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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.

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 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.

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).



Children on Driveways

Since 2001, RoSPA has monitored press reports of accidents involving children in or near cars or vans at their home. Between 2001 and 2012, 24 children have been killed on or near the driveways of their home.

Most (14 of the 24) of the deaths occurred when a child was hit by a reversing vehicle. In a further three cases, the vehicle rolled back after the handbrake had been accidentally released (by a young child in one of those cases). A vehicle was driving onto the driveway in two cases, and the exact manoeuvre was not clear from the reports of the other cases. Most of the children were toddlers aged between 1 and 2 years old; the rest were 3 to 7 years old.

The most terrible thing about these accidents is that an adult member of the child's family was usually driving the vehicle. In some cases, it was a neighbour or a visitor to the house.

There is evidence that a lack of awareness of the risk of this type of accident is a significant factor. In 2010, a survey conducted by RoSPA, in conjunction with the Iain Goodwill Trust (www.iains-trust.org), found that the majority of parents are unaware of the potential for an accident involving their children and a car at home.

One of the main issues identified was that parents and carers do not think an accident will happen to their family, unless they know someone who has already experienced one, meaning they do not take simple precautions.

Of those who took part in the survey:

- 59% could recall a time when their child had followed them out of the house on to the driveway without them realising
- 22% had started to manoeuvre a vehicle on the driveway and realised their child was close to the car when they thought they were elsewhere
- 95% reported temporarily leaving their children unattended in the car on the driveway while they "dashed back into the house" for something
- 42% said their children had picked up the family car keys without being seen to do so.

However, 68% believed it was unlikely that their child would ever be injured by a vehicle entering or leaving their driveway. And 83% believed it was unlikely their child would ever be injured by a vehicle parked on their driveway.

The survey also found that a disturbingly high proportion (63%) of respondent addressed sometimes left children inside the car while they made a quick call to somewhere like a shop or school.

The full report of the survey, "Children In and Around Cars: Final Report", is available at www.rospace.com/RoadSafety/info/children_in_and_around_cars_report.pdf



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. In some of the cases above, the parent was unaware that a child had managed to get out of the house.

It is not until the age of four or five years 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 mirrors. It is easy for drivers to let their guard down or go into autopilot when doing something, such as reversing onto or off a driveway, that they do daily. This can make an accident more likely.

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

When reversing:

- Make sure you know where all children are.
- Check around the vehicle by using the mirrors and looking over your shoulder.
- Be aware of any blind spots, especially directly behind, where small children can be hidden from view.
- Ideally, ask another adult to guide you as you reverse. If that's not possible and you have the slightest doubt, get out of the vehicle to check.
- Wind down the driver's side window to increase your awareness of what's around you.
- Always reverse slowly, to give yourself time to keep checking all around you. This also makes it easier to stop suddenly if you need to do so.
- Look over your shoulder out of the rear window; do not just rely on using the rearview and wing mirrors, as you reverse.
- Keep it slow!



Road Safety..... Information

Inside the Car

Young children should never be left alone inside a vehicle, even when the engine is turned off. In addition to the tragedies above, RoSPA knows of cases where children have died after being left unattended in vehicles – two deaths were due to an electric window, and two deaths were due to fires caused by children playing with matches left in the vehicle.

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

When leaving your car:

- Never leave the keys in the ignition when you get out of the car, even if you are intending to start the car again very shortly. 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.
- Always lock the steering wheel after removing the ignition key (turn the steering wheel until it locks) as this makes it more difficult for a child to start the car.
- 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.
- Watch out for children's hands, fingers, legs, and even heads, getting caught in a car door as it's closed – this is another common injury.
- Always lock your car when you leave it, even if you'll be returning to it almost immediately. Apart from the security benefits, this will make it harder for children to climb inside without you realising.
- Discourage children from playing with the car controls, such as the handbrake.

At home:

- Keep the car keys in a safe place, out of reach of children.



Road Safety..... **Information**

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; designs that prevent windows from shutting when they encounter resistance, such as a hand or a child's neck, 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'.

Some manual transmission cars also now require the clutch to be fully depressed before the ignition will start. This means that small child cannot start the car, even if s/he has the car keys, because they would not be tall enough to reach the clutch foot pedal.

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.