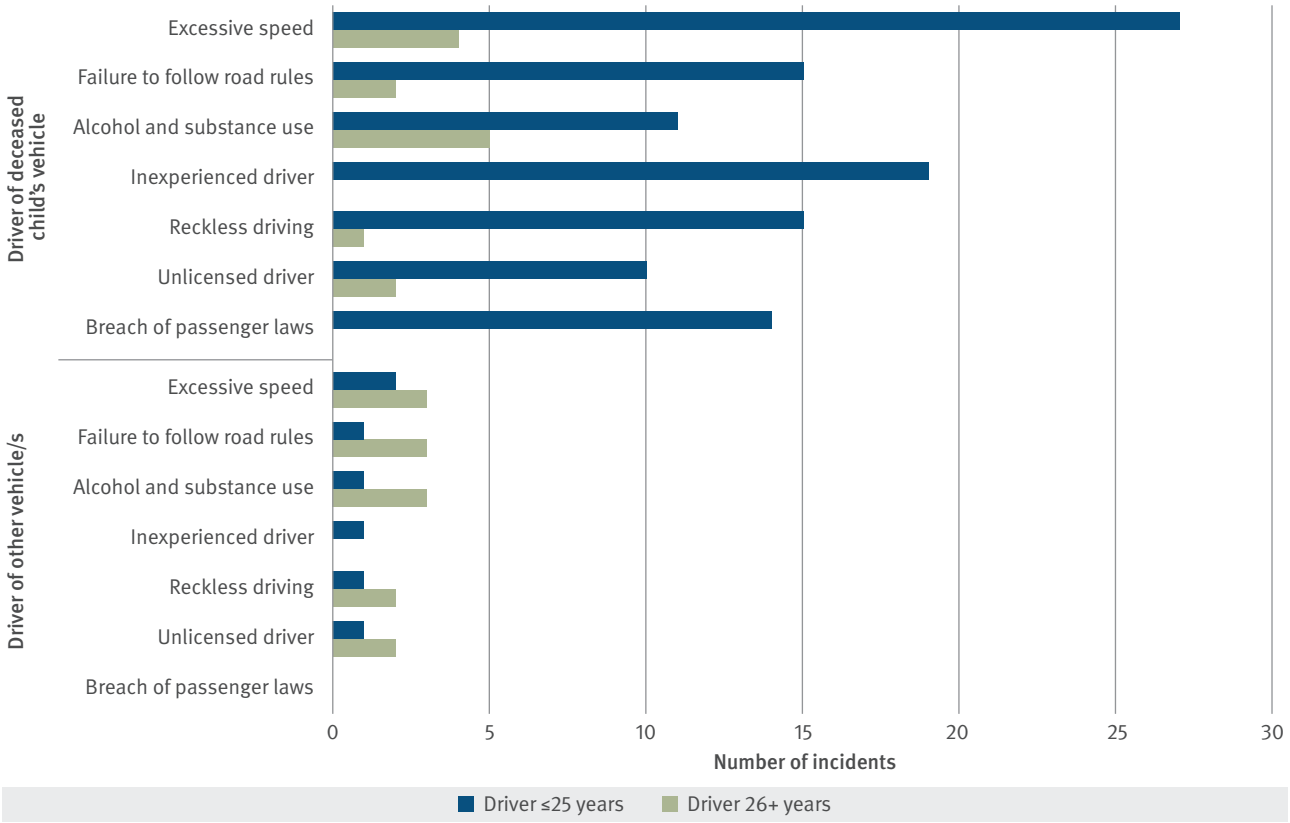
During 2024–25, 16 children and young person died in 15 motor vehicle incidents, an increase from the 6 deaths in 2023–24. Of the 16 deaths, 44% (7) were driving at the time of the incident while 56% (9) were passengers. Excessive speed was the most commonly identified risk factor (6 incidents), followed by unlicensed, suspended or disqualified driver (4 incidents) and driver inexperience, no or inappropriate restraint and alcohol or substance use (3 incidents each). Seven incidents had been identified to have 2 or more risk factors.

Over the last 5 years, 73 children died in 68 motor vehicle incidents. Single-vehicle accidents accounted for 60% (41) of those incidents. Forty-four incidents (65%) involved a young driver (up to 25 years of age) driving the vehicle in which the child/ren was/were travelling. Twenty-five children and young people (34%) were either not restrained or inappropriately restrained at the time of the crashes.

Risk factors identified in 68 incidents over the last 5 years are illustrated in Figure 3.2. The most common driver risk factors were:

- excessive speed (53%)
- failure to follow road rules (31%)
- alcohol and/or substance use (29%)
- inexperienced driver (29%)
- reckless/dangerous driving (28%).

Figure 3.2: Most common driver risk factors in motor vehicle incidents, by role of vehicle and age of driver (number of incidents), 2020–21 to 2024–25



Notes: The role of the vehicle applies to the vehicle in which the deceased child was travelling and, where applicable, any further vehicles involved in the incident. Multiple risk factors may be present in each incident.

Seatbelt and child restraint use in children 0–12 years

In October 2024, the Commission published a report examining seatbelt and child restraint use among children aged 0 to 12 years. Analysis of data from the Child Death Register revealed that motor vehicle accidents continue to be a leading cause of death for children under 18 in Queensland. Between 2004 and 2023, 123 children in this age group lost their lives as passengers in road crashes. Encouragingly, the annual rate of child passenger fatalities declined by 3.7%, suggesting the strengthened seatbelt and child restraint laws along with other road safety measures have improved road safety. Despite this progress, there are still notable gaps in compliance with legal requirements and best practices, especially within priority populations.

One in 4 children who died were not using any form of restraint, including adult seatbelts. Since the introduction of strengthened child restraint laws in 2010, one-third of children who died were not secured in compliant restraints. Even among those who were restrained, approximately 75% were not restrained in accordance with best practice for their age, often transitioning prematurely to booster seats or adult seatbelts. This highlights a critical gap between legal compliance and optimal safety.

Best practice guidelines recommend that children under 13 should sit in the rear seat and use age-appropriate restraints based on size rather than age alone. While most younger children were rear seat passengers, one in 4 children aged 7–12 who died were seated in the front. The data also revealed early transitions from rear-facing to forward-facing restraints and from booster seats to adult seatbelts, which may reduce protection in crashes.

Children living in remote and disadvantaged areas were significantly over-represented in fatalities. The death rate in remote areas was more than 3 times higher than in major cities, and children in the most disadvantaged areas had death rates 3 times higher than those in the least disadvantaged areas. These disparities are compounded by limited access to appropriate restraints, lower health literacy, and longer emergency response times.

Aboriginal and Torres Strait Islander children were particularly vulnerable, with a mortality rate 3.8 times higher than non-Indigenous children. Nearly 60% of unrestrained children were First Nations children, and restraint compliance was extremely low in remote Indigenous communities. These findings suggest that systemic inequities, cultural factors, and access barriers play a significant role in restraint non-use.

Children known to the child protection system were also over-represented, accounting for nearly 30% of deaths. Less than half of these children were in legally compliant restraints, and over half of those not legally restrained were Aboriginal and Torres Strait Islander children. These children often face intergenerational adversity and are at higher risk of death from external causes, including transport injuries.

The report highlights the importance of accurate and complete data collection in crash investigations. Missing data on restraint type and seat position limits the ability to assess compliance and effectiveness. Improvements in data completeness have been noted in recent years, but further training and expertise in forensic crash investigation are needed to ensure high-quality data for research and policy development.

Key findings show that while restraint use has improved, many children are still not protected adequately. Legislation lags behind best practice, particularly regarding the age at which children transition between restraint types. Queensland allows rear-facing restraint only until 6 months of age, which is lower than many other developed countries. This early transition may contribute to higher mortality rates among infants.

Recommendations include strengthening child restraint laws to align with best practice, particularly extending rear-facing requirements and delaying transitions to adult seatbelts. Culturally responsive, community-based education and distribution programs should be prioritised for First Nations and remote communities. Improved data collection, targeted interventions, and public awareness campaigns are essential to reduce preventable deaths and improve road safety for children across Queensland.

The report is available at **www.qfcc.qld.gov.au/safer-pathways-through-childhood**

Pedestrians

Four children and young people died in pedestrian incidents during 2024–25. Of these, 3 fatalities were linked to e-scooter incidents, while one was in the context of a low-speed vehicle run-over.

In the Child Death Register, incidents involving e-scooters and other personal mobility devices are classified as pedestrian deaths, consistent with ICD-10 coding guidelines (coded to V09). As of November 2022, Queensland's general road rules have formally included e-scooters under the regulations governing personal devices. Since 2022, 5 young people aged 12 to 15 have died in e-scooter related incidents. The most frequently identified contributing factor was riding without adult supervision (5), failure to follow road rules (5), riding without helmet (4), followed by reckless/dangerous driving (3) and excessive speed (2).

Over the last 5 years, there have been 29 pedestrian incidents, the majority of which were low-speed vehicle run-overs (19 out of 29 or 66%), followed by road and railway crossings (6 out of 29 or 21%). The risk of pedestrian injuries differed by age groups:

- Children under 5 years are most at risk from pedestrian incidents, accounting for 59% (17 of 29) of the pedestrian deaths over the 5-year period.
- Children aged 5–14 years accounted for 6 pedestrian deaths, 3 of which occurred while travelling on or crossing a roadway.
- Six young people aged 15–17 years died in pedestrian incidents. Of the 6 fatalities, 3 were related to e-scooter incidents. Two of the incidents have been identified to involve multiple risk factors such as riding without supervision, not wearing helmet, speeding, reckless/dangerous riding and alcohol or substance use.

Improving safety when young people ride e-scooters and e-bikes

In June 2025, the Commission released *Improving safety when young people ride e-scooters and e-bikes*, the first of a series of Insights Papers on the causes and factors that contribute to child fatalities in Queensland.

E-scooters and e-bikes are increasingly popular among young people in Queensland due to their affordability, ease of use, and recreational appeal. However, this surge in usage has led to a significant rise in injuries and fatalities, particularly among children under 15. Many incidents involve underage and unsupervised riding, lack of helmet use, speeding, and riding at night without lights. Emergency services have reported a 171% increase in scooter-related injuries over 5 years, with most incidents occurring during school commute hours and involving collisions with vehicles.

The physical environment and device design contribute to safety risks. Shared paths and roads expose young riders to potential collisions with pedestrians and vehicles. E-scooters are often unstable due to small wheels and top-heavy construction, making them difficult to control on uneven surfaces. Lithium-ion batteries used in these devices pose fire hazards, especially when poorly manufactured or handled. The absence of mandatory safety standards for these batteries and devices further increases the risk of serious accidents.

Regulatory inconsistencies across jurisdictions create confusion about where and how these devices can be safely used. Queensland has the youngest legal age for e-scooter use (12 years with supervision), while other states require riders to be at least 16 or 18. Enforcement is limited, and despite thousands of infringements issued, unsafe practices persist. The lack of compulsory third-party insurance for e-scooter riders in Queensland also leaves gaps in liability and protection, especially in the event of serious crashes.

Data and research limitations hinder effective safety planning. Injury and crash data often lack detail on device type, rider age, and incident circumstances, making it difficult to assess the full scope of the problem. Many incidents go unreported, and there is a lack of trip-level data to understand usage patterns and risk exposure. Improved data collection and analysis are essential for tailoring safety measures and monitoring progress toward injury reduction goals.

Education and awareness efforts are currently insufficient. Many young riders view e-scooters as toys, leading to casual and unsafe use. There are few training programs to teach safe riding skills, and public campaigns often fail to reach all communities due to cultural and communication barriers. Schools have an important role to play in promoting safe riding, but local management of safety processes leads to inconsistent practices across Queensland.

Key findings from the paper highlight that children under the legal riding age are frequently involved in incidents, often as unsupervised riders. Most injuries result from falls or collisions, and males aged 12–15 are disproportionately affected. The majority of incidents occur on roads or shared paths, and many involve non-compliant devices capable of exceeding legal speed limits. Helmet use remains low, and standard bicycle helmets may not provide adequate protection against facial injuries.

To address these challenges, the Commission recommends raising the minimum legal age for e-scooter use to 16 years, aligning Queensland with other jurisdictions. It also calls for improved data collection, including consistent device coding and trip-level data, to better understand usage and risk. Strengthening laws and enforcement, including penalties for unsafe behaviour and clearer rules at the point of sale, is essential to improve compliance and safety.

Additional recommendations include expanding public education and culturally informed awareness campaigns, promoting safe device design, and investing in infrastructure upgrades. Schools should adopt consistent safety protocols for managing e-mobility devices, and training programs should be developed to teach young riders practical skills and hazard awareness. A coordinated, multi-sector approach is needed to ensure the safety of young e-mobility users and reduce preventable injuries and deaths.

Continued over page...

Improving safety when young people ride e-scooters and e-bikes

More information about the safe use of personal mobility devices is available at **https://streetsmarts.initiatives.qld.gov.au/initiatives/pmd-rules/**

The Commission's report is available at **www.qfcc.qld.gov.au/safer-pathways-through-childhood**

Low-speed vehicle run-overs

The term 'Low-speed vehicle run-over' (LSVR) refers to incidents where a pedestrian, often a child, is struck by a slowly moving vehicle, typically in areas outside of regular traffic zones or while transitioning into or out of such areas. These events predominantly affect children under the age of 5.

Over the last 5 years, nineteen children and young people have lost their lives in LSVR incidents. Of these, 16 were children aged under the age of 5, and the majority incidents occurred at the child's home or the residence of someone familiar to the child (13 of 16 or 81%), with the driver most frequently identified as a parent or other close family member (14 of 16 or 88%).

Motorcycles, bicycles and quad bikes

No motorcycle-related deaths among children and young people were recorded in 2024–25. However, in the last 5 years, there have been 19 fatalities involving children and young people riding motorcycles. In 18 of the 19 fatalities, the motorcycle was being operated by the child or young person themselves. Notably, helmet use was either absent or improper (e.g. not fastened correctly) in 10 of the 19 incidents, accounting for over half of the deaths. The most commonly identified risk factors across these incidents included speeding (37%), alcohol and/or substance use (26%) and reckless/dangerous riding (21%).

In the 2024–25 reporting period, 2 bicycle-related deaths were recorded. Over the past 5 years, 4 young people aged between 9 and 14 years have died in incidents involving bicycles.

One quad bike-related[42] death was recorded in 2024–25. Over the last 5 years, there have been 7 deaths of children and young people riding quad bikes. Five of the 7 deaths were children under the age of 16. The primary mechanisms of injury were: ejection from vehicle (3), vehicle rollover (2) and collision with a stationary object (2). Of the 7 deaths, 5 were not wearing helmets at the time of the incident. Lack of ability or driver inexperience have been identified as the most common contributing factor (5).

Charges and criminal proceedings

Of the 22 transport-related incidents in 2024–25, 2 resulted in driving-related criminal charges (e.g. dangerous operation of a motor vehicle causing death). Over the last 5 years, there were criminal charges in relation to 28 of the 129 transport-related incidents.

Over the last 5 years, 8 young people have died in 7 separate incidents that involved allegedly stolen vehicles. Among these, 2 incidents involved motorcycles. One further fatality was identified as engaging in criminal activity at the time of the incident.

42 Also known as all-terrain vehicles or ATVs. Includes side-by-side vehicles (SSVs) and utility task vehicles (UTVs).

Queensland Ambulance Service data

Injury data plays a crucial role in deepening our understanding of the risks that vehicles and machinery pose to children. The Queensland Ambulance Service (QAS) has contributed valuable data on ambulance responses to transport-related incidents involving children. This year, a new and improved methodology was introduced to identify and categorise these cases. The updated approach is more accurate, rigorous, and robust, resulting in a higher number of identified cases than reported in previous years across all incident types, particularly transport-related incidents.

Table 3.1 presents QAS responses to over 6,500 transport incidents involving children and young people during 2024–25, encompassing both fatal and non-fatal injuries. Half of these incidents involved motor vehicles (50%), followed by bicycles (20%) and scooters (15%). Transport incidents were most common among adolescents aged 15–17 years (35%) and 10–14 years (33%).

E-scooter-related incidents accounted for 64% of all scooter-related injuries. Of the 632 e-scooter injuries recorded, the majority occurred among older children, 47% in the 15–17 age group and 44% in the 10–14 age group.[43]

Table 3.1: Queensland Ambulance Service responses to transport incidents (number), 2024–25

Type of incident	Under 1 year	1–4 years	5–9 years	10–14 years	15–17 years	Total
Motor vehicle	191	540	659	677	1,233	3,300
Bicycle	5	97	198	669	368	1,337
Scooter/e-scooter	0	41	153	459	340	993
E-scooter	*0*	*8*	*48*	*281*	*295*	*632*
Other scooter	*0*	*33*	*105*	*178*	*45*	*361*
Motorcycle	*	5	57	221	249	532
Pedestrian	*	29	45	70	45	189
Quad bike	0	11	26	31	24	92
Watercraft	0	*	*	13	15	28
Other (e.g. go kart, skateboard)	0	*	15	40	40	95
Total	**196**	**723**	**1,153**	**2,180**	**2,314**	**6,566**

Data source: Queensland Ambulance Service (Sep 2025)

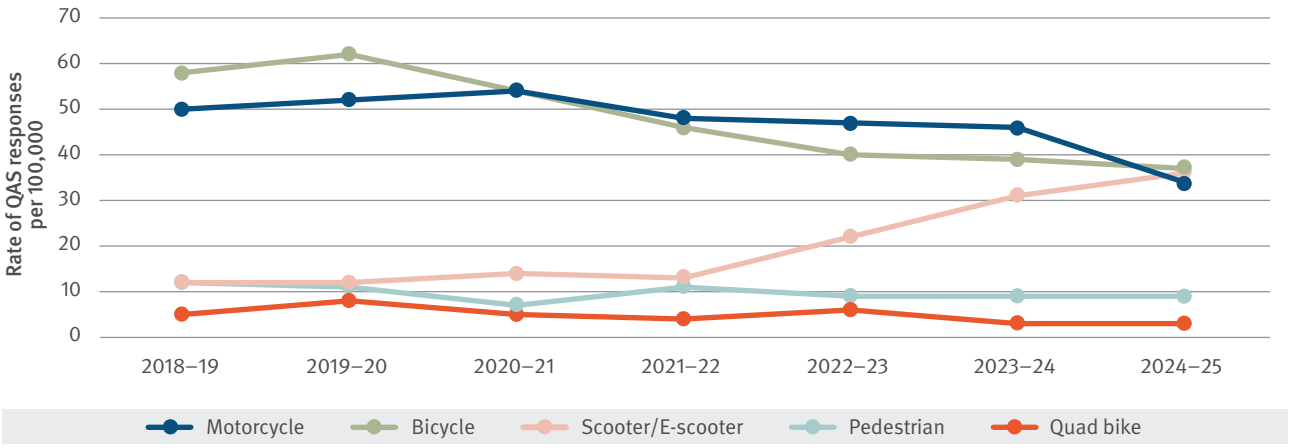
** Not reported for numbers less than 5 and excluded from totals.*

Notes: Excludes data for children and young people whose gender was recorded as missing or indeterminate (n=33). Numbers in the table do not add to the total number of transport incidents attended by QAS (n=6,574) as cells with less than 5 are not shown, and are excluded from table totals.

43 All scooter incidents were manually reviewed by QAS. Incidents were only identified as e-scooter incidents where the type of scooter (such as e-scooter, electronic scooter, motorised or powered scooters) was recorded somewhere in the record. QAS advise that there has been more frequent recording by paramedics of scooter type involved in scooter incidents in very recent years (particularly in 2024/25). Hence, there is less uncertainty about scooter type in the 24/25 reporting period than in previous years. The observed increase in e-scooter incidents may reflect a true increase in e-scooter incidents, but also improvements in scooter identification using QAS data.

Figure 3.3 presents the rate of QAS responses for selected transport-related incidents over the past 6 years.[44] To enable accurate trend analysis, the data shown is based on the previous methodology reported on in past annual child death reports. The most notable trend is a sharp increase in response rates for scooter/e-scooter incidents, particularly from 2020–21 onwards, reflecting their rising popularity and associated risks. In contrast, bicycle-related and motorcycle-related responses have declined in recent years, while responses to other transport incidents have remained relatively stable without clear trends.

Figure 3.3: Queensland Ambulance Services responses to selected transport incidents (rate per 100,000), 2018–19 to 2024–25



Data source: Queensland Ambulance Service (Sep 2025)

Notes: Excludes cases where gender was recorded as indeterminate or missing. Rates are calculated for each financial year per 100,000 population aged 0–17 years.

44 Data for the past years is published in previous editions of this report, from data originally provided by the QAS.

Learnings

2025 Australian and New Zealand Child Death Review and Prevention Conference

Restraint practices among fatally injured child passengers and the general child passenger population

Professor Julie Brown
Co-Director, Transurban Road Safety Centre at NeuRA

At the 2025 Australian and New Zealand Child Death Review and Prevention Conference, hosted by the Commission, Professor Julie Brown, as Co-Director for Transurban Road Safety Centre at NeuRA, presented research on the critical differences in restraint practices between fatally injured child passengers and the broader population of child passengers in Australia. Drawing from detailed crash data and observational studies, the research investigated how misuse, non-use, or inappropriate restraint selection, contributed to child fatalities in motor vehicle incidents.

Key findings of the research suggest that a substantial number of children who died in crashes had been unrestrained, using their restraint incorrectly or were improperly restrained relative to their age, size, and legal requirements. Comparative data from the general population revealed widespread issues in the way restraints are being used, and a lack of awareness around best practice guidelines, particularly during transitions from booster seats to adult seatbelts.

The research also highlighted patterns of increased risk among specific cohorts, such as children in remote regions and socio-economically disadvantaged communities, where access to restraint fitting services had often been limited.

The presentation concluded with Professor Brown advocating for enhanced public education, improved accessibility to restraint fitting programs, and clearer messaging around best practice restraint use. Furthermore, Professor Brown called for evidence-informed policy reform to align legal requirements with current safety research, with the aim to reduce preventable injuries and fatalities among child passengers.

View the presentation: www.qfcc.qld.gov.au/2025/ANZCDRPG-Conference