

## London Road Safety Unit

### Research Summary No 14

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## The Safety of Schoolchildren on London's Roads

### Overview

Over a million school aged children live in London and the majority of their journeys are to or from school. Research was undertaken to better understand the safety of children on the school journey on London's roads. The researchers collated and analysed London's casualty and collision data (Stats19 data) and other routinely available data.

The research found that:

1. Most of London's schoolchildren were living within walking distance of their school but fewer than half of all children were walking to school in London.
2. Almost two thirds of children's journeys were to or from school, but less than a third of child casualties were recorded as being on the school journey.
3. Pedestrians and cyclists, boys, eleven to twelve year olds and Black children were found to have the highest injury risk.
4. The majority of the drivers involved in collisions injuring child pedestrians or child cyclists lived within 3km of the collision locations.
5. Over a five year period (2001-2005), more than half of the schools had no children injured on the school journey. Schools with a high proportion of children on free school meals or a high proportion of Black children were found to have the highest injury rates.

The research findings can help practitioners identify children most at risk and prioritise schools where road safety interventions may be needed most. The findings may also be relevant to those involved in planning safer routes to school schemes and developing school travel plans.

### Background

There are around 3,000 publicly funded schools and almost 1.2 million pupils in Greater London. School travel is an important element of transport policy, aiming to encourage more walking and cycling amongst children. However, these can be in conflict with parents' concerns over road safety, children's personal security, as well as convenience.

The challenge for transport professionals and other stakeholders is to ensure that children are safe as they walk or cycle to school. A research study on the road safety of London's school children was commissioned by the London Road Safety Unit and carried out by MVA consultancy.



# Research summary

The aim of this study was to assess children's safety on the school journey and to inform practitioners involved in planning, funding or implementing initiatives and schemes which may affect the road safety of school children across London. The findings may help in achieving London's ambitious targets for reducing child casualties as well as encouraging children to walk and cycle to school.

## Objectives

The main research objectives of this study were:

1. To describe and assess the road safety for schoolchildren across London;
2. To explore factors which influence the road safety of London's schoolchildren; and
3. To describe and analyse the road safety of all London schools.

## Methods

The study began with a literature review to identify determinants of injury risk on the school journey. The available evidence could be grouped into the following areas:

- Travel patterns (e.g. mode of travel, distance from school)
- Demographic and behavioural factors (i.e. sex, age, deprivation, ethnicity)
- Local area characteristics and other circumstances (e.g. crossing facilities, type of road, traffic speeds, weather and light conditions)

Based on this literature review, hypotheses were formulated to guide the data analyses. A variety of data sets were used in the analyses: In addition to London's collision and casualty data (ACCSTATS based on STATS19), data from the London Area Travel Survey (LATS 2001), data from the pupil and school Census (provided by the Department for Children, Schools and Families), and data from the London population data (provided by the Greater London Authority) were used in the analyses.

At the core of all analyses were London's collision and casualty data (covering the period between 1994 and 2005). The data hold collision information (date, time, location), vehicle and driver information, and casualty information (road user, age, sex, ethnicity, post code). The data also include information on whether the child casualty was on the school journey, and which school the casualty attended at the time of the collision. School-aged casualties (4-15 years old) were defined as related to the school journey if:

- They were recorded as having been injured on the school journey; and
- They were injured after 7am and before 6pm; and
- They were injured during the week and during normal term time.

School-aged casualties (4-15 years old) were defined as not school-related if they didn't fulfil any of the above criteria. Most statistical analyses were undertaken comparing the group of casualties defined as having occurred on the school journey to the group of casualties defined as having occurred on another type of journey. Additionally, sub-group analyses were undertaken to identify groups at risk.

## Results

### The school journey in London

Most children live within a twenty minute walk from their school. However, the length of the school journey has increased in recent years and fewer children walk to school.

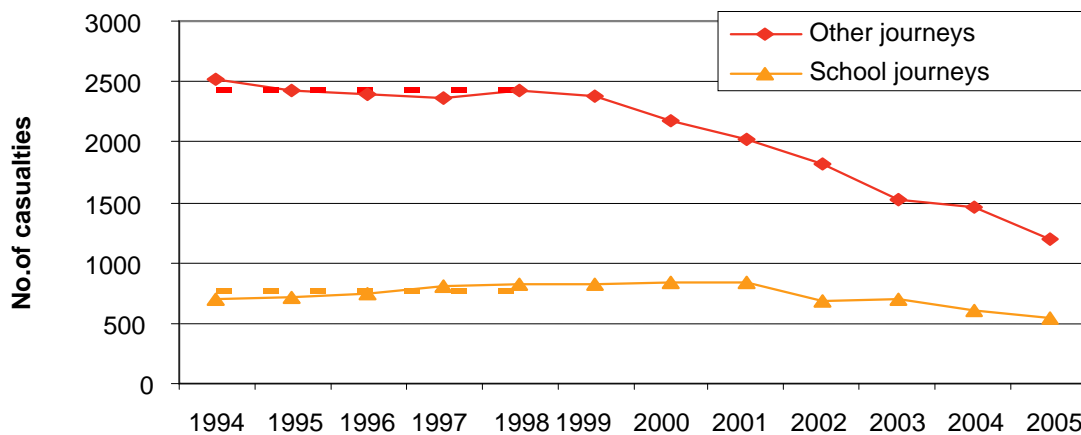
## Research summary

The research found that the majority (61%) of children's journeys in London were to or from school. However, less than half of primary school children and less than a third of secondary school children were walking to school in London (based on 2002-2004 data). In 2005, 66% of children lived within 1.6km (1 mile) of their school, equivalent to a twenty minute walk. The average length of the school journey in London was 1.6km for primary school children and 3.1km for secondary school children. Travel trends indicate that with the increasing length of the school journey, the proportion of children walking has decreased over time. While the increased length of the school journey increases exposure to injury risk, the switch from walking to motorised travel reduces exposure to injury risk on the school journey. Therefore, the changing travel trends have an impact on casualty trends.

### Safety of London's schoolchildren

Fewer children are injured on the school journey compared to other journeys, making the school journey appear safer than other journeys.

Analyses of casualty data indicate that compared with the baseline average for 1994-98, by 2005 the number of school aged casualties had fallen more (-51%) on other journeys than on school journeys (-41%, Figure 1).



**Figure 1: School aged casualties (all severities) on school journeys and other journeys (1994-2005)**

Table 1 shows that about a third (31%) of child casualties were recorded as being on the school journey. The data also indicate that the proportion of children killed or seriously injured (KSI) was smaller (27%) than that of children slightly injured (32%, data not shown) on the school journey.

**Table 1: School aged casualties by severity and journey purpose (2005)**

	School journey	Other journey	Total
All injury severities	538 (31%)	1192 (69%)	1730
KSI injuries	64 (27%)	176 (73%)	240

As about 60% of all children's journeys are to or from school, these findings suggest that school journeys are comparatively safe in London.

### Children most at risk on the school journey

In London, most children are injured as pedestrians and less than half of child pedestrian casualties are injured on the school journey.

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The proportion of child casualties injured on school journeys compared to other journeys is lower for all modes and varies by mode: 43% of child pedestrians, 13% of child cyclists and 15% of child car occupants are injured on the school journey. This compares to 57% of child pedestrians, 87% of child cyclists and 85% of child car occupants who were injured on other journeys. The great majority of children injured on the school journey are injured as pedestrians and they tend to be more seriously injured than other road users (Table 2).

**Table 2: School aged casualties on school journey by severity and by mode (2005)**

	Pedestrian	Cyclist	Car passenger	Other
All injury severities	409 (76%)	22 (4%)	81 (15%)	26 (5%)
KSI injuries	55 (86%)	2 (4%)	3 (5%)	3 (5%)

Using child casualty and population data, casualty rates were calculated by mode and for socio-demographic factors. The casualty rates were found to be consistently lower for school journeys compared to other journeys and indicate that pedestrians and cyclists, boys, children aged eleven to twelve and Black children had the highest injury risk. These findings are consistent with findings from other research studies and identify children most at risk from road traffic injury in London.

### Collision circumstances and driver characteristics

On the school journey, crossing a road seems to represent the highest risk for child pedestrians. Drivers involved in collisions injuring child pedestrians or child cyclists are mostly male and live within 3km of the collision location.

Analysis showed that collisions involving children on the school journey peaked in spring and autumn, mostly occurred in daylight and more often occurred in the afternoon rather than in the morning. Almost no child pedestrians or child cyclists were recorded as having been injured in a 20mph zone. Almost all child pedestrian casualties on the school journey were injured close to a pedestrian crossing (35%) or close to a junction (63%). These proportions were significantly higher than for child pedestrian casualties who were injured on other journeys. These findings suggest that crossing roads increases exposure to risk for child pedestrians on the school journey in London.

Analysis of drivers' characteristics involved in collisions with children injured as pedestrians show that they were mostly male, with the proportion of female drivers being significantly higher for child pedestrians injured on the school journey (29%) than on other journeys (23%). On school journeys, the driver of the car carrying the injured child car occupant tended to be female (67%) while for other journeys the proportions were broadly similar (53% male drivers, 46% female drivers). More than half of the drivers involved in collisions injuring child pedestrians or child cyclists lived within 3km of the collision location and this distance was similar for all journeys.

### Road safety by school

Almost a quarter of London schools are located within or close to a 20mph zone. More than half of schools have not had any children injured on the school journey over a five year period.

There are over 3,000 primary and secondary publicly funded schools in London. Over recent years, many of these schools developed a school travel plan and/or were considered for safer routes to schools schemes. Of these schools, 17% were located in a 20mph zone, and 6% were located within 100m of a 20mph zone.

## Research summary

Over a five year period (2001-2005), 61% of the schools had no children injured on the school journey. Casualty rates per school were calculated using the number of casualties and pupils per school. Casualty rates were higher for secondary schools than primary schools, higher for schools with a high proportion of pupils receiving free school meals and higher for schools with a high proportion of Black pupils. These findings are consistent with other research which found higher child pedestrian injury rates for children living in deprived areas and for Black children.

### Conclusions

The researchers conclude that considerable changes in school travel have occurred in recent years with major potential implications for children's road safety and health more generally. As the length of the school journey has increased, fewer children are walking to school and more children are being driven or are using the bus to get to school. Initiatives such as school travel plans and safer routes to school may help to reverse this trend in London.

The researchers find that school travel is comparatively safe and believe this may be partly attributable to safer routes to schools schemes, school travel plans and children being more familiar with the school journey than with other journeys.

The research indicates that pedestrians and cyclists, boys rather than girls, children aged between eleven and twelve, as well as Black children are most at risk of being injured on London's roads. The research also indicates that many of the drivers involved in collisions injuring child pedestrians or child cyclists live locally. These findings may help in planning and targeting road safety initiatives (e.g. education, campaigns) in London.

The research shows that more than half of schools had no pupils injured over a five year period. The research also shows that primary schools and schools with a high proportion of pupils receiving free schools meals or with a high proportion of Black pupils were more likely to have higher injury rates than other schools. These findings may help in prioritising and targeting schools for road safety initiatives.

The research findings may be useful to inform London practitioners who are delivering road safety in schools, planning safer routes to school schemes, or developing travel plans and help to ensure that children are safe as they walk or cycle to school.

### Selected References

MVA (2007): The Safety of Schoolchildren on London's Roads. Final Report for London Road Safety Unit, Transport for London.

Edwards P, Green J, Roberts I, Grundy C, and Lachowycz K (2006) Deprivation and Road Safety in London: A report to the London Road Safety Unit. London: LSHTM.

Steinbach R, Edwards P, Green J, and Grundy C (2007) Road Safety of London's Black and Asian Minority Ethnic Groups: A report to the London Road Safety Unit. London: LSHTM.

**The full report and other research reports are on [www.tfl.gov.uk/roadsafetyreports](http://www.tfl.gov.uk/roadsafetyreports)**

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