Children’s car-restraints: use and parental attitudes

P. W. RICHMOND, A. SKINNER & A. KIMCHE
Accident and Emergency Department, Cardiff Royal Hospital, Cardiff, Wales

SUMMARY

An analysis of the attitudes of 600 parents towards children’s car-restraints together with their use is presented.

Only 47% of infants under 9 months of age and 26% of children under 15 years of age were always appropriately restrained. Children under 4 were more likely to be restrained than older children and previous involvement in a road-traffic accident led to increased use of restraint.

INTRODUCTION

Accidents are the commonest cause of death in children and road-traffic accidents account for over 40% of this total (Office of Population Censuses and Surveys, 1985).

In 1985 there were 69 fatalities in the UK to children aged 14 years and under whilst travelling in cars. A total of 1057 were seriously injured and 8117 sustained slight injuries (Department of Transport, 1985). Children aged 1–2 years have the highest mortality, and the lowest are those aged 12–13 years and infants (Avery & Hayes, 1985). Restraining children in cars can reduce the overall injury rate by two thirds (Farr, 1974).

A survey was undertaken to determine the awareness of parents to the safety and legal aspects of transporting children in cars and to assess the frequency of use of restraints.

METHODS

The present practice and attitudes of 600 parents (of 941 children) who attended the
Paediatric Section of the AED at the Cardiff Royal Infirmary between December 1987 and February 1988 and who owned a car were analysed.

The ages of the parents and their children, the type, if any, of car-restraints fitted, together with the frequency of use or reasons for non-use were recorded.

Involvement in a road-traffic accident in the last 5 years and parents’ attitudes towards the safety and legal aspects of transporting infants in cars were noted.

A restraint was considered appropriate if it conformed to the Department of Transport recommendations; infants under nine months of age—a car seat or carrycot with harness: 9 months–4 years—a child safety seat: 5 years to 9 years—an adult belt with a booster or child safety harness: older than 9 years—an adult belt (Department of Transport, 1983).

The anchorage of forward-facing rear-mounted child-seats was considered unacceptable if the rear anchorage point was placed directly behind the adult seat on the floor in a hatchback or estate car.

RESULTS

Two hundred and forty-seven (26%) of a total of 941 children were appropriately restrained at all times whereas 342 (36%) were restrained on some occasions. One hundred and thirty-three (44%) children 0–4 years were always restrained correctly (Table 1).

Table 1 Restraint use—children’s age with relation to age of accompanying parent

<table>
<thead>
<tr>
<th>Parental age</th>
<th>Always</th>
<th>Usually</th>
<th>Occasionally</th>
<th>Restraint not used</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>21–30</td>
<td>12</td>
<td>52</td>
<td>15 7</td>
<td>10 21 3</td>
</tr>
<tr>
<td>31–40</td>
<td>10</td>
<td>45</td>
<td>49 1</td>
<td>10 21 3</td>
</tr>
<tr>
<td>41–50</td>
<td>2</td>
<td>10</td>
<td>22 -</td>
<td>7</td>
</tr>
<tr>
<td>&lt;50</td>
<td>-</td>
<td>-</td>
<td>2 -</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>109</td>
<td>88 8</td>
<td>6</td>
</tr>
</tbody>
</table>

0–9m 10m–4y 10–14y 0–9m 10m–4y 10–14y 0–9m 10m–4y 10–14y

Table 2 Is it safe to carry an infant on your lap in the rear seat?

<table>
<thead>
<tr>
<th>Parental age</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
<th>Don’t know</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>5</td>
<td>(45)</td>
<td>3</td>
<td>(27)</td>
<td>3</td>
<td>(27)</td>
</tr>
<tr>
<td>21–30</td>
<td>36</td>
<td>(17)</td>
<td>146</td>
<td>(70)</td>
<td>26</td>
<td>(12.5)</td>
</tr>
<tr>
<td>31–40</td>
<td>35</td>
<td>(12)</td>
<td>240</td>
<td>(79)</td>
<td>28</td>
<td>(9)</td>
</tr>
<tr>
<td>41–50</td>
<td>18</td>
<td>(26)</td>
<td>50</td>
<td>(71)</td>
<td>2</td>
<td>(3)</td>
</tr>
<tr>
<td>&gt;50</td>
<td>1</td>
<td>(12.5)</td>
<td>7</td>
<td>(87.5)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>(16)</td>
<td>446</td>
<td>(74)</td>
<td>59</td>
<td>(10)</td>
</tr>
</tbody>
</table>
Children's car-restraints

Infants 0–9 months
Thirty-two (63%) of 51 children had an appropriate restraint, but this was used on all journeys by only 24 (75%).

The anchorage of the baby seat was thought to be unsatisfactory in eight cases.

Children 10 months–4 years
One hundred and fifty (60%) of 252 children were fitted with an appropriate restraint and this was always used by 109 (73%).

Thirty-four were thought to have an inappropriate anchorage system.

Children 5–9 years
Boosters were used by only 26 (9%) of the 304 children.

Children 10–14 years
Rear seat-belts were fitted in 145 cases but were always worn by only 88 (61%). One hundred and ninety-one had no restraint in the rear seats.

Reasons for non-use
Twenty-seven parents with children under 5 years of age commented that the child did not like using the restraint, 11 felt it was too expensive, four felt that it took up too much space and two that safety was not improved with a restraint.

Twenty-four parents of children aged 10–14 years commented that the child did not like using a rear seat-belt.

Previous road-traffic accidents (RTA)
One hundred and three (17%) parents had been involved in an RTA within the previous 5 years.

An appropriate restraint was used by their children on all journeys by 45 (44%) (cf overall rate, 26%) and never used by 43 (42%) (cf overall rate, 64%).

Fifty-one (8.5%) children had been involved in an RTA in the previous 5 years and 22 (43%) always used an appropriate restraint and 22 went unrestrained (43%).

Transport of infants on parent's lap
Five hundred and sixty-four (94%) parents knew that they were not allowed to carry an infant on their lap in the front seat although only one parent with a child 0–9 months thought it was allowed.
Four hundred and forty-six (74%) parents knew it was unsafe to carry an infant on their lap in the rear seat (Table 2). Thirty-seven (72%) of 51 parents with a child under 9 months of age knew it was unsafe, but five thought it was safe and nine were unsure.

DISCUSSION

The advantages of restraining children in cars are well established, yet this survey reveals that the majority of children still travel unrestrained.

Only 26% of 941 children were always correctly restrained rising to 31% on some journeys. However, boosters appeared to be unpopular and if this group were excluded, then the restraint use rose to 36% and 49% respectively.

These figures compare with 34% of 268 children who were correctly restrained in a questionnaire survey (Eatough et al., 1985); Eatough also noted 13% were using incorrectly anchored restraints.

Similarly, 34 (13%) of 252 children in this survey were using incorrectly anchored child safety seats.

Direct observation of restraint use by the Department of Transport (1987) revealed a restraint rate for infants up to 12 months of 55% and children 1–4 years 42%. This appears to correlate with restraint use in this survey of 47% for infants up to 9 months and 44% for children 1–4 years.

Road-traffic accidents in the previous 5 years involving the parent or child increased the overall restraint use from 26% to 44% and 43% respectively but over 40% still travelled without restraints.

Sixteen per cent of parents still felt it safe to travel with an infant on their laps in the rear seat. In the Department of Transport survey (1987) 37% of infants under 12 months were carried in this manner.

Infants and young children are more likely to be restrained than older children and previous involvement in car accidents led to increased restraint use.

It would appear to be unacceptable that 51 parents stated their children did not use an available restraint because their children did not like using one. It was encouraging to note that only 11 commented on the expense and four on loss of space inside the car.

However, cost was given as the main reason for not using restraints in the survey by Eatough et al. (1985).

Restraint use declined with age but not significantly from infants (47%) to children aged 1–4 years (44%). This contrasts with New Zealand’s experience (Geddis & Appleton, 1982) where 65% of infants between 6 and 12 months were restrained declining to only 30% of children aged between 3 and 4 years.

Infants are still being transported in cars on the laps of their parents.

More should be done to improve the frequency of use of restraints and an accident & emergency department may play a role in prevention as approximately 20% of children attend in a given year.
REFERENCES


