

# ***Seated for Safety:***

**Child passenger safety educational materials in the United States:  
Content, availability, accuracy, and appropriateness**

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# Glossary of Abbreviations

<b>AAAFST</b>	AAA Foundation for Traffic Safety
<b>AAP</b>	American Academy of Pediatrics
<b>EDC</b>	Education Development Center, Inc.
<b>NHTSA</b>	National Highway Traffic Safety Administration

# Foreword

This report summarizes a study that explored the content and availability of child passenger safety educational materials targeted at lay audiences in the United States, and identified gaps in the available materials. The project was made possible with funding from the AAA Foundation for Traffic Safety, a not-for-profit, publicly supported, charitable research and education organization. This project is consistent with AAA's centennial theme on child passenger safety.

The opinions, findings, and conclusions expressed in this report are those of the authors and do not necessarily reflect those of the AAA Foundation or the individuals who reviewed this report. The AAA Foundation for Traffic Safety and Education Development Center, Inc., assume no liability for the use or misuse of any information, opinions, findings, or conclusions contained within this report.

This report is also available on the AAA Foundation for Traffic Safety website at [www.aaafoundation.org](http://www.aaafoundation.org).

# Executive Summary

In the United States between 1994 and 1998, approximately 5,500 motor vehicle passengers aged 12 and under were killed and 660,000 were injured. Contributing factors in the death and injury of these children include inappropriate selection, installation, and use of child restraints; inappropriate “graduation” from child safety seats to seat belts; and improper seating position within the vehicle. Educational materials that teach caregivers how to protect children in motor vehicles are an important part of an overall strategy to reduce child motor vehicle deaths and injuries.

Child passenger safety educational materials for parents, caregivers, teachers, and children must provide up-to-date information about the technical aspects of child passenger safety in a manner consistent with the education, culture, and language ability of their audiences. In addition, if the materials are to be useful as educational tools, they must be easy to obtain. This study explored the content and availability of existing child passenger safety educational materials that target lay audiences, identified gaps in this body of materials, and evaluated the technical accuracy of materials and their appropriateness for diverse audiences.

The project staff identified and contacted 158 potential producers of child passenger safety educational materials, and 101 organizations supplied copies of 401 relevant items. This report presents findings from interviews conducted with the 101 organizations about the materials collected. A sample of the materials was evaluated for technical accuracy, cultural competence, and appropriateness for low-literacy audiences, low-income audiences, and children with special health care needs, using an evaluation tool developed by the project staff.

Of the 401 items collected for this study, 370 are described on the CD-ROM produced from this research. The CD-ROM contains downloadable versions of many of the items, if permitted by the sponsoring organizations.

The study identified child passenger safety educational materials that covered a broad range of topics, including child safety seats, safety belts, seating position, air bags, and child weight issues. These materials are distributed by a variety of methods and to a range of audiences. However, many of the evaluated items do not contain all the basic information required from a resource on child passenger safety; the information most often missing was the importance of rear seating for children 12 and under. Some of the evaluated materials were factually inaccurate, providing incorrect guidelines for rear-facing infants.

Few of the evaluated items address the needs of children at highest risk of motor vehicle injury, including those from low-income and non-English-speaking families. Reading levels are generally higher than is recommended for the general public, the materials are not readily available in languages other than English, and few items address the concerns of specific populations, including low-income audiences. Certain topics are rarely addressed, such as guidelines for transporting children with special health care needs or transporting children in vehicles other than standard passenger cars.

The field of child passenger safety is evolving rapidly, requiring the revision of existing materials and the development of new materials. It is essential that all materials being disseminated are technically accurate and contain the basic information needed to keep children safe. Organizations and agencies that produce educational materials should have them developed and reviewed for technical accuracy by child passenger safety experts.

In addition, new materials are needed on specific topics, such as guidelines for children with special health care needs and children riding in vehicles other than cars. New materials are also needed for audiences whose children are at high risk of injury. These materials should be created in accordance with some basic principles of health education: written at recommended reading levels, developed with input from target audiences, field-tested, available in a variety of languages, and inclusive of issues of concern to specific populations.

# Introduction

## **Statement of the Problem**

Between 1994 and 1998, approximately 5,500 children aged 12 and under were killed in traffic crashes while riding in motor vehicles in the United States, a rate of 2.19 per 100,000.<sup>1</sup> For each child killed in a crash, an estimated 120 children received nonfatal injuries.<sup>2</sup> Underserved minority populations, recent immigrants, non-English speakers, people with low income, people with low literacy, and children with special health care needs are at particular risk of injury as motor vehicle occupants.<sup>3,4</sup>

Inappropriate restraint use and seating position place children at risk of injury. Recent studies reveal that 80 to 90% of children are not properly restrained while riding in motor vehicles.<sup>5</sup> The fatality risk for all crash types is almost 40% lower for children seated in the back seat than for those riding in the front seat.<sup>6</sup> Yet 11 to 21% of infants, 6 to 15% of 1 and 2 year olds, 21 to 30% of 3 to 6 year olds, and 41 to 43% of 7 to 12 year olds continue to ride in the front seat.<sup>7</sup>

Parents and caregivers who transport children are faced with critical decisions that affect the safety of their small passengers, such as the proper selection, installation, and use of height-, weight- and age-appropriate restraints; the “graduation” of children from car seats to safety belts; and the placement of children in the vehicle. Child passenger safety educational materials for parents, caregivers, and teachers must be kept up-to-date and must educate this audience about the technical aspects of protecting children in a way that meets the educational, cultural, and linguistic needs of the audience. Materials must not only be technically accurate; in order to be useful, they must also be accessible to lay audiences.

Several factors contribute to the public’s confusion about child passenger safety, including the variety of child restraints for children of different ages and sizes, incompatibility between the design of car seats and vehicles, and gaps in child occupant protection laws.<sup>5</sup> Vehicles used for public transportation, including vans, taxicabs, airport shuttles, and buses, are not generally equipped with car seats or safety belts, further adding to the confusion. Parents and caregivers also face complicated decisions when transporting a large number of children or when operating motor vehicles that do not have rear seats, such as pickup trucks.

A variety of factors place certain children at particularly high risk as motor vehicle occupants. For example, rural areas have higher motor vehicle crash and death rates than urban and suburban areas, and crashes in these areas tend to be more severe.<sup>8</sup> Pickup trucks and other vehicles without standard back seats are common in rural areas.

Other populations have their own challenges. Grandparents from the pre-car seat generation may be responsible for transporting their grandchildren but may not have information about standard child passenger safety procedures. Low-income families may not be able to afford car seats or may balk at purchasing new seats as a child grows. Low-income families may also depend on older cars that are equipped with obsolete or problematic rear safety belts,<sup>3</sup> or on public transportation that does not include any child safety restraints. Children with special health care needs (e.g., prematurity, spina bifida, breathing problems) also have specific requirements.

People with limited or no English must contend with car seat use and installation instructions that may be difficult to read or understand, and these instructions may not be available in languages other than English. Cultural barriers also exist. Some cultural beliefs conflict with the proper use of child restraints; for example, some people believe that the proper place for a child is in a mother's arms, or that a crying child in a car seat may be interpreted as bad parenting. Others believe that thinking about or preparing for a motor vehicle crash may cause one to happen.

Recent research has provided child passenger safety professionals with age-, height-, and weight-specific guidelines for appropriate child restraint usage. However, many providers continue to use outdated educational materials, including those that illustrate improperly restrained children. Some educational materials, including those targeting caregivers of children with special needs, are accurate but too complicated for lay audiences. Other materials may be incomplete, neglecting such crucial information as the importance of rear seating or appropriate age and weight guidelines for moving children from rear-facing to forward-facing car seats.

### **Purpose of the Study**

This document presents the methods and results from a seven-month study funded by the AAA Foundation for Traffic Safety and discusses implications for the future development of child passenger safety educational materials. The project explored the content and availability of existing child passenger safety educational materials targeted at lay audiences and identified gaps in this body of materials. Although conducting a formal evaluation of the materials was outside the scope of this project, to the extent possible, this report discusses the technical accuracy of the materials and their appropriateness for diverse audiences.

This report describes the content, availability, accuracy, and appropriateness of the 401 items that were reviewed. *Content* includes topics addressed, age groups addressed, target audiences, and formats. *Availability* includes production figures, cost, distribution plans, methods of distribution, and recipients. *Accuracy and appropriateness* includes revision dates, training provided, type of evaluation completed, technical accuracy, cultural competence, languages available, reading levels, appropriateness for low-

literacy and low-income audiences, and accuracy and appropriateness of information for children with special health care needs.

A CD-ROM produced as part of this project contains information about 370 items produced by the 90 sponsoring organizations who gave us permission to include abstracts and, in some cases, partial or full copies of their materials. **Inclusion of educational materials on the CD-ROM does not indicate endorsement by Education Development Center, Inc., or the AAA Foundation for Traffic Safety, as these materials have not been formally reviewed for technical accuracy.** Further, neither organization is to be held liable for inappropriate dissemination of materials that may contain inaccurate information. The CD-ROM is available from the AAA Foundation for Traffic Safety, 1440 New York Ave, NW, Suite 201, Washington, DC 20005, or on the Web at [www.aaafoundation.org](http://www.aaafoundation.org).

# Research Design and Methodology

## Compilation of Materials

This project began in May 2001. The project team created a database to store information about every organization contacted and each relevant child passenger safety educational item received. The database allowed project staff to track requests for materials and to record profiles of materials received (Appendix 1).

Project staff used a number of sources to identify organizations from which to solicit materials, including *Who's Who in Traffic Safety*,<sup>9</sup> an extensive Internet search, and referrals from personal contacts in the field of child passenger safety. In addition, requests for child passenger safety educational materials were placed in 32 newsletters and 10 electronic mailing lists. Organizations were offered a free copy of the *Seated for Safety* final report and CD-ROM as an incentive for their participation.

The staff identified 158 organizations as potential producers of child passenger safety educational materials. Project staff contacted by telephone at least one person in all 158 organizations. Fifty of these organizations did not have relevant materials. Seven had relevant materials but did not provide them. A total of 101 organizations (Appendix 2) supplied copies of relevant child passenger safety educational materials, and most organizations provided more than one item. Some items could not be included because they were temporarily out of stock, being updated, or otherwise unavailable. Ninety of the 101 organizations with relevant materials gave permission for their materials to be described on the project CD-ROM (Table 1).

Table 1. Compilation of Materials

Organizations contacted = 158	
↳ Organizations with relevant materials = 101	
↳ Organizations permitting inclusion of materials on CD-ROM = 90	
<hr/>	
Relevant items received = 401	
↳ Items included on CD-ROM = 370	

### **Data Collection**

Project staff reviewed the materials for relevance to the project. The materials included in the study focused on child passenger safety and addressed a target audience that included laypeople. Formats included, but were not limited to, brochures, fact sheets, videos, posters, public service announcements, CD-ROMs, coloring books, and calendars. Web-based materials were included, but websites alone were not considered. Promotional objects (e.g., pens, mugs, T-shirts, some stickers) were also excluded from this study, as were materials whose authoring organization could not be identified.

Project staff then contacted the organizations that produced relevant items. Using a structured telephone survey, staff compiled a profile on each item. The staff created 401 profiles with information on (a) content (topics addressed, age groups addressed, target audiences, and formats) (b) availability (production figures, cost, distribution plans, methods of distribution, and recipients of materials), and (c) accuracy and appropriateness (revision dates, training provided, type of evaluation conducted, and languages available). For many of the questions, multiple responses were possible. The profile information is based on the producer's responses, not staff interpretation.

### **Digitization of Materials**

Organizations were given three options for including their educational materials on the CD-ROM and were asked to sign a release indicating their choice:

1. Include abstract only.
2. Include abstract and a partial depiction of the item (e.g., front cover) in PDF format.
3. Include abstract and full depiction of the item in PDF format.

Organizations that did not want to include any reference to their materials on the CD-ROM did not sign a release. Ninety of the 101 sponsoring organizations gave permission to describe a total of 370 items on the CD-ROM; some of these organizations also gave permission to place a PDF version of the cover or the entire item on the CD-ROM. Permission was not granted in 31 cases, for example, because the sponsor reported that the item was outdated or the sponsor was uncertain about copyright status.

### **Evaluation of Materials**

Project staff evaluated a sample of materials for their accuracy and appropriateness for high-risk audiences. A 10% sample (41 items) was reviewed. To be included in this sample, materials had to:

- be widely distributed (i.e., developed by a national organization, federal agency, or corporation, as opposed to a state agency or local organization)
- cover the main topics examined in this project
- contain enough text to assess key criteria (i.e., be a brochure or fact sheet, as opposed to a coloring book)

- be written in English

Staff selected one brochure or fact sheet from each producer on each of the following primary topics of interest (if available): child safety seats, seat belts, seating position, children with special health care needs, and children riding in vehicles other than passenger cars.

Using an evaluation tool developed by project staff (Appendix 3), materials were evaluated for the following:

- technical accuracy
- cultural competence
- appropriateness for low-literacy audiences
- appropriateness for low-income audiences
- appropriateness for children with special health care needs

These evaluation criteria are described next.

### Technical Accuracy

Materials were evaluated for technical accuracy, using guidelines derived from National Highway Traffic Safety Administration (NHTSA)<sup>10,11</sup> and American Academy of Pediatrics (AAP)<sup>12</sup> recommendations. The evaluation for technical accuracy was two-tiered, determining whether the item was (1) current and (2) complete. Table 2 describes the criteria for technical accuracy.

Table 2. Criteria for Technical Accuracy

<b>Considered outdated if ANY of the following criteria were met:</b>	<b>Considered complete if ALL of the following criteria were met:</b>
Infants placed in a rear-facing restraint in the front seat are depicted or described.	Item warns of the dangers frontal air bags pose to children aged 12 and under when seated in the front seat.
Children age 12 or under seated in the front seat are depicted or described.	Item states the importance of seating all children aged 12 and under in the rear seat.
Infants facing forward before they are at least one year old AND weigh at least 20 pounds are depicted or described.	Item states the importance of placing infants in the rear-facing position until they are at least one year old AND weigh at least 20 pounds.
Children moving from child safety seats to safety belts without a transition to booster seats are depicted or described.	Item states the need for booster seats for children too big for convertible seats but too small for adult safety belts.
	Item states the necessity of and procedures for ensuring that safety seats are properly installed in motor vehicles.

Based on the above criteria, the following definitions were used:

- *Not technically accurate*—contains outdated information
- *Technically accurate but incomplete*—contains no outdated information but meets only some criteria for completeness
- *Technically accurate and complete*—contains no outdated information and meets all criteria for completeness

### **Cultural Competence**

There are no concrete guidelines for how to evaluate the cultural competence of educational materials. Consequently, project staff used guidelines adapted from recommendations for delivering culturally competent health services developed by the Georgetown University Child Development Center National Center for Cultural Competence.<sup>13</sup> The criteria used to determine the cultural competence of educational materials were as follows:

- Item contains appropriate translations.
- Item uses culturally relevant illustrations.
- Item was field-tested.

Based on the above criteria, the following definitions were used:

- *Not culturally competent*—met none of the criteria
- *Partially culturally competent*—met at least one but not all criteria
- *Completely culturally competent*—met all three criteria

### **Appropriateness for Low-Literacy Audiences**

Readability formulas were used to assess the appropriateness of materials for audiences with varying language skills. Project staff selected the Simplified Measure Of Gobbledygook (SMOG) scale<sup>14</sup> to assess reading levels, because the SMOG scale has been evaluated and used extensively to study patient educational materials.<sup>15</sup>

Materials were evaluated for their appropriateness for low-literacy audiences using criteria derived from guidelines developed by the Maine AHEC Health Literacy Center<sup>16</sup> based at the University of New England in Biddeford, Maine, and the Injury Prevention Research Center and Health Communications Research Laboratory at the University of North Carolina, Chapel Hill.<sup>17</sup> The criteria were as follows:

- Item uses pictures whenever possible to express an idea.
- Text is written at or below a sixth grade reading level.
- Item does not use jargon or technical terms without providing an explanation.
- Instructions are phrased in a positive tone and in the active voice.
- Item expresses a single idea per sentence.
- Typeface is easy to read (e.g., minimal use of italics or script).
- Typography uses a text size of at least 10 points.
- Layout allows for ample white space and an uncluttered appearance.

Based on the above criteria, the following definitions were used:

- *Inappropriate for low-literacy audiences*—met none of the criteria
- *Partially appropriate for low-literacy audiences*—met at least one but not all of the criteria
- *Appropriate for low-literacy audiences*—met all eight criteria

### **Appropriateness for Low-Income Audiences**

Materials were evaluated for their appropriateness to the particular circumstances faced by low-income audiences. Staff used criteria derived from Traffic Safety Fact Sheets<sup>18</sup> produced by the Children’s Safety Network, and recommendations from the U.S. Consumer Product Safety Commission<sup>19,20</sup> The criteria were as follows:

- Provides recommendations for child passenger safety in older vehicles that lack safety features present in newer cars (e.g., shoulder belts).
- Provides recommendations for vehicles belonging to persons outside the child’s immediate family (e.g., taxicab, friend’s car, grandparent’s car).
- Provides information on obtaining low-cost or free child safety seats that comply with NHTSA guidelines.
- Provides information about the danger of using secondhand child safety seats (e.g., ability to escape recalls, previous involvement in a motor vehicle crash, noncompliance with current NHTSA guidelines).

Based on the aforementioned criteria, the following definitions were used:

- *Inappropriate for low-income audiences*—met none of the criteria
- *Partially appropriate for low-income audiences*—met at least one but not all of the criteria
- *Completely appropriate for low-income audiences*—met all four criteria

### **Appropriateness for Children with Special Health Care Needs**

Materials were evaluated for the accuracy and completeness of child passenger safety information regarding children with special health care needs. The guidelines were derived from the AAP policy statement on transporting children with special health care needs<sup>21</sup> and Talty et al.<sup>22</sup> The following criteria were used to evaluate the items:

- Recommends an air bag on/off switch for children who cannot be seated in the rear seat because they require constant supervision and no adult other than the driver is available to supervise them.
- Recommends a standard child restraint device whenever possible.
- Recommends against modifying car restraint systems unless they have been crash-tested and meet NHTSA standards.
- Recommends infant-only safety seats with the ability to recline.
- Recommends the appropriate 45-degree angle for rear-facing seats.
- Warns against placing small infant or infants and children with tracheotomies in safety seats with harness/tray-shield combinations or armrests.
- Recommends restraint choices for children who have outgrown child safety seats.

- Addresses muscle tone abnormalities.
- Addresses prone and supine positioning of infants.
- Addresses children with spica casts.
- Addresses children with challenging behavior.
- Addresses wheelchair transportation.
- Addresses equipment transportation.

Based on the above criteria, the following definitions were used:

- *Inaccurate for children with special health care needs*—contained statements contrary to any of the above criteria
- *Accurate but incomplete for children with special health care needs*—met some but not all criteria
- *Accurate and complete for children with special health care needs*—met all 13 criteria
- *Not applicable*—had no relevant information

# Results

## **Overview**

One hundred and fifty-eight organizations were identified as likely producers of child passenger safety educational materials. Project staff contacted by telephone at least one person at all 158 organizations—a response rate of 100%. One hundred and one organizations had relevant materials and sent them for inclusion in the project. The results are based on a telephone survey of these 101 sponsoring organizations, which produced 401 child passenger safety educational items. Sponsoring organizations were interviewed about their materials on an item-by-item basis. More than one response was possible for many questions, so percentages sometimes exceed 100%. The following results are based on these interviews.

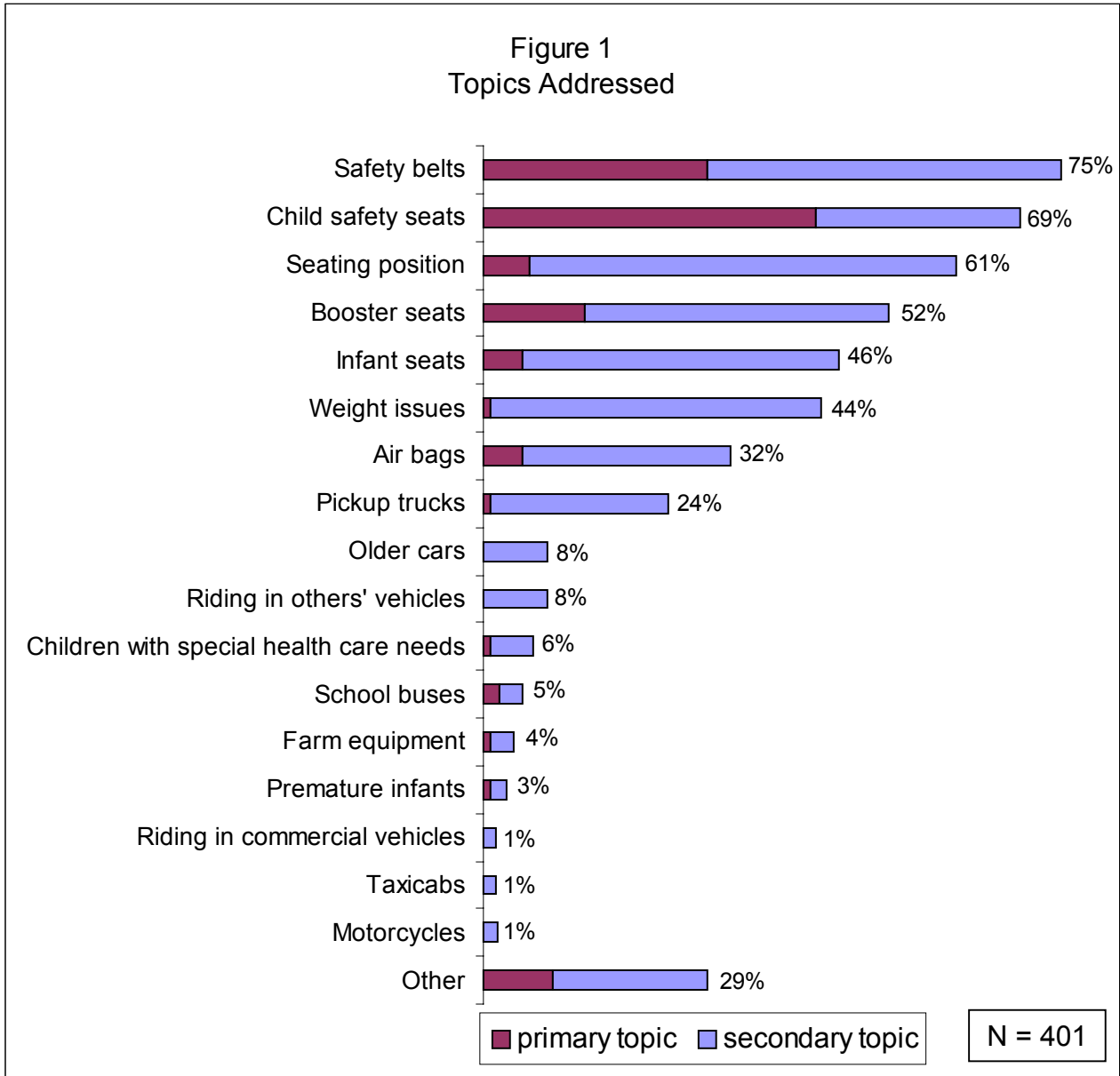
## **Content of Materials**

### **Topics Addressed**

Materials were categorized by the nature of the information provided: counseling, legislative, and/or product information and advertising. Because counseling information was broadly defined as all information intended to educate about child passenger safety practices, all educational items compiled for this study were deemed to provide counseling information. Sixteen percent of the items contained information about legislative issues (e.g., child passenger safety laws). Six percent contained information about specific products or advertising.

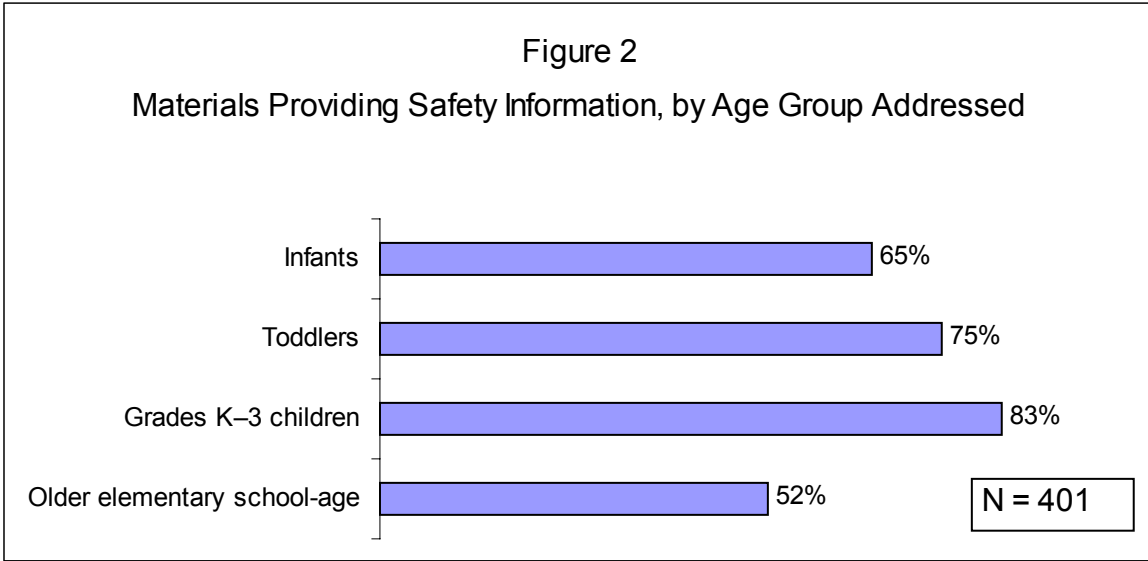
Sponsoring organizations were asked to select one topic that was the primary focus for each of their items. Approximately 5% of the items were described as having more than one primary focus. Most often, the primary topic was child safety seats (43%). Safety belts were the primary focus of 29% of the items. Booster seats were less frequently the primary focus, at 13%. Seating position was the primary topic of only 6% and air bags of only 5% of the items. Less than 5% of the items focused on any of the following topics: weight issues, premature infants, children with special health care needs, school buses, pickup trucks, farm equipment, and riding in others' vehicles. Organizations also selected topics that were a secondary focus of the items.

Figure 1 shows the frequency with which materials addressed specific topics, either as a primary or a secondary focus. When secondary topics are factored in, the percentage of materials addressing important topics increases significantly. Still, only 6% of the items discuss children with special health care needs, and few cover any mode of transportation other than standard automobiles.



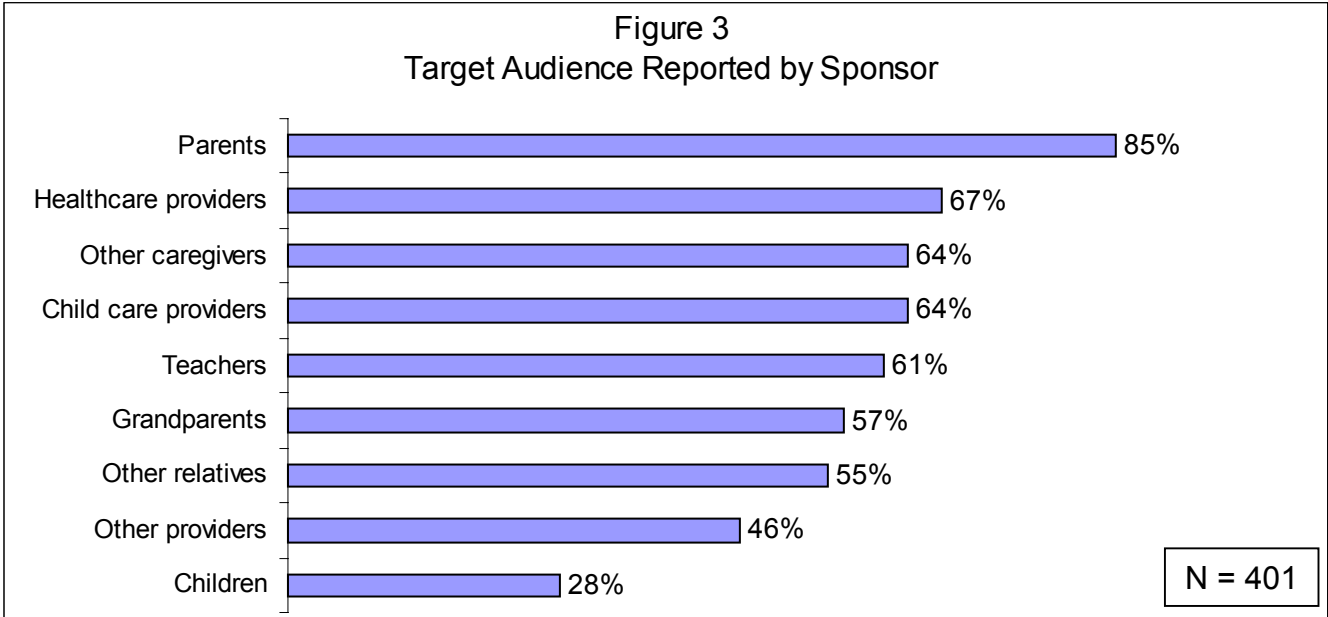
**Age Groups Addressed**

Figure 2 shows that the majority of materials provided information about more than one age group. Children in grades K–3 (5–8 years) were the age group most often addressed (83%). It is important to note that 52% of educational materials contained information about the safety of older elementary school-age children (9–12 years). Materials also addressed child passenger safety for infants (0–12 months) and toddlers (13 months–4 years). One hundred and sixty items (40%) targeted all four age groups.

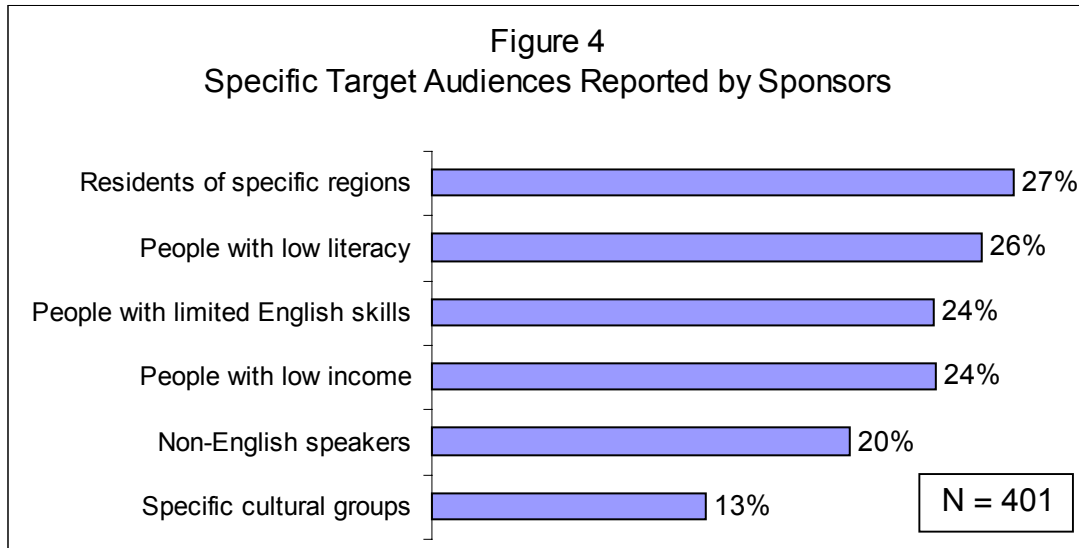


**Target Audience**

Figure 3 shows that parents were the most frequent target audience for the materials (85%), and that children were least likely to be targeted (28%). Most materials were appropriate for more than one audience, according to the respondents.

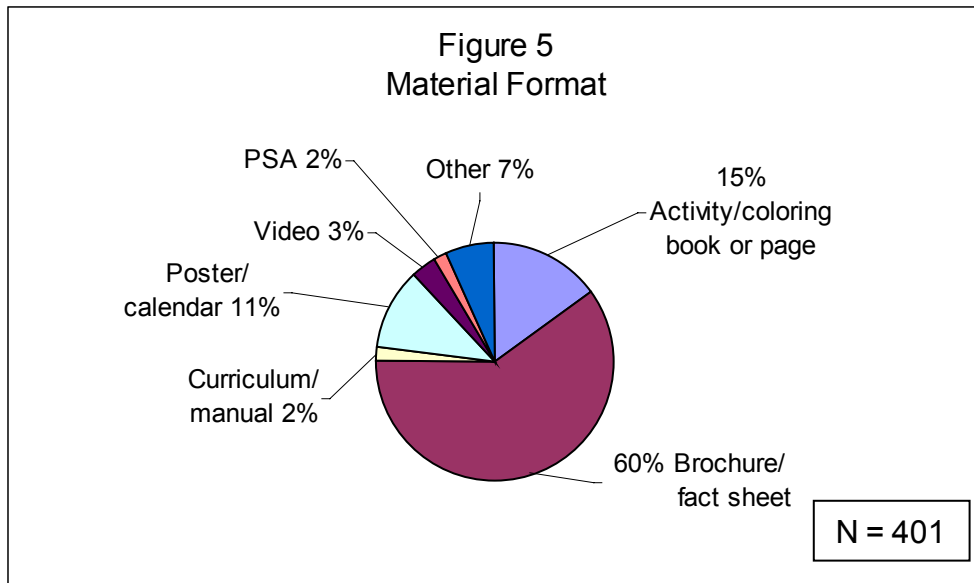


A limited number of items target audiences known to be at high risk of motor vehicle injury (Figure 4). Few items target people with low income (24%) or members of specific cultural groups (13%).



**Format**

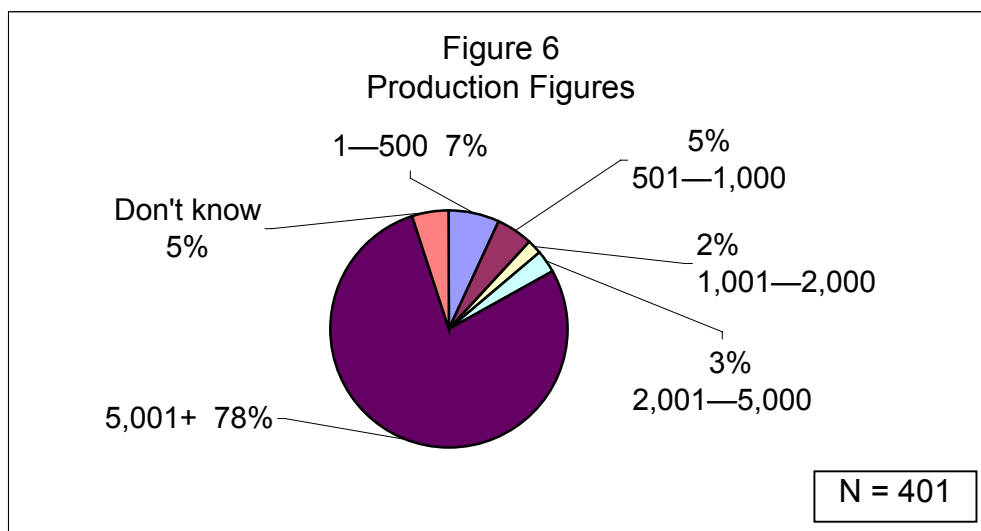
Figure 5 describes the format of the compiled materials. The majority of items were brochures or fact sheets. A small number of activity/coloring books or pages were available. Only 2% (7 of 401) of the items were curricula intended for school-age children.



## Availability of Materials

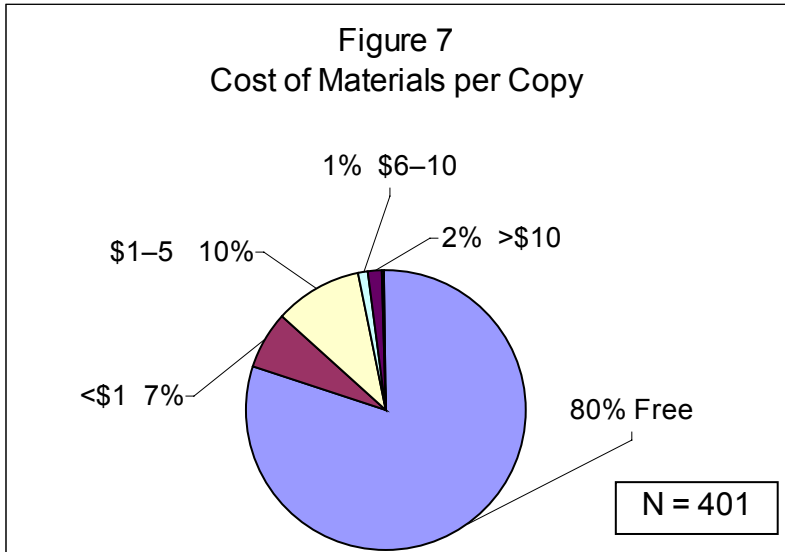
### **Production Figures**

Figure 6 shows the production figures of the materials in the sample. Most of the items (78%) were produced in quantities of 5,000 or greater. Only 12% were produced in quantities of 1,000 or less. Ninety-five percent were still available at the time of the request (though not necessarily in stock). Seventy-seven percent of the respondents reported plans to print additional copies.



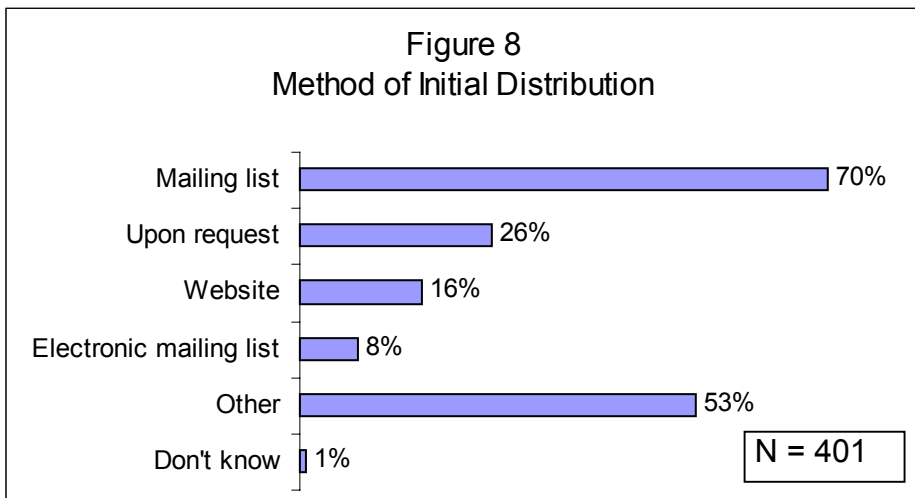
### **Cost of Materials**

The majority of items (80%) were distributed free of charge (Figure 7). However, some of these items were free only to people living in specific states or to members of specific organizations. Most of the purchasable items cost less than 10 dollars per copy. Items for sale included 46% of the videos, 36% of the activity/coloring books or pages, 29% of the curricula, and 19% of the brochures or fact sheets.



**Methods of Distribution**

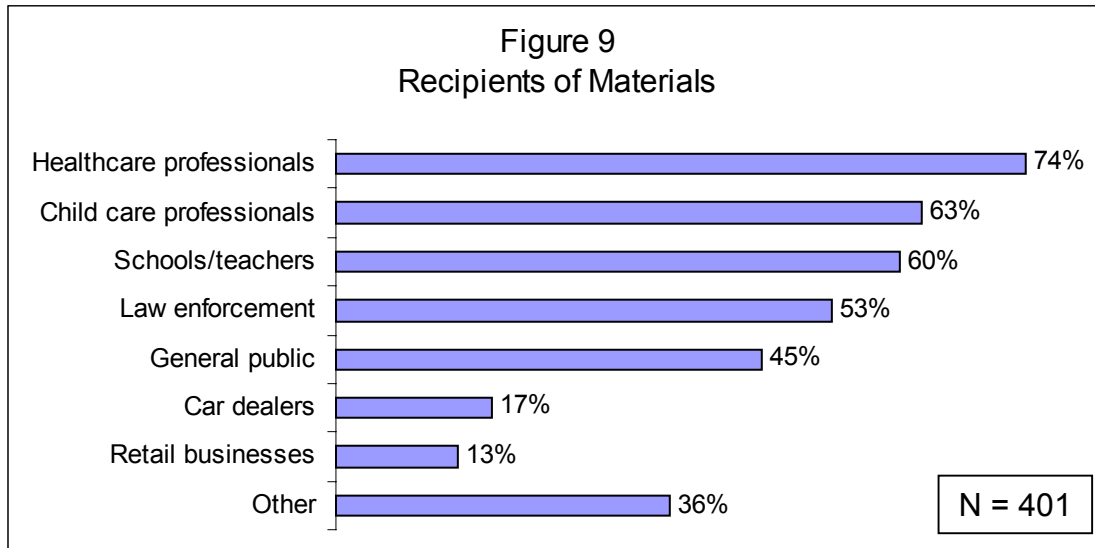
Figure 8 illustrates how sponsoring organizations distributed their materials. Most organizations employed several distribution methods. Seventy percent of the items were distributed to specific mailing lists, and an additional 24% were distributed electronically, via an electronic mailing list or website. Materials were also made available at health and safety fairs, meetings, conferences, and classes.



**Recipients of Materials**

Figure 9 identifies audiences that received materials. Only 45% of the items were distributed directly to the general public by sponsoring organizations. Seventy-five percent of the items were distributed to healthcare professionals, and 13% were

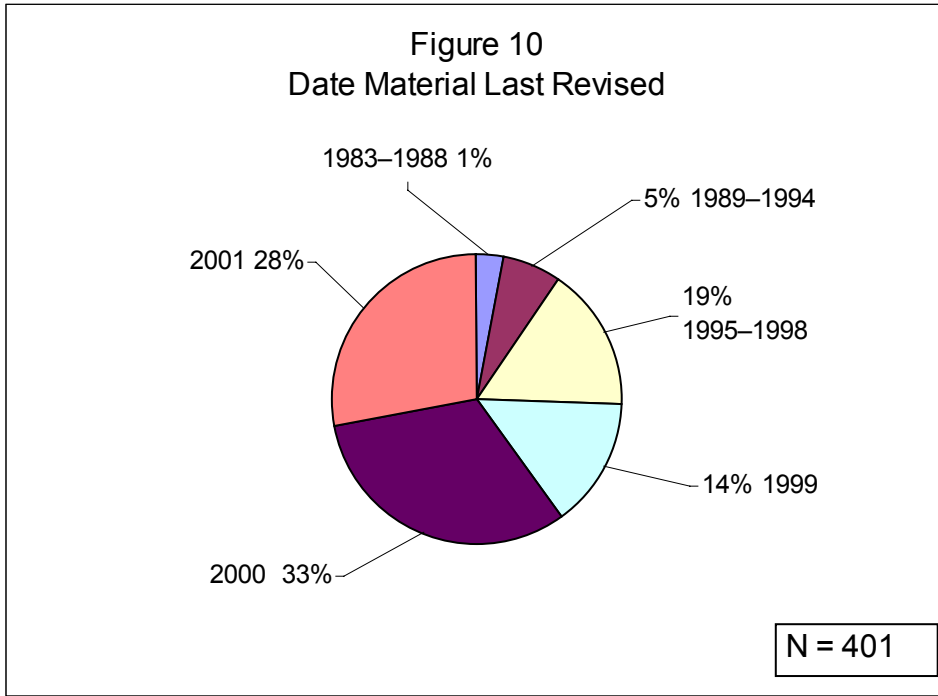
distributed to retail businesses. The percentages add up to more than 100% because many of the materials were distributed to multiple audiences. The category of “Other” includes government agencies and local programs and agencies.



### **Accuracy and Appropriateness of Materials**

#### **Date of Last Revision**

Figure 10 shows the time frame in which materials were last revised. Although 61% were revised within the last two years, a substantial percentage (39%) were not. This is important because several key recommendations on child passenger safety have been issued in the last two years, and consequently, items that were not revised within that time may be outdated.

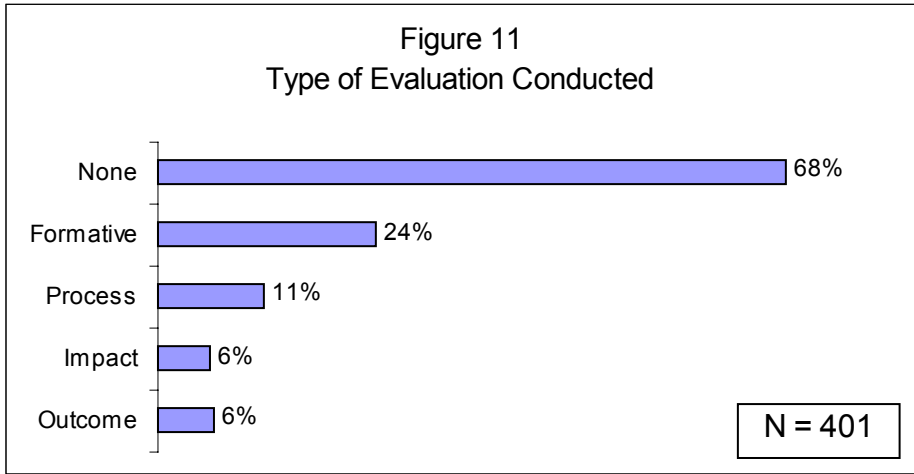


### **Training Provided**

Training or instruction for using the materials was provided for 154 items (39%). Fifty-one percent of the sponsoring organizations provided training for at least some of their materials. Training was defined as any form of guidance provided to the recipients of materials distributed by the sponsoring organization. This definition was subject to sponsor interpretation.

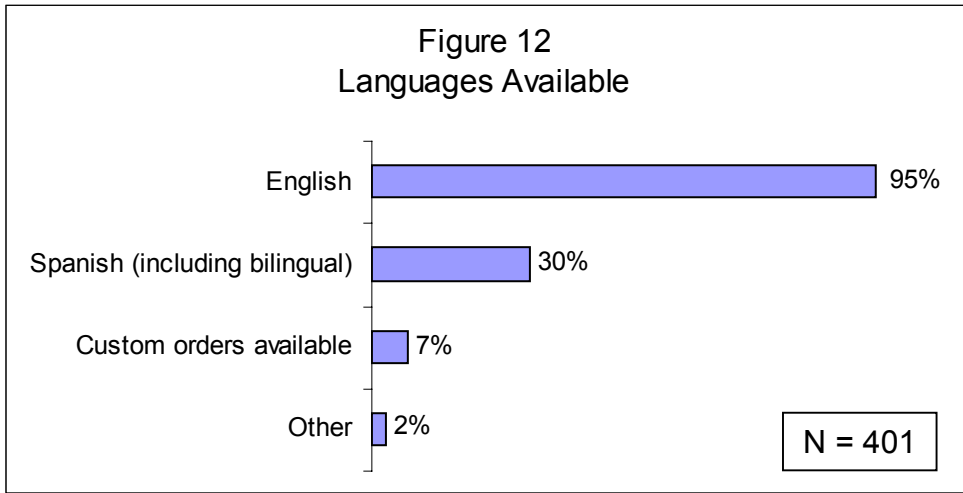
### **Evaluation Conducted**

Project staff asked about the evaluation of materials by offering examples of several evaluation methods: *formative* (pre-testing of materials during their development), *process* (testing whether materials reached the intended audience as planned), *impact* (assessing whether the materials changed the knowledge, attitudes, or behaviors of the intended audience), and *outcome* (testing whether the materials affected measurable objectives, such as injury rates). More than two-thirds of the items (68%) had not been evaluated at all by any of these methods (Figure 11). For 1% of items, the sponsoring organization did not know if any evaluation was completed. For organizations that did evaluate their products, formative evaluation was most widely used (24%). Some items were evaluated by more than one method.



**Languages Available**

Nearly all (95%) of the items were available in English (Figure 12). Thirty percent were available in Spanish; of these items, 14 were bilingual (English and Spanish on the same item). Seven percent could be custom-ordered in other languages, but usually only in very large quantities. Less than 1% of items were available in each of the following languages: French, Arabic, Russian, Somali, Tagalog, Chinese, Japanese, Vietnamese, Korean, Cambodian, or other Asian dialects.

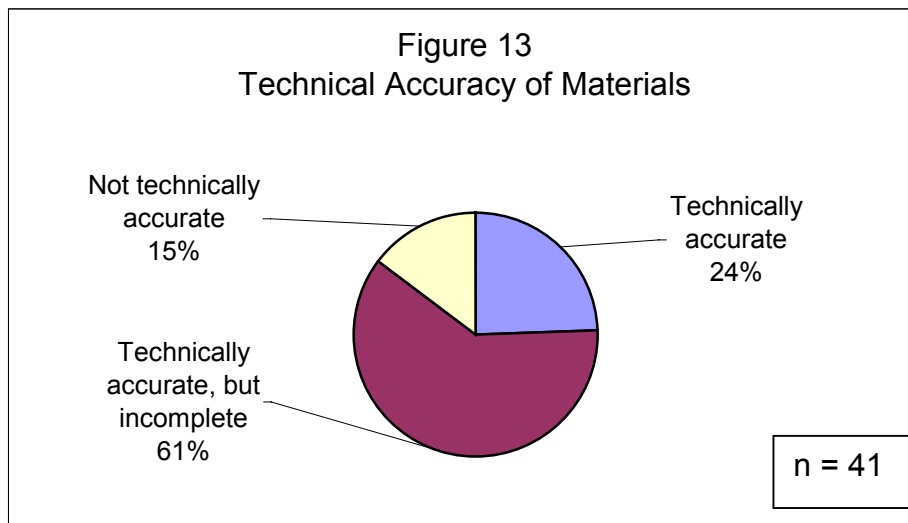


## **Staff Evaluation of Materials**

Results of staff evaluations of 41 child passenger safety educational items are described next.

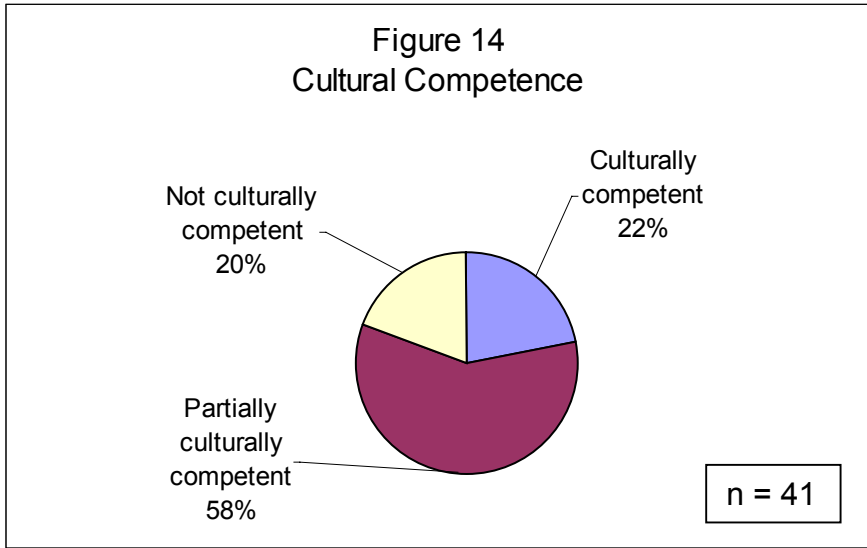
### **Technical Accuracy**

Twenty-four percent of the sampled items were technically accurate and complete (Figure 13). The majority (61%) were technically accurate but incomplete. Most were incomplete because they lacked information about rear seating, including ages at which children need to be seated in the back. Other items did not discuss the importance of keeping infants rear-facing until they reached specific ages and weights, using booster seats, or properly installing child safety seats. The 15% of items that were not technically accurate had incorrect recommendations for rear-facing infants.



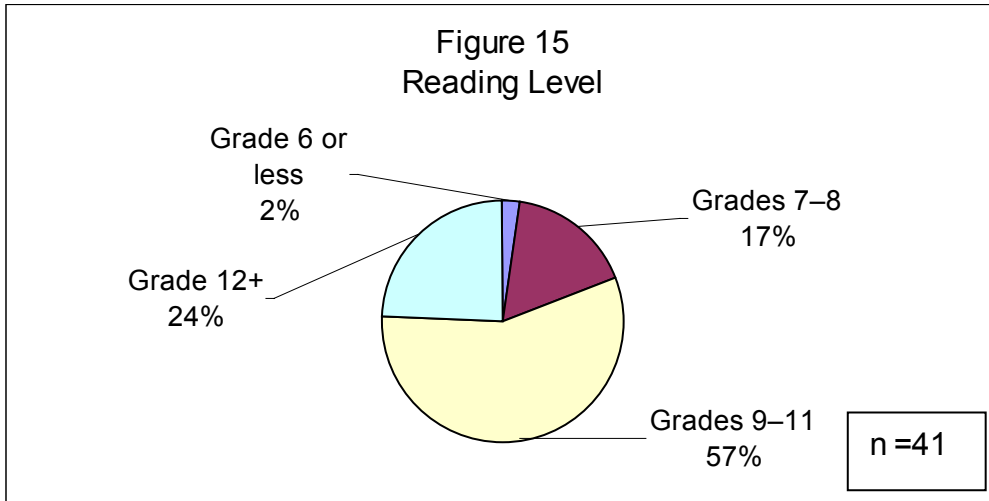
### **Cultural Competence**

Only 9 of 41 (22%) of the evaluated items were completely culturally competent (appropriately illustrated, translated, and field-tested). Fifty-eight percent of the evaluated materials were only partially culturally competent because they were not field-tested, did not contain culturally competent illustrations, and/or were not available in languages other than English (Figure 14).



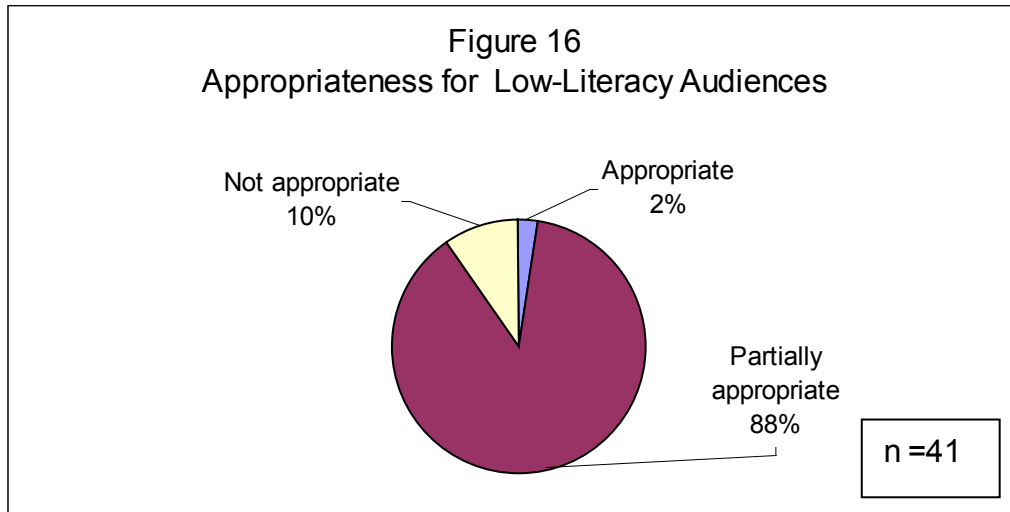
**Readability and Appropriateness for Low-Literacy Audiences**

The reading levels for the evaluated materials ranged from grade 6 or below to grade 12 and higher. Figure 15 shows that only 19% of the items were written at a level appropriate for the average adult (eighth grade or below), and only 2% were written at a reading level appropriate for low-literacy audiences (sixth grade or below). In contrast, sponsors reported that 34% of the items were designed for low-literacy audiences.



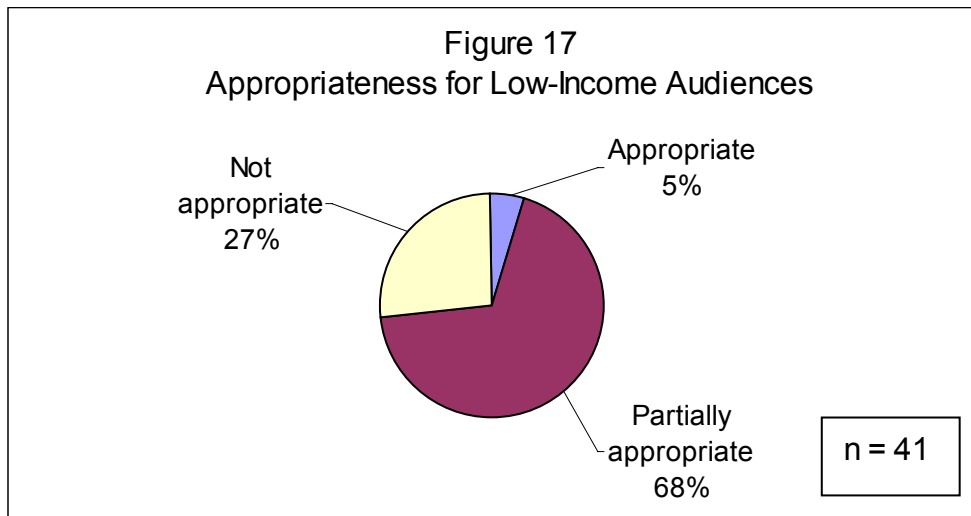
Only 2% of the items were appropriate for low-literacy audiences (Figure 16). Most items (88%) were partially appropriate for a low-literacy audience. Thirty of 36 items (83%) categorized as partially appropriate had reading levels higher than recommended for low-literacy audiences. Other reasons that items were found to be inappropriate

included formatting or text size that made them difficult to read (24%) and overuse of technical terms or jargon without appropriate explanation (15%).



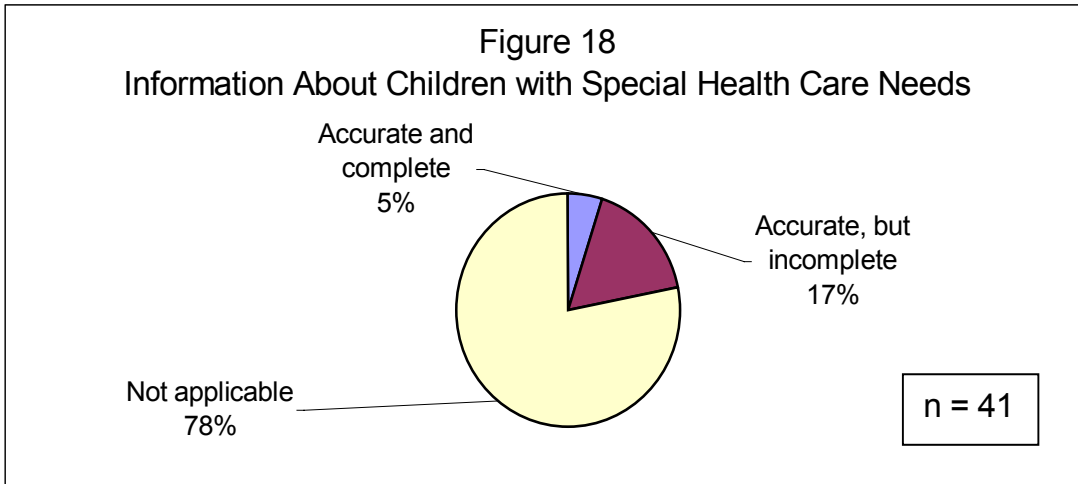
### Appropriateness for Low-Income Audiences

Figure 17 shows that only 5% of the evaluated items were completely appropriate for low-income audiences and included information about riding in older cars, using someone else's car, and finding low-cost, free, or secondhand child safety seats. The items deemed partially appropriate were most likely to contain information about riding in older cars (88%) and least likely to contain information about secondhand seats (59%), low-cost or free seats (46%), and riding in someone else's car (46%).



### Appropriateness for Children with Special Health Care Needs

Figure 18 shows that only 22% of items contained any accurate information about child passenger safety for children with special health care needs. Of those items, 77% were missing critical information and were deemed incomplete. Most evaluated items (78%) contained no information that applied to this audience.



# Discussion

This unique study was designed to collect child passenger safety educational materials and to assess their content, availability, accuracy, and appropriateness for laypeople. Over the course of seven months, project staff identified strengths and weaknesses of existing materials in an effort to provide suggestions for improving child passenger safety educational resources.

## **Strengths and Weaknesses of Existing Materials**

### **Content of Materials**

Many of the child passenger safety educational materials address child safety seats, booster seats, safety belts, seating position, air bags, and weight issues. Educational materials are most likely to be produced in print (e.g., coloring books, brochures, fact sheets), but multimedia items have also been developed (e.g., videos, PSAs). Educational materials address a range of age groups and are intended for a variety of audiences, including parents, children, healthcare professionals, and child care providers.

Despite the relatively large number of items covering a broad range of topics (401), few include information on children with special health care needs; safe transportation in older cars, taxicabs, or pickup trucks; or legislative issues (e.g., state child passenger safety laws). There are also few curricula aimed at school-aged children.

This study was aimed specifically at materials targeting laypeople; however, most respondents from the sponsoring organizations reported that the materials were developed with broad audiences in mind—few items target one specific audience. Although sponsors reported that many materials were appropriate for relatives other than parents (e.g., grandparents), less than 1% of the items seemed to be developed specifically for these audiences. Few items address important issues concerning children known to be at high risk of injury, including those from families with low literacy or limited English skills, families with low income, and members of specific cultural groups.

### **Availability of Materials**

In general, educational materials are produced in large numbers (usually quantities of more than 5,000), and sponsoring organizations plan to reprint large numbers of their existing materials when necessary. Large-scale production, coupled with distribution plans that address a range of audiences, ensures the widespread distribution of the materials. Organizations use a variety of methods, including mailing lists and electronic media, to disseminate materials to several audiences, including healthcare

professionals, school staff, law enforcement personnel, and the general public. Because most materials are free and very few cost more than \$10, cost may not be a barrier to educators or laypeople wanting child passenger safety information.

Sponsoring organizations use many distribution methods, but several factors may reduce the availability of materials. Only 16% of organizations make materials available via the Internet, despite its rapid emergence as a primary source for health-related information for lay audiences. Further, although most educational materials are available at no cost, there are few curricula appropriate for school-age children, and 29% of the curricula available are not free.

### **Accuracy and Appropriateness of Materials**

Although nearly 25% of the evaluated items contained complete and accurate information, most had limitations that could be cause for concern. The most common problem was inaccurate or missing information about correct seating positions. In addition, a large number of materials were more than two years old and therefore were likely to be out of date because of revised recommendations for child passenger safety.

Producers of child passenger safety materials seem to recognize the need to create information for high-risk cultural groups and low-income populations. However, most items are not specifically designed for these high-risk groups. Few of the 401 compiled items had been evaluated by sponsoring organizations with formative, process, impact, or outcome evaluation methods. As such measures may reveal inappropriate language or messages in materials that target diverse cultural groups, items should be evaluated during their development and matched with the audience for which they are intended. Materials that have not been field-tested with their target audiences are of unknown effectiveness.

There is some recognition of the need to make materials available in languages other than English. However, less than one-third of the items were available in languages other than English, and, of these, very few were in languages other than Spanish. Materials in other languages tended to be direct translations, which raises questions about cultural competency. Sponsoring organizations should consider developing original materials in other languages, rather than merely providing materials translated from English. Some organizations produce custom orders of materials in other languages, and until there are widely accepted guidelines for cultural competency, this may be an important method of reaching non-English-speaking audiences.

Reading levels are generally too high, especially for low-literacy audiences or audiences with limited English proficiency. According to respondents, less than one-third of the items were appropriate for audiences with low literacy or limited English. However, it is likely that this indicates overreporting, as the staff evaluations identified few materials at a sixth grade reading level or below. To better respond to audience needs, child passenger safety educational materials should be formatted appropriately, avoid excess

technical jargon, provide illustrations where possible, and be written at appropriate reading levels.

There are not many items that meet the needs of low-income audiences. Materials rarely provide information about sources of free or low-cost seats, secondhand seats, riding in older motor vehicles, or riding in alternate modes of transportation (e.g., public buses, taxicabs).

Materials also tend to ignore the technical requirements of transporting children with special health care needs. Few of the evaluated items included such information; among those that did address these issues, the information was seldom complete.

### **The Next Generation of Child Passenger Safety Educational Materials**

The following recommendations for developing or revising child passenger safety materials are based on the results of this study.

#### 1. Content of materials

- Conduct focus groups/formative research to produce a series of materials/activities for school-age children, especially those in grades 4–6.
- Develop new child passenger safety educational materials that feature information about airbags, booster seats, and seating position.
- Develop materials that feature pickup trucks, commercial vehicles, farm equipment, older cars, and specific populations, such as children with special health care needs.
- When child passenger safety laws change, revise existing materials and include legal issues as a component in any new materials that are developed.
- Coordinate efforts at the national, state, and local levels in order to avoid duplication.

#### 2. Availability of materials

- Develop materials that target specific audiences, especially those known to be at high risk of motor vehicle injury (e.g., low-literacy audiences, low-income audiences, specific cultural groups).
- Make greater use of the Internet as a cost-effective way to distribute child passenger safety information.
- Continue to use other dissemination methods, as significant numbers of laypeople whose children are at high risk of injury do not have access to the Internet.
- Make materials more accessible in public places (e.g., libraries, post offices) and at meetings and conferences where child passenger safety technicians and other safety and public health professionals congregate.

#### 3. Accuracy and appropriateness of materials

- Field-test new materials with their designated target audiences before going into production, and evaluate them after dissemination.
- Develop materials with specific target audiences in mind, rather than for a general audience or a wide variety of audiences.
- Revise child passenger safety educational materials frequently to reflect changes in laws and new research and safety technologies.
- Develop procedures or assign responsibility to ensure that the organization is not distributing outdated materials.
- Have all new or revised materials reviewed by a certified child passenger safety technician for technical accuracy and by other experts for appropriateness before production.
- Pay more attention to readability of materials by using readability indices in the design and development phases. Ensure that materials are written at literacy levels appropriate for average adult readers (at an eighth grade level), if not for low-literacy audiences (sixth grade reading level or below).
- Develop tools to assess cultural competence/appropriateness during development. Developing culturally appropriate materials in a variety of languages is a high priority for improving outreach to high-risk populations.

### **Products Produced as a Result of This Research**

#### **Evaluation Tool**

The evaluation tool developed for this study has not been field-tested but is an attempt to describe the accuracy and appropriateness of child passenger safety materials. There are currently no tools that allow reviewers to assess both the technical accuracy of materials and the appropriateness of materials for diverse audiences, including distinct cultural groups and low-income and low-literacy audiences. The evaluation tool is strengthened by its reliance on NHTSA, AAP, and Consumer Product Safety Commission standards in its development.

#### **CD-ROM**

The CD-ROM was developed for certified child passenger safety technicians and other experts who are qualified to educate laypeople about child passenger safety practices and/or may be involved in designing new materials. All materials collected between May 1 and October 15, 2001, were considered for inclusion on the CD-ROM. The CD-ROM contains descriptions of 370 items developed by 90 sponsoring organizations and is indexed by safety topic, target audience, and language. The CD-ROM includes abstracts of educational materials and, depending on sponsor permission, partial or full reproductions as PDF files. Because this project involved compiling all existing child passenger safety educational materials, some items contain inaccurate information.

### **Study Strengths and Limitations**

This is the first comprehensive study of the content, availability, accuracy, and appropriateness of existing child passenger safety educational materials and, like all studies, this study has limitations. Because some organizations that produce materials did not respond to requests for information, the items compiled do not represent a complete inventory of all available child passenger safety educational materials. Due to the reliance on interviews, questions were subject to sponsor interpretation, with some categories loosely defined (e.g., training provided, evaluation completed). In addition, interviewees were not necessarily the developers of materials and had varying degrees of familiarity with the materials. The evaluation of materials for accuracy and appropriateness is also limited; project staff did not include a certified child passenger safety technician, and the evaluation tool was not previously tested and validated. Further, it is known that child passenger safety technical standards are evolving rapidly, and it is possible that information contained in some of these materials may become outdated as this goes to press.

# Future Research

This study examined the content, availability, accuracy, and appropriateness of child passenger safety educational materials targeting laypeople. This is a snapshot of existing materials, describing their content, showing how they are being disseminated, and identifying opportunities for improvement in the production and design of educational materials.

Future research should focus on establishing standards for new educational materials and on developing better strategies for distributing materials to high-risk target audiences.

Additional research is needed in order to do the following:

- Determine the usefulness of training or other guidance to accompany child passenger safety educational materials.
- Track child passenger safety educational materials to see if they reach their target audiences.
- Identify and evaluate child passenger safety websites that are aimed at lay audiences.
- Understand how professional groups and intermediaries are using materials.
- Evaluate the utility of this CD-ROM.

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# List of Appendices

- Appendix 1** Access Database
- Appendix 2** List of Sponsoring Organizations
- Appendix 3** Evaluation Tool

# **Appendix 1**

## **Access Database**

# Seated for Safety Access Database

Microsoft Access - [Sponsors and Materials Checklist]

File Edit View Insert Format Records Tools Window Help

GENERAL INFORMATION: there are total of      sponsor entries and total of      item entries.


**STEP 1: Please choose a sponsor (sponsor information will show up below).**

> Choose a sponsor by organization's name      or ID      Find!

If the drop-down box has more than one entry per organization, then the organization has more than one sponsoring chapter.

FIND sponsors by keyword:      Find!

Additional navigation buttons (for navigating sponsor entries):      First      Previous      Next      Last      Find by Title      Switchboard

Sponsor's Name		ID	133
		Org ID	285
		Contact ID	
Contactperson's Name			
Phone #			
2nd Phone #			
Email			

Who's handling this sponsor?      Not yet completed      Designation     

**STEP 2, Important!**

Click this label after selecting a sponsor      **Materials Checklist**

Form View      CAPS NUM

Microsoft Access - [CMMMain]

File Edit View Insert Format Records Tools Window Help

STEP 3 This sponsor has total of 1 items' entries.

Please choose item by its ID or name. Sponsor's ID (SPID) is included as confirmatory information. >>>

Selected sponsor's ID:  Incomplete New sponsor Sponsor orgs. Switchboard

Item's ID: (Auto)  Additional navigation buttons (for navigating SELECTED SPONSOR'S item entries): First Previous Next Last New

Other sponsors?

Item's Title:  Item Entry Comments

Year educational material was last revised:  Type of Material:  Contact

(1) Theme of educational material:

legislative issues  
 counseling issues  
 product information/advertising

You're in page - 1 -  
 Navigation buttons that help to navigate the current entry: Page 2 Page 3 Page 4

(2) Primary topic (focus) area:

air bags  
 pickup trucks  
 farm equipment  
 premature babies  
 weight issues  
 child safety seats  
 infant seats  
 booster seats  
 safety belts  
 seating position  
 riding in commercial vehicles  
 CSUW - children with special healthcare needs

(3) Other topic (focus) area:

air bags  
 pickup trucks  
 farm equipment  
 premature babies  
 weight issues  
 child safety seats  
 infant seats  
 booster seats  
 safety belts  
 seating position  
 riding in commercial vehicles  
 CSUW - children with special healthcare needs

Web address:  N

Size (in KB)  0 KB

Form View NUM

Microsoft Access - [CMMain]

File Edit View Insert Format Records Tools Window Help

(4) Age group addressed in educational material:

infants (0 - 12 months)

toddlers (13 months - 4 years)

K-3rd grade (5 - 8 years)

older elementary age (9 - 12 years)

(5) How did we determine what age group the educational material addressed?

reported by sponsor

educational material specified/implied age

(6) Target audience

Target audience	Reported by sponsor (Y/N)	Educational material specified/implied target audience (Y/N)
children	<input type="checkbox"/>	<input type="checkbox"/>
parents	<input type="checkbox"/>	<input type="checkbox"/>
grandparents	<input type="checkbox"/>	<input type="checkbox"/>
other relatives	<input type="checkbox"/>	<input type="checkbox"/>
other caregivers	<input type="checkbox"/>	<input type="checkbox"/>
child care providers	<input type="checkbox"/>	<input type="checkbox"/>
teachers	<input type="checkbox"/>	<input type="checkbox"/>
healthcare providers	<input type="checkbox"/>	<input type="checkbox"/>
other providers	<input type="checkbox"/>	<input type="checkbox"/>
low income audiences	<input type="checkbox"/>	<input type="checkbox"/>
audience with limited English skills	<input type="checkbox"/>	<input type="checkbox"/>
residents of specific regions	<input type="checkbox"/>	<input type="checkbox"/>
non-English speakers	<input type="checkbox"/>	<input type="checkbox"/>
low literacy audiences	<input type="checkbox"/>	<input type="checkbox"/>
racial/ethnic groups	<input type="checkbox"/>	<input type="checkbox"/>

You're in page - 2 -

Navigate this entry:

Page 1 Page 3 Page 4

New sponsor

Switchboard

Form View NUM

Microsoft Access - [CMMain]

File Edit View Insert Format Records Tools Window Help

(7) Estimated production figures (total number of this educational material printed to date) [dropdown]

(8) Was there any training provided in use of this educational material? [dropdown]

(9) Do you have a distribution plan for dissemination of this educational material? [dropdown]

(10) How was this educational material initially distributed?

mailing list     request  
 website         don't know  
 listserv

other: [text box]

(11) How is this educational material made available after initial distribution?

mailing list     request  
 website         don't know  
 listserv

other: [text box]

(12) To whom was this educational material initially distributed?

health professionals     police departments     retail businesses     members of the general public  
 schools/teachers         child/day care         car dealers         don't know

other: [text box]

(13) Will this educational material be reprinted/redistributed? [dropdown]

(14) Are copies of this educational material still available? [dropdown]

(15) What is the cost of this educational material? [dropdown]

(16) Is this educational material copyrighted? [dropdown]

(17) If this educational material is copyrighted, can we obtain an abstract to include on our CD-ROM? [dropdown]

(18) If this educational material is copyrighted, can we obtain a photo to include on our CD-ROM? [dropdown]

You're in page - 3 -

Navigate this entry:

Page 1    Page 2    Page 4

New sponsor

Switchboard

Form View    CAPS NUM

Microsoft Access - [CMMain]

File Edit View Insert Format Records Tools Window Help

(19) Languages educational material is available in:

English  
 Spanish  
 English/Spanish  
 French  
 Creole  
 Chinese  
 Japanese  
 Vietnamese

other:

(20) Is this educational material available electronically?

yes, website:   
yes, email:   
yes, CD-ROM:   
yes, software:   
No   
Don't know

(21) Was an evaluation of this educational material completed?

(22) Evaluation type:  formative  process  impact  outcome  n/a

(23) Describe evaluation

(24) Was evaluation written up or published?

(25) Additional contacting suggestions:

(26) Other information:

(27) Is the information technically accurate?   
Comments

(28) Is material culturally appropriate?   
Comments

(29) Is material appropriate for low income audience?   
Comments

(30) Is material appropriate for low literacy audience?   
Comments

(31) Reading level:

(32) Does special needs information seem complete and accurate?

ZOOM Assessment Section

You're in page - 4 -

Navigate this entry:

Page 1 Page 2 Page 3

New sponsor

Switchboard

Form View

CAPS NUM

# **Appendix 2**

## **List of Sponsoring Organizations**

## List of Sponsoring Organizations

- 1) AAA National Headquarters  
Traffic Safety Department  
1000 AAA Drive  
Heathrow, FL 32746-5063
- 2) AAA Automobile Club of Southern California  
3333 Fairview Road  
Costa Mesa, CA 92626
- 3) AAA California State Automobile Association  
150 Van Ness Avenue  
San Francisco, CA 94142-9186
- 4) AAA Foundation for Traffic Safety  
1440 New York Avenue NW  
Suite 201  
Washington, DC 20005
- 5) AAA Hoosier Motor Club  
Public and Government Relations  
3750 Guion Road  
Indianapolis, IN 46208-0505
- 6) AAA Mid-Atlantic  
3 AAA Drive  
Hamilton, NJ 08691
- 7) AAA New Jersey Automobile Club  
Foundation for Safety and Education  
1 Hanover Road  
Florham Park, NJ 07932-1888
- 8) AAA New Mexico  
10501 Montgomery Boulevard NE  
Albuquerque, NM 87111
- 9) Air Bag & Seat Belt Safety Campaign  
National Safety Council  
1025 Connecticut Avenue NW  
Suite 1200  
Washington, DC 20036

- 10) Alabama SAFE KIDS Campaign  
Children's Hospital  
1600 7th Avenue S  
Birmingham, AL 35233
- 11) Alaska Highway Safety Office  
Alaska Department of Transportation and Public Facilities  
3132 Channel Drive  
Room 145  
Juneau, AK 99801
- 12) Alaska Injury Prevention Center (AIPC)  
3701 East Tudor Street 105  
P.O. Box 210736  
Anchorage, AK 99521-0736
- 13) Alliance for Community Traffic Safety (ACTS) Oregon  
Child Safety Seat Resource Center  
405 West Arlington Street  
Gladstone, OR 97027
- 14) American Academy of Pediatrics (AAP)  
National Headquarters  
141 Northwest Point Boulevard  
Elk Grove Village, IL 60007-1098
- 15) American Academy of Pediatrics, Pennsylvania Chapter  
Traffic Injury Prevention Project  
919 Conestoga Road  
Building 2 - Suite 307  
Rosemont, PA 19010
- 16) Arizona Governor's Office of Highway Safety  
3030 North Central  
Suite 1550  
Phoenix, AZ 85012

- 17) Bassett Healthcare  
One Atwell Road  
Cooperstown, NY 13326
- 18) Bemidji Area Indian Health Service  
Department of Health and Human Services  
Public Health Service  
Indian Health Service  
522 Minnesota Avenue NW  
Bemidji, MN 56601
- 19) Boost America!  
c/o 1 Thomas Circle  
Tenth Floor  
Washington, DC 20005
- 20) Buckle Down Cleveland  
Rainbow Babies & Children's Hospital  
University Hospitals Health System  
11100 Euclid Avenue  
WRN B53  
Cleveland, OH 44106-6039
- 21) Buckle Up Baby Program  
Roseville Fire Department  
401 Oak Street #402  
Roseville, CA 95678
- 22) Channing L. Bete Co., Inc  
200 State Road  
South Deerfield, MA 01373-0200
- 23) Child Safety Solutions Corporation  
P.O. Box 1403  
Rockland, ME 04841

- 24) Children's Hospital of Philadelphia  
34th Street and Civic Center Boulevard  
3535 - Room 961  
Philadelphia, PA 19104-4399
- 25) Colorado Injury Prevention Program  
Health Promotion & Disease Prevention Division  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive S  
Denver, CO 80246-1530
- 26) Custer Health  
P.O. Box 401  
Center, ND 58530
- 27) Delaware Office of Highway Safety  
Delaware Department of Public Safety  
P.O. Box 1321  
Dover, DE 19903-1321
- 28) Emergency Nurses Care - ENA's Injury Prevention Institute  
Emergency Nurses Association (ENA)  
205 South Whiting Street  
Suite 403  
Alexandria, VA 22304
- 29) Evenflo Company, Inc.  
1801 Commerce Drive  
Piqua, OH 45356
- 30) Families Acting for Community Traffic Safety (FACTS)  
Family, Career and Community Leaders of America, Inc.  
National Headquarters  
1910 Association Drive  
Reston, VA 20191-1584

- 31) Farm Safety 4 Just Kids  
P.O. Box 458  
110 South Chestnut Avenue  
Earlham, IA 50072
- 32) Fit for a Kid  
DaimlerChrysler Corporation  
1010 Wisconsin Avenue NW  
Suite 800  
Washington, DC 20007
- 33) Floating Hospital for Children  
Department of Pediatrics  
New England Medical Center  
750 Washington Street  
#351  
Boston, MA 02111
- 34) General Motors Corporation  
100 Renaissance Center  
Detroit, MI 48265
- 35) Greater Sacramento Safe Kids Coalition  
Davis Medical Center  
University of California  
2315 Stockton Boulevard  
Room 4302  
Sacramento, CA 95817
- 36) Harborview Injury Prevention and Research Center  
P.O. Box 5371  
Mailstop CM09  
Seattle, WA 98105
- 37) Held in Trust Program  
South Carolina Department of Insurance  
300 Arbor Lake Drive  
Suite 1200  
Columbia, SC 29202
- 38) Illinois Division of Traffic Safety  
Illinois Department of Transportation  
3215 Executive Park Drive  
P.O. Box 19245  
Springfield, IL 62794-9245

- 39) Insurance Institute for Highway Safety (IIHS)  
Highway Loss Data Institute  
1005 North Glebe Road, Suite 800  
Arlington, VA 22201
- 40) Intermountain Injury Control Research Center (IICRC)  
University of Utah  
615 Arapeen Drive  
Suite 202  
Salt Lake City, UT 84108
- 41) International Center for Injury Prevention (ICIP)  
BUCKLEBEAR®  
5009 Coye Drive  
Stevens Point, WI 54481-5078
- 42) Iowa Governor's Traffic Safety Bureau  
Iowa Department of Public Safety  
629 East 2nd Street  
Des Moines, IA 50319-0248
- 43) Kansas City Injury Coalition for Kids  
Children's Mercy Hospital  
2401 Gillham Road  
Kansas City, MO 64108-4698
- 44) Kansas Safety Belt Education Office  
Kansas Bureau of Traffic Safety  
Department of Transportation  
3312 Clinton Parkway  
Lawrence, KS 66047
- 45) Kids in the Back/Niños Atrás  
c/o Nueva Esperanza  
401 Main Street  
Holyoke, MA 01040

- 46) Maine Bureau of Highway Safety  
Department of Public Safety  
164 State House Station  
Augusta, ME 04333-0164
- 47) Maine Injury Prevention Program  
Unintentional Childhood Injury Prevention and Control Programs  
Division Community Health  
11 State House Station  
8th Floor, Key Bank Plaza  
Augusta, ME 04333
- 48) Maine Transportation Safety Coalition  
P.O. Box 818  
Augusta, ME 04432-0818
- 49) Maryland Kids in Safety Seats  
201 West Preston Street  
Baltimore, MD 21201
- 50) Massachusetts Governor's Highway Safety Bureau  
10 Park Plaza  
Suite 5220  
Boston, MA 02116
- 51) Michigan Office of Highway Safety Planning  
c/o Michigan Resource Center (MRC)  
4000 Collins Road  
P.O. Box 30633  
Lansing, MI 48909-8133
- 52) Michigan SAFE KIDS  
Childhood & Unintentional Injury Prevention Section  
Michigan Department of Community Health  
3423 N. Martin Luther King, Jr. Boulevard  
P.O. Box 30195  
Lansing, MI 48909

- 53) Mississippi Highway Safety Patrol  
Mississippi Department of Public Safety  
P.O. Box 958  
Jackson, MS 39205
- 54) Mitsubishi Motor Sales of America, Inc  
6400 Katella Avenue  
P.O. Box 6400  
Cypress, CA 90630-0064
- 55) Montgomery County and Child Passenger Safety Program  
Division of Consumer Affairs  
Department of Housing and Community Affairs  
Montgomery County Maryland  
100 Maryland Avenue  
Suite 330  
Rockville, MD 20850
- 56) National Highway Traffic Safety Administration (NHTSA)  
U.S. Department of Transportation  
400 Seventh Street SW  
Washington, DC 20590
- 57) National Latino Children's Institute (NLCI)  
320 El Paso Street  
San Antonio, TX 78207
- 58) National Parent and Teacher Association (PTA)  
330 North Wabash Avenue  
Suite 2100  
Chicago, IL 60611-3690
- 59) National SAFE KIDS Campaign  
1301 Pennsylvania Avenue NW  
Suite 1000  
Washington, DC 20004-1707
- 60) National Safety Council  
1025 Connecticut Avenue NW  
Suite 1200  
Washington, DC 20036-5405

- 61) Nebraska Office of Highway Safety  
301 Centennial Mall S  
P.O. Box 94612  
Lincoln, NE 68509
- 62) Nevada Office of Traffic Safety  
107 Jacobsen Way  
Stewart Facility  
Carson City, NV 89711
- 63) New Jersey Department of Highway Traffic Safety  
New Jersey Division of Law & Public Safety  
225 East State Street  
P.O. Box 048  
Trenton, NJ 08625-0048
- 64) New York State Bureau of Injury Prevention  
New York State Department of Health  
Empire State Plaza, Room 557  
Corning Tower  
Albany, NY 12237
- 65) New York State Governor's Traffic Safety Committee  
Department of Motor Vehicles  
6 Empire State Plaza  
Room 414  
Albany, NY 12228
- 66) New York State Police  
Building #22  
1220 Washington Avenue  
Albany, NY 12226-2252
- 67) Nissan Consumer Affairs  
Nissan North America, Inc.  
P.O. Box 191  
Gardena, CA 90248
- 68) North Dakota Child Passenger Safety  
North Dakota Department of Health  
600 East Boulevard Avenue  
Bismarck, ND 58505-0200

- 69) North Dakota Drivers License and Traffic Safety  
North Dakota Department of Transportation  
608 East Boulevard Avenue  
Bismarck, ND 58505-0700
- 70) Ohio Governor's Highway Safety Office  
Ohio Department of Public Safety  
1970 W. Broad Street  
P.O. Box 182081  
Columbus, OH 43218-2081
- 71) Oklahoma SAFE KIDS Coalition  
The Children's Hospital of Oklahoma  
P.O. Box 26307  
Oklahoma City, OK 73126
- 72) Operation Baby Buckle  
Safe America  
P.O. Box 965308  
2480 Sandy Plains Road  
Marietta, GA 30066
- 73) Optimist International  
4494 Lindell Boulevard  
St. Louis, MO 63108
- 74) Otsego County Office of STOP-DWI and Traffic Safety  
Suite 210, 250 Main Street  
Oneonta, NY 13807
- 75) Pennsylvania Bureau of Highway Safety and Traffic Engineering  
Pennsylvania Department of Transportation  
400 North Street, 6th Floor, Keystone Building  
P.O. Box 2047  
Harrisburg, PA 17120-0064
- 76) Pennsylvania Division of American Trauma Society  
6706 Carlisle Pike  
Mechanicsburg, PA 17055
- 77) Primary Children's Medical Center (PCMC)  
100 North Medical Drive  
Salt Lake City, UT 84113-1100

- 78) Riley Hospital for Children  
Automotive Safety for Children Program (ASFC)  
Room 004, 575 West Drive  
Indianapolis, IN 46202
- 79) Riley Hospital for Children  
Community Education Department  
575 West Drive  
Room 008  
Indianapolis, IN 46202-5272
- 80) Safe Ride News Publications, Inc.  
14604 Ninth Avenue NE  
Shoreline, WA 98155
- 81) Safer New Mexico Now  
3220 Richards Lane  
Suite A  
Santa Fe, NM 87507
- 82) Safety on the Move  
California Child Care Health Program  
6505 Alvarado Road  
Suite 108  
San Diego, CA 92120
- 83) Safety Restraint Coalition  
917 Kirkland Avenue  
Kirkland, WA 98033
- 84) SafetyBeltSafe U.S.A.  
P. O. Box 553  
Altadena, CA 91003

- 85) Shasta County Public Health Department  
2650 Breslauer Way  
Redding, CA 96001-4297
- 86) Shell Oil Company  
910 Louisiana Street  
Houston, TX 77002-4916
- 87) Shelness Productions  
Box 326  
New Milford, CT 06776
- 88) Southwest District Health Department  
920 Main Street  
Caldwell, ID 83605
- 89) Tennessee Department of Health  
6th Floor, Cordell Hull Building  
425 Fifth Avenue N  
Nashville, TN 37247
- 90) Texas Bureau of Disease & Injury Prevention  
Safe Riders  
Texas Department of Health  
1100 West 49th Street  
Austin, TX 78756-3199
- 91) Texas Traffic Safety Section  
Department of Transportation  
125 East 11th Street  
Austin, TX 78701-2483
- 92) THINK FIRST Foundation  
National Injury Prevention Programs  
American Association of Neurological Surgeons and the Congress of Neurological Surgeons  
5550 Meadowbrook Drive  
Suite 110  
Rolling Meadows, IL 60008
- 93) Thomas Built Buses, Inc.  
1408 Courtesy Road  
High Point, NC 27260

- 94) Utah Highway Safety Office  
Department of Public Safety  
5263 South Commerce Drive  
Suite 202  
Salt Lake City, UT 84107
- 95) Vermont Division of Community Public Health  
Vermont Department of Health  
108 Cherry Street  
P.O. Box 70  
Burlington, VT 05402-0070
- 96) Vermont Governor's Highway Safety Program  
Department of Public Safety  
5 Park Row  
Waterbury, VT 05676
- 97) Virginia Department of Health  
Center for Injury and Violence Prevention  
1500 East Main Street  
Room 105  
Richmond, VA 23219
- 98) Washington State Booster Seat Coalition  
King County Booster Seat Campaign  
Harborview Injury Prevention and Research Center  
325 Ninth Avenue  
Box 359960  
Seattle, WA 98104-2499
- 99) Washington Traffic Safety Commission  
1000 South Cherry Street  
P.O. Box 40944  
Olympia, WA 98504-0944
- 100) Western Massachusetts SAFE KIDS Coalition  
Bay State Medical Center Children's Hospital  
759 Chestnut Street  
Springfield, MA 01199
- 101) What to Expect Foundation  
41 West 83rd Street  
New York, NY 10024

# **Appendix 3**

## **Evaluation Tool**

## Seated for Safety Evaluation Tool

Sponsoring Organization: \_\_\_\_\_

Name of Educational Material: \_\_\_\_\_

### Part I:

Is the material technically accurate?

#### A. Is information outdated?

*[Any materials meeting any of these criteria should be destroyed.]*

*If any of the following are depicted or described, place a check in the appropriate box(es):*

- Placement of an infant in a rear-facing restraint in the front seat
- Children ages 12 and under seated in the front seat
- Infants forward-facing before 20 pounds AND one year
- Graduating a child from a convertible safety seat directly to a safety belt

⇒ **If at least one of the above boxes is checked, then the material is technically inaccurate.**

#### B. Is new up-to-date information included?

*[If any of the following is missing from the material, then the material needs to be replaced or supplemented]*

*If the following information is included, place a check in the appropriate box(es):*

- Danger of frontal air bags to children 12 and under seated in the front seat
- Keeping infants rear-facing until at least one year AND at least 20 pounds
- Use of booster seats for children too big for convertible seats, but too small for adult safety belts
- Need to install safety seats securely (e.g., LATCH method, tether)
- The importance of all children 12 and under seated in the back seat

⇒ **If none of the boxes under (A) is checked, and at least one box under (B) is left unchecked, then the material is technically accurate, but incomplete.**

⇒ **If none of the boxes under (A) is checked and all boxes under (B) are checked, then the material is technically accurate.**

Is the material technically accurate?

- Technically accurate
- Technically accurate, but incomplete
- Not technically accurate

Notes:

## Part II:

### Is the material culturally competent?

*Place a checkmark in the appropriate box(es) below.*

- If the material is targeting a specific audience, appropriate translations are made available
- Material has depictions which reflect the culture and ethnic background of the target audience
- Material has been field-tested

⇒ **If all boxes are checked, then the material is culturally competent.**

⇒ **If at least one, but not all boxes are checked, then the material is partially culturally competent.**

⇒ **If none of the boxes are checked, then the material is not culturally competent.**

### Is the material culturally competent?

- Yes
- No
- Partially

**Notes:**

## Part III:

### Is the material appropriate for low-income audiences?

*Place a checkmark in the appropriate box(es) below.*

- Material provides recommendations for riding in older cars (e.g., lap belt only, child must ride in front)
- Material provides recommendations for riding in others' vehicles (e.g., taxicabs, friends' cars)
- Material provides information about obtaining low-cost or free car seats
- Material addresses secondhand car seats (e.g., yard sales, knowledge of crash history)

⇒ **If all boxes are checked, then the material is appropriate for low-income audiences.**

⇒ **If at least one, but not all boxes are checked, then the material is partially appropriate for low-income audiences.**

⇒ **If none of the boxes are checked, then the material is not appropriate for low-income audiences.**

### Is the material appropriate for a low-income audience?

- Yes
- No
- Partially

**Notes:**

**Part IV:**  
**What is the reading level of the material?**

Reading level of the educational material determined using the SMOG scale.

Reading level: \_\_\_\_\_

**Part V:**  
**Is the material appropriate for low-literacy audiences?**

- Material uses pictures whenever it is possible to simply and clearly express an idea this way
  - Reading level is at or below the sixth grade level
  - Material does not use jargon or technical terms without explaining or illustrating them
  - Material puts most instructions in a positive form (i.e., “sit in a booster seat...” rather than “if you don’t sit in a booster seat...”) and active voice (i.e., “sit in a booster seat...” rather than “a booster seat should be used”)
  - Most sentences contain only one idea
  - Material contains typeface that is easy to read (e.g., minimal italics and script)
  - Material contains text size that is easy to read (at least 10-point font)
  - Material contains formatting that makes material easy to read (e.g., adequate white space, not dense, not overcrowded)
- ⇒ **If all boxes are checked, then the material is appropriate for low-literacy audiences.**
- ⇒ **If at least one, but not all boxes are checked, then the material is partially appropriate for low-literacy audiences.**
- ⇒ **If none of the boxes are checked, then the material is not appropriate for low-literacy audiences.**

**Is the material appropriate for low-literacy audiences?**

- Yes**
- No**
- Partially**

**Notes:**

**Part VI:**

**Does the material provide complete and accurate information about transporting children with special health care needs?**

- Material recommends an air bag on/off switch for children requiring frequent observation during travel, and for whom there is no adult to accompany them in the back seat
- Material states that whenever possible, a standard child restraint device is the preferable choice
- Material states that car restraint systems should not be modified or used in a manner other than that specified by the manufacturer unless it has been crash-tested and meets NHTSA standards
- Material describes infant-only car safety seats with capacity to recline
- Material correctly describes the appropriate 45-degree angle for rear-facing seats
- Material states that premature and small infants, and infants and children with a tracheostomy should not be placed in a car seat with a harness-tray/shield combination or an armrest
- Material describes restraint choices for children who have outgrown car seats
- Material addresses muscle tone abnormality
- Material addresses prone and supine positioning of infants
- Material addresses children with Spica casts
- Material addresses children with challenging behavior
- Material addresses wheelchair transportation
- Material addresses equipment transportation

**List any inaccuracies here:**

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⇒ **The material provides complete information about children with special health care needs only if all of the boxes above are checked.**

**Does the material contain accurate and complete information about children with special health care needs?**

- Accurate and complete**
- Accurate, but incomplete**
- Not accurate**
- Not applicable**

## Sources:

Children's Safety Network (1999). *MCH agencies: Traffic safety partners fact sheet packet*. [fact sheets]. Newton, MA: Author.

Committee on Injury and Poison Prevention, American Academy of Pediatrics (1999). Transporting children with special health care needs. *Pediatrics*, 104, 988–992.

Georgetown University Child Development Center, National Center for Cultural Competence (2001). *Promoting cultural diversity and cultural competency: Self-assessment checklist for personnel providing services and supports to children with special health needs and their families* [on-line]. Accessed July 5, 2001, from the World Wide Web: [gucdc.georgetown.edu/nccc/nccc7.html](http://gucdc.georgetown.edu/nccc/nccc7.html).

McLaughlin, G.H. (1969). SMOG grading: A new readability formula. *Journal of Reading*, 12, 639–646.

National Highway Traffic Safety Administration and National Safety Belt Coalition (1997). *Is this child on the road to danger? Child passenger safety materials review and evaluation tool*. Washington, DC: National Highway Traffic Safety Administration.

Talty, J.L., Keller, M.K., Chappelow, M., Stroup, K.B., Bull, M.J. (1999). Transporting children with orthopaedic conditions and surgeries. *Orthopaedic Nursing*, 18(6), 29–35.

United States Consumer Safety Commission (2000). *Recall round-up 2000*. Bethesda, MD: Author.

United States Consumer Safety Commission (2000). *Thrift store safety checklist: For consumers and thrift stores* [brochure]. Bethesda, MD: Author.

University of North Carolina, Injury Prevention Research Center and Health Communications Research Laboratory (1994). *The TBI prevention book*. Chapel Hill, NC: Author.