



NZTA research summary

April 2024

Safety of school bus journeys

Approximately 10% of New Zealand children travel to school by bus. How safe is it, and can it be safer?

The last report on New Zealand school bus safety was published in 2010, and recently there's been renewed interest in school bus safety. This includes calls for seatbelts, and changes to standing and seating requirements on school buses.

In response, the researchers in this 2022 study reviewed school bus safety in New Zealand and identified opportunities to improve student and driver safety in and around school buses. The research aimed to:

- understand national and international best practice
- assess the operating conditions for school bus services
- review the legislation, guidance, policy and practices of school bus travel
- recommend ways to improve school bus passenger safety.

The researchers reviewed school bus services contracted or funded by the Ministry of Education Te Tāhuhu o te Mātauranga and dedicated school bus services contracted by councils as part of public transport contracts.

The researchers:

- did a literature review to examine guidance, research and practices in New Zealand and overseas
- engaged with stakeholders to better understand current practices, challenges and safety concerns
- did a technical analysis of school bus safety and the types of roads at greater risk of a serious school bus crash.

Who runs our school buses, and for whom?

School bus travel in New Zealand is delivered by:

- **Daily Bus services**, which are directly contracted and funded by the Ministry of Education
- **Direct Resourcing** or **Māori Medium Schools**, where schools or kura get bulk funding from the Ministry of Education to provide or contract school bus services
- councils as part of their urban transport network.

Students are eligible for a school bus service funded by the Ministry of Education if they live more than a set distance from their nearest school and there is no other suitable public transport available. The eligibility distance depends on the year level of the student, ranging from 3.2 to 4.8 km from the school. The Ministry also funds and contracts 'Technology Bus' services for Year 7 and 8 students who need to travel to other schools for technology classes.

Approximately 83% of daily school bus services are funded or contracted by the Ministry of Education. These services account for approximately 92% of the passenger kilometres travelled overall because they generally travel much longer distances than services provided by councils.

About 84% of the Ministry of Education Daily Bus services (by length) operate on rural roads, compared to regional council school bus services in Auckland and Wellington, which are approximately 88% urban by length.

School bus crashes and injuries

The researchers assessed the crash risk (for all road users) in different school bus environments. They found that:

- run-off and head-on road crash rates are higher on rural roads than urban roads
- the crash rate is highest on undivided roads with extreme operating conditions, such as windy roads at higher elevations and at risk of bad weather.

The researchers also reviewed crashes involving school buses and injuries reported to the Ministry of Education between 2010 and 2021. They found that:

- bus drivers and passengers were most likely to be injured while travelling on the bus (24.7 injuries per year), and 38% of these were from non-collision events such as harsh braking
- the highest rate of death and serious injury (DSI) to road users was around pick-up and drop-off (PUDO), with a rate of 3.0 DSIs per year. Most (75%) of these DSIs were pedestrians crossing the road to or from the bus.

They note limitations in how school bus related injuries are reported and recommend taking caution when using historical crash data to predict the likelihood of future fatal and serious school bus crashes.

School bus safety policy and practice

The researchers also reviewed guidance, policy, legislation and practice relevant to school bus safety, which covered:

- the Road to Zero strategy and how actions will affect school bus user safety
- school bus route design
- PUDO site selection, assessment and auditing
- school bus signage, visibility, and speed limits around buses
- fleet profile, vehicle selection and vehicle technologies
- occupant protection, including compartmentalisation, seatbelts and standing on buses
- driver management
- education and behaviour management
- crash and incident reporting
- Ministry of Education auditing processes.

Review and recommendations for school bus safety

Finally, the researchers reviewed the findings across all their research. They identify potential interventions and actions to address safety issues and gaps in:

- school bus route design
- speed and infrastructure (on roads where school buses operate)
- selection, design, visibility and operation of PUDO sites
- visibility of school buses, visibility of school bus routes and speeds around stationary buses
- school bus vehicle safety technologies
- bus occupant protection
- bus driver management
- education and behaviour management
- eligibility for school bus transport from a safety perspective
- data collection, reporting and sharing.

They recommended forming a multi-agency school bus safety working group to continue investigating the potential actions in more detail.



RR 710: *Safety of school bus journeys*, NZ Transport Agency Waka Kotahi research report. Available at www.nzta.govt.nz/resources/research/reports/710