



Road Safety..... Information

March 2008

Children In and Around Cars

Most accidents involving children and cars occur when a child is travelling in a car that crashes, or is hit by a car as a pedestrian or cyclist. However, there are also cases where children are injured, and sometimes killed, when they are in or around a car, but not in a road accident. These tragic cases usually involve a vehicle reversing over a child on a driveway or a child being injured by something inside the vehicle, such as an electric window.

Size of the Problem

It is difficult to obtain detailed estimates of child casualties in these types of accidents as they are often not included in the road accident recording system (STATS19). However, some data is available from the HASS/LASS database. HASS - the Home Accident Surveillance System - and LASS - the Leisure Accident Surveillance System - are two linked databases holding details of home and leisure accidents (not including road or workplace accidents) that caused a serious enough injury to warrant a visit to hospital. The data is taken from a sample of 16 - 18 accident and emergency departments in the UK, from which national estimates are then calculated.

The HASS/LASS data for 2002 (the last year for which data is available) was searched for 'in-car accidents (not RTAs) involving children aged 0 -14 years'.

There were 202 cases, which would give a UK estimate of roughly 4,141 hospital admissions per year. Almost half of the injuries were to children under 4 years old, and the injuries were split almost evenly between both genders.

Many of the hospital visits recorded in HASS/LASS were not serious injuries – 21% of the children involved were examined but did not require treatment, and 54% were treated on the spot with no follow-up treatment required. Around 1 in 10 cases were referred to the patient's GP.

Over a quarter of the accidents (around 1,333) were due to the child striking an object inside the vehicle, frequently bumped heads for a variety of reasons, and this was likely to happen to patients of all ages.



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Another common issue was children taken to hospital because they had swallowed a foreign body, or inserted one in their nose or ear - accounting for approximately 882 cases. Around 430 of these were due to the child putting an object in their ear or nose (most commonly when the child was around the age of 3 years).

There were around 369 instances where children swallowed an object – sometimes resulting in choking – and again, around three quarters of the cases involved children between 1 and 5 years old.

The only other frequent form of injury was due to a pinch or crush between two blunt surfaces, accounting for around 770 visits to hospital. The body part most likely to be injured this way was the patient’s hand or fingers (in 80% of the cases), and the most common cause was getting trapped in the door of a car (in 63% of cases).

Since 2000, RoSPA has collected press reports of 13 fatal accidents in which a child was killed while in and around a car, but not in a car crash. Five of these deaths occurred when children were left unattended in vehicles – two deaths were due to an electric window, and two deaths were due to children playing with matches left in the vehicle.

There were 8 fatalities on or around driveways, 6 of which occurred when a vehicle was reversing. The most terrible thing about these accidents is that an adult member of the child’s family was usually driving the vehicle. In one case a child managed to start the car, which then reversed over a second child.

Most of the children were toddlers aged between 1 and 2 years old.

There have also been several cases of a car being stolen while, unknown to the thief, a child was still inside.



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What Can Parents and Drivers Do?

Between the ages of one and two years, infants' mobility increases at a terrific, but irregular rate, so they can easily escape a parent's supervision for a short time and get into difficulties before the parent realises they have moved.

It is not until the age of four or five that children begin to understand the concept of danger, and begin to heed warnings given to them.

Reversing

One of the most common circumstances for these types of (rare) accidents is when a car is being reversed off a driveway. The driver has a limited view when reversing and, of course, small children may not be visible in the rearview and wing mirrors. It is easy for drivers to let their guard down or go into autopilot when doing tasks that they perform daily – such as reversing onto or off a driveway – and this makes an accident more likely. In some cases, the parent was unaware that a child had managed to get out of the house.

Where possible, it is better to reverse onto a driveway, and drive off forwards.

Before reversing,

- Make sure you know where all children are
- check around the vehicle by using the mirrors and looking over your shoulder. Be aware that you may have blind spots around your vehicle, especially directly behind the vehicle, where small children can be hidden from view.
- When reversing, make sure you perform the manoeuvre slowly, which gives you time to keep checking all around you. The rear window gives you the best view out of the rear of the car.



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Inside the Car

Young children should never be left alone inside a vehicle, even when the engine is turned off.

Never leave the keys in the ignition when you get out of the car.

Also, keep the car keys in a safe place, out of reach of children, in the house.

Even if you are intending to start the car again very shortly, always remove the ignition keys. A child could start the car or a car thief could jump in the car and drive off – there have been several cases where this has happened with a child still in the rear seats.

Another useful tip is to lock turn the steering wheel after removing the ignition key; this is usually done by turning the steering wheel until it locks. This makes it more difficult to start the car because when putting the ignition key back in to start the car, the steering wheel also has to be turned to release the steering lock. This would make the car more complicated to start for a young person. If possible, turn the wheels so that if the car moved, it would be stopped by the kerb or something similar. (Rule 252 of the Highway Code advises this when parking on a hill).

Make sure that dangerous items are not kept in a car where children can get hold of them. The HASS/LASS data includes cases of children starting a fire in a car with matches that were left in the vehicle, swallowing rat poison and being hurt by sharp objects, such as fishing hooks.

Another common injury is children getting their hands, fingers, legs and sometimes heads caught in a car door as it is closed.



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What Can Vehicle Manufacturers Do?

In some of these cases, simple changes to vehicle design may also help to prevent accidental injuries. Two of the recorded fatalities were strangulation due to children playing with electric windows, and designs that prevent windows from shutting when they encounter resistance would prevent these casualties.

In at least one case, the accident may have been prevented if the car had had some form of secondary safety feature so that it could not be started without depressing the clutch pedal, brake pedal, or similar. In fact, this is normal in cars with automatic transmissions where the car has to be put into 'drive'.

In the US, at least one manufacturer also fits a switch that will not allow a manual vehicle to be started without the clutch being depressed. This means that the car can only be started by someone tall enough to reach the foot pedal, which would prevent a small child starting the car.

Replacement of Key Based Ignitions with Start Buttons

Methods of starting vehicles are changing, with push buttons, rather than a key, becoming more common. Car manufacturers need to build in safeguards to prevent children from starting this type of vehicle. For example, on some vehicles this method of starting is combined with an electronic parking brake that is automatically activated when the vehicle starts.

Anti-Theft Devices

It is also possible that some anti-theft devices might help to prevent accidental ignition – by requiring an input from the driver in addition to the ignition in order to start the car.

Electric Windows

Electric windows are designed so that they do not work when the engine is off and should stop when they encounter any resistance, such as a child's hand or neck. However, this is not foolproof and children have been killed by getting their neck trapped in an electric window.