

ROAD FATALITIES AMONGST CHILDREN TRAVELLING TO AND FROM SCHOOL IN AUSTRALIA

This monograph presents a statistical summary of road fatalities in 1994 amongst children travelling to and from primary or secondary school in Australia. There were 20 such fatalities in 1994, the latest year for which complete data are available. This represents about one in every ten road deaths amongst children aged between 5 and 17 (196 deaths).

Every year FORS constructs a database of Australian fatal road crashes based on comprehensive crash accounts provided by coroners. This database provides the basis for a detailed understanding of the causes of severe road crashes to guide the development of road safety counter measures.

In the case of small fatality groups, such as the subject of this monograph, the database provides a mechanism for identifying recurring crash patterns. Many of these patterns might otherwise remain hidden from interested parties, such as coroners, who may encounter just a handful of cases of any given type.

The documentation obtained from coroners routinely includes information about the purpose of the travel being undertaken at the time of the crash, including details of any travel to and from school. This information is not available for lower severity crashes. Based, however, on the stated date and time of such crashes, it is estimated that 400 school children were admitted to hospital in 1994 from road trauma sustained during the journey to or from school.

Table 1 describes the travel modes of the 20 children killed whilst travelling to or from school in 1994. It shows that:

- Fourteen of the deaths occurred during pedestrian activity, more than one quarter of all pedestrian deaths in that age group. These comprised:
 - 8 children crossing the road after leaving school buses,
 - one child crossing the road after leaving a public bus,

- one child crossing the road after leaving a car, and
- 4 children walking to or from school.
- Five of the deaths involved cyclists, about one in five of all cyclist deaths in that age group.
- One death occurred to a child alighting from a bus.

Table 1 also shows that most of the deaths during the journey to and from school involved primary school children (15). This represents almost one quarter of all road deaths amongst children of primary school age.

The main fatality groups are summarised below.

Children crossing the road after leaving buses

Table 2 summarises the characteristics of the nine crashes involving children crossing the road after leaving buses. **The majority of them involved a primary school child on the journey home from school alighting from a school bus beside a high-speed rural road and crossing the road unaccompanied by an adult.** One crash involved a child who had alighted from a public bus.

The children involved in these crashes had a median age of 9 years.

The event sometimes involved the child being hit by a vehicle on the far side of the carriageway after the child attempted to cross from behind the bus. On other occasions it involved the child being hit by the bus or another vehicle on the near side of the carriageway after the child attempted to cross from in front of the bus.

Only one of the fatalities occurred during the journey to school. This involved a

Table 1 Number of road deaths amongst children aged 5 to 17, by mode of travel, Australia 1994

Mode of travel	Deaths on journey to/from school	All road deaths of 5-17 year olds	% of all road deaths of 5-17 year olds
Pedestrians			
Crossing road after leaving school bus	8		
Crossing road after leaving public bus	1		
Crossing road after leaving car	1		
Walking to or from school	4		
All pedestrian activity	14	51	27%
Cyclists	5	24	21%
Vehicle occupants	1	121	1%
All modes of travel			
Amongst children of primary school age	15	62	24%
Amongst children of high school age	5	134	4%
All children	20	196	10%

child alighting temporarily from the bus en route to school.

Apart from the high-speed rural nature of the roads (8 of the 9 fatalities occurred in speed zones above 60 km/h), there was generally nothing very difficult about the conditions that prevailed when these crashes occurred. The crashes commonly occurred in fine weather on dry, level roads having a single lane for each direction of travel.

Responsibility for the crash was attributed to the child's error in all cases, compounded by illegal vehicle speed in two instances. The deaths were not restricted to boys, who tend to outnumber girls in most types of road crash involvement.

Was 1994 atypical? An earlier FORS monograph⁽¹⁾ identified six deaths in 1992 amongst children crossing the road after leaving school buses. Four of those deaths occurred on high-speed rural roads.

Children walking to or from school

Table 3 summarises the characteristics of the four fatal crashes in 1994 that involved children walking to or from school.

These crashes all occurred in urban areas. In none of the cases was the child accompanied by an adult.

Three of the deaths occurred during the journey home from school. Earlier FORS work⁽¹⁾ has identified that pedestrian deaths during the journey home from school tend to outnumber by 4 to 1 those during the journey to school. The children involved in these crashes had a median age of 6.5 years. It might be conjectured that in their early years of schooling children are commonly dropped off at school but that less secure arrangements sometimes exist for the journey home. It might also be that children are less attentive and more distracted with friends during the journey home.

There was nothing very difficult about the conditions that prevailed when these crashes occurred. The crashes commonly occurred in fine weather on dry, level, straight roads in residential areas having a single lane for each direction of travel. All four crashes occurred in 60 km/h zones.

With the exception of the death of one child on a pedestrian crossing, responsibility for each crash was attributed to the child's error. Three of the four children involved in these crashes were girls.

Children cycling to or from school

Table 4 summarises the characteristics of the five fatal crashes in 1994 that

involved children cycling to or from school.

These crashes tended to involve older boys and girls than other fatal crashes with children journeying to or from school. The median age of the cyclists in the crashes was 11 years.

Again, there was nothing very difficult about the conditions that prevailed when these crashes occurred. The crashes commonly occurred in fine weather on dry, level, straight, low-speed roads.

Responsibility for the crash was attributed solely to the child's error in four cases and jointly between the cyclist and a speeding driver in one case.

Table 2 Characteristics of nine fatal crashes involving children aged 5 to 17 killed whilst crossing the road after leaving a bus, Australia 1994

Gender		Location of colliding vehicle	
Males	5	Far side of road	5
Females	4	Near side, school bus	2
		Near side, other vehicle	2
Median age			
	9.0 years		
Accompanied by adult		Road configuration	
No	9	Undivided, with single lane each way	9
Yes	0		
Nature of journey		Weather and road conditions	
Travelling home	8	Fine, with dry road	8
Travelling to school	1	Raining or wet road	1
Crash location		Vertical road alignment	
Rural location	8	Level or gentle slope	8
Urban location	1	Unstated alignment	1
Speed limit at crash site		Horizontal road alignment	
110 km/h	1	Straight	5
100 km/h	3	Curved or near a curve	4
90 km/h	1	Responsibility for crash	
80 km/h	3	No responsibility of driver	7
60 km/h	1	Part responsibility of driver (speeding)	2

Table 3 Characteristics of four fatal crashes involving pedestrians aged 5 to 17 killed whilst walking to or from school, Australia 1994

Gender	
Males	1
Females	3
Median age	6.5 years
Accompanied by adult	
Yes	0
No	4
Nature of journey	
Travelling home	3
Travelling to school	1
Crash location	
Urban residential location	3
Urban parkland location	1
Speed limit at crash site	
60 km/h	4
Other	0
Location of collision	
On pedestrian crossing	1
On near side of road	3
At far side of road	0
Road configuration	
Undivided, with single lane each way	3
Undivided, with two lanes each way	1
Weather and road conditions	
Fine, with dry road	3
Raining	1
Vertical road alignment	
Level or gentle slope	3
Crest	1
Horizontal road alignment	
Straight	3
Curved	1
Responsibility for crash	
No responsibility of driver	3
Sole responsibility of driver	1

Summary

- In 1994, there were 20 fatalities amongst children travelling to or from school in Australia.
- Some 400 others are estimated to have been hospitalised.
- Four of the 20 deaths occurred during the journey to school.
- Those killed comprised:
 - nine children crossing the road after leaving buses,
 - one child crossing the road after leaving a car,
 - four children walking to or from school,
 - five cyclists, and
 - one child alighting from a bus.
- The bus-related deaths generally involved a primary school child on the journey home from school alighting from a school bus beside a high-speed rural road and crossing the road unaccompanied by an adult.
- The deaths of children walking to or from school all occurred in urban areas. They generally involved children in their early years of primary school and generally occurred on the journey home rather than the journey to school.
- The crashes were rarely characterised by difficult prevailing conditions.
- Responsibility for the crash was generally attributed to the child's error.

Table 4 Characteristics of five fatal crashes involving children aged 5 to 17 killed whilst cycling to or from school, Australia 1994

Gender	
Males	3
Females	2
Median age	11.0 years
Nature of journey	
Travelling home	3
Travelling to school	2
Crash location	
Urban residential/ commercial location	3
Urban residential location	1
Rural location	1
Speed limit at crash site	
100 km/h	1
60 km/h	4
Type of event	
Failure to give way at intersection	2
Illegal entry from footpath	2
Fall from cycle into path of vehicle	1
Weather and road conditions	
Fine, with dry road	5
Raining or wet road	0
Vertical road alignment	
Level or gentle slope	5
Other alignment	0
Horizontal road alignment	
Straight, at intersection	4
Straight, mid block	1
Curved or near curve	0
Responsibility for crash	
Sole responsibility of cyclist	4
Cyclist and driver of a speeding vehicle	1

Reducing the hazards associated with school buses

The material presented here suggests a recurring road safety issue with the set-down arrangements from school buses on rural roads.

It appears that rural school bus systems are safely depositing children at school but are dealing much less well with the return journey.

On the face of it, this road safety issue should be relatively easy to address compared, for example, with the manifest difficulties associated with reducing fatalities that stem from deviant road use.

While this is an issue for the attention of road safety authorities, it is also an issue for those responsible for the day-to-day wellbeing of children. The role of parents and guardians is critical to the achievement of safer roads for children.

In particular, parents, schools, local government and local bus companies within each rural community could work together towards providing children with safe crossing after alighting from buses in their areas. The first step is for all to be aware of the potential hazard and the second step is to put in place action to remove that hazard.

There is also a role here for locally-based programs to educate school children and the rest of the community about the issue.

A number of measures which might augment local initiatives have been proposed by the Australian Council of State School Organisations (see inset).

Recent Developments

The provision of a detailed picture for subsequent years, such as we have for 1994, must await the lengthy process of assembling similar records. Counts of child road casualties during school travel times suggest, however, a reduction of death and injury amongst children

travelling to and from school as a general category. An estimated 7 deaths occurred among child pedestrians in 1997 during school travel times, compared to 14 in 1994 (with all deaths, including cyclists and vehicle occupants, falling to 11), while hospitalisations of children travelling to and from school declined to about 350 in 1997 from about 400 in 1994.

Without further data it is not possible to comment on the causes or significance of this decline, but it might be noted that a number of measures affecting child pedestrian and cyclist safety have been implemented (at least in some jurisdictions) since 1994, including:

- more intensive enforcement of speed limits,
- reduced speed limits in some residential zones,
- progressive implementation of "safe routes to school" programs, including traffic engineering treatments, and
- flashing lights to identify school buses setting down passengers, with reduced speed limits when lights are operating.

The December 1998 meeting of the Australian Transport Council (ATC) also directed Austroads to prepare a report on school bus safety in all jurisdictions to the next meeting of ATC.

References:

- (1) *Pedestrian casualties: children in early school years. Federal Office of Road Safety, Monograph 8, 1996.*
- (2) *Australian Council of State School Organisations, policy document 1997.*

School bus measures proposed by the Australian Council of State School Organisations⁽²⁾ include:

- School buses to be required to carry distinctive identification that would provide a clear warning to other road users.
- All new buses to be required display flashing amber lights that would operate in conjunction with the door control to signify a legal requirement that other vehicles were prohibited from passing at more than 25 km/h.
- Measures to be implemented to encourage retro-fitting of this system to existing buses.
- School buses to be fitted with auxiliary mirrors to improve the bus driver's vision across the front of the bus to help prevent students from crossing there.
- School buses to be required to carry an adult supervisor other than the driver.
- The school bus route to display marked areas out of which a school bus must have passed before students cross the road.
- School buses to be limited to carrying one person to each single seat and no children standing.
- School bus drivers to be subject to annual health checks and trained in basic life support, and school buses plying remote areas to be fitted with a two-way radio.