

# Traffic Safety Facts

## Traffic Tech – Technology Transfer Series



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## Reducing Nonuse of Restraints by Children Ages 5 to 7

### Background

NHTSA's "Misuse of Child Restraints" study (DOT HS 809 671) identified high rates of unrestrained children of booster seat age and weight. This project was undertaken in response to those findings, selecting 5- to 7-year-olds to target because of the higher rate of nonuse in that age range. The study objective was to suggest solutions to the problem of unrestrained children riding in motor vehicles.

### Method

The study methodology entailed: (1) a literature review to identify factors associated with children's nonuse of occupant restraints and potential interventions; (2) discussions with key informants to identify barriers to restraint use in this child population, and to recommend strategies to reduce nonuse; (3) a brainstorming session with experts to propose and prioritize strategies to reduce nonuse among identified high-risk populations; and (4) focus groups in four cities with adults observed transporting unrestrained children ages 5 to 7 to discuss strategies to increase restraint use. The obtained information encompassed not just nonuse but also improper use (e.g., using a seat belt instead of a booster seat).

### Literature Review

Populations at higher socioeconomic levels are more likely to use child safety seats and booster seats than those at lower socioeconomic levels. In addition, research has shown child occupants of White drivers more likely than occupants of African-American and Latino drivers to use child safety seats and booster seats and less likely to be unrestrained. Findings regarding other demographic variables related to the driver have varied across studies and years. Regarding the child, the older and heavier the booster-seat-age child, the lower the likelihood the child will be riding in a child safety seat or booster seat.

Studies have found a number of factors to be associated with improper child restraint use including low perceived injury risk to the child, resistance by the child to using a booster seat, challenges to using a booster seat due to vehicle design or too many passengers, and cultural barriers among some groups. In addition, child restraint use has been found to be lower when the driver was unrestrained. The presence of a State booster seat law corresponds with a higher percentage of children using booster seats.

Studies have shown increases in child safety seat use from community-wide information and enhanced enforcement campaigns. The challenge of educational programs is to overcome the reasons parents and caregivers provide for not restraining their children when they ride in motor vehicles. Educational programs about booster seats and the child restraint law combined with booster seat giveaways have been successful in increasing booster seat use at pre-school programs in lower socioeconomic communities. Most educational programs aimed at increasing restraint use by young children have focused on parents and caregivers, using a multitude of strategies including rewards, one-to-one instruction, and distribution of educational material. Studies have shown that these programs on their own – without booster seat laws, enforcement, or loaner programs – have had little to mild success.

### Discussions With Key Informants

The participating child passenger safety (CPS) professionals estimated that approximately 20% of the booster seat age children they observe—generally during car seat check events—are unrestrained. Although they reported encountering unrestrained children in all kinds of communities, their greatest concern was the number of unrestrained children among minorities, recent immigrants, and low income households. They also commonly observed unrestrained children in pickup trucks, older vehicles, and vehicles with many passengers.

The CPS professionals noted that many parents and caregivers are unfamiliar with child restraint laws, have limited knowledge of proper restraint use, perceive minimal risk, report they cannot afford a booster seat or do not know where to buy one, or are permissive when children complain about being restrained. They also mentioned situational factors associated with booster-seat-age children riding unrestrained. Parents have told the CPS professionals it's inconvenient to use booster seats, they are in a hurry, the booster seat does not fit in the back seat of the vehicle (because of other passengers or other child safety seats), there is no shoulder belt in the back middle seat to use with a booster seat, and children often disconnect the vehicle seat belt from its position over the booster seat.

The CPS professionals were asked about their programs to encourage booster seat use. They said their programs emphasize injury and fatality as a result of failure to use proper restraints, and in many minority communities the programs include booster seat giveaways. They also convey the message that children ages 4 to 7 must be properly secured in booster seats until they are at least 8 years old or 4' 9" tall.

## Brainstorming Session

A major theme from this session was that in many families, the children are "calling the shots." Parents and caregivers need to reclaim authority in the area of safety. Parents also face a developmental barrier at this age as children want to be independent. They do not want to sit in booster seats because of peer pressure. The experts mentioned that people who don't use restraints themselves and who don't restrain their children don't consider the possibility of being in a crash. They also said that low perceived risk is why many part-time users only restrain themselves and their children on longer trips. The experts stated that messages need to emphasize the necessity of buckling up on every trip.

Other barriers to booster seat use included cost, lack of enforcement, and lack of a booster seat law. Participants who worked in law enforcement cited lack of judicial follow-through as a barrier for officers in writing tickets for booster seat violations.

A consensus opinion was that individual differences in the target audience were larger than group differences, resulting in a need for a palette of messages. Such a palette of strategies to inform parents and caregivers should include message content that focuses on safety, risk, and enforcement.

## Focus Groups

The focus group findings reinforced themes uncovered in the earlier phases of the study: Confusion about what proper child restraint means, unfamiliarity with booster seats and how they work, logistical difficulties in using booster seats, children's resistance to using the seats, and perceived lack of enforcement of the child restraint law.

Participants were asked to rank six strategies in terms of their perceived ability to motivate appropriate restraint use by children ages 5 to 7. They ranked education as most effective, based on their perceptions that inconsistent use or nonuse results from innocent ignorance among people who would otherwise be dedicated to their children's safety. The participants suggested using schools to reach children and their parents, and providing teachers with simple and clear material. They also suggested using law enforcement officers as guest speakers, and public safety events as venues for teaching about child restraint use, especially where goods and services relating to children are provided. Communication was the second-ranked strategy, as participants believed most people would use child restraints if they fully understood the risks of not doing so. They believed it important to raise the sense of (injury) risk, eliminate confusion about what restraint to use, educate the public on the law and associated penalties, and raise the level of concern about getting caught by law enforcement.

Greater enforcement of the child restraint law ranked third, followed by demonstration of proper child restraint use, and a stronger child restraint law. Assistance to low-income households ranked sixth (it was perceived as being adequately addressed). Participants thought enforcement of the child restraint law would be more effective if the following conditions were met: Greater public knowledge of the law's provisions; a perceived increase in efforts to enforce the law (e.g., greater use of checkpoints and more publicity about their existence); and a substantial increase in fine amounts and applied points.

## How to Order

For a copy of *Identifying Strategies to Reduce the Percentage of Unrestrained Young Children* (40 pages plus appendices) prepared by TransAnalytics, LLC, write to the Office of Behavioral Safety Research, NHTSA, NTI-130, 1200 New Jersey Avenue SE., Washington, DC 20590, or send a fax to 202-366-7394, or download from [www.nhtsa.gov](http://www.nhtsa.gov). Alan Block was the project manager for this study.



U.S. Department of Transportation  
**National Highway Traffic Safety  
Administration**

1200 New Jersey Avenue SE., NTI-130  
Washington, DC 20590

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