

Identifying Strategies to Reduce the Percentage of Unrestrained Young Children

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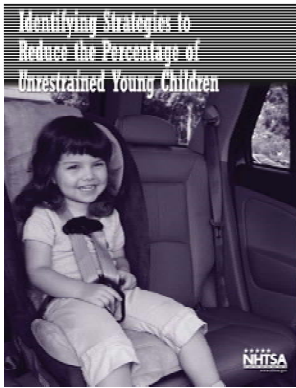
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DOT HS 811 076
January 2009

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Janelle Rose



Project Objectives & Scope of Work

Explore the factors that contribute to nonuse of occupant restraints by children ages 5 through 7 riding in motor vehicles, and to identify strategies to increase restraint use in this age group.

- Literature Review
- Discussions with Key Informants
- Brainstorming Sessions
- Focus Group Sessions



Literature Review

- Identified populations, socioeconomic characteristics, ecological factors, behaviors, and attitudes related to nonuse of restraints by children in this age range.
- Identified possible strategies to increase use.



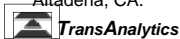
Discussions with Key Informants

- Attendees: Nationally recognized CPS experts and local CPS-certified instructors and technicians with extensive field experience.
- Purpose:
 - Identify barriers to children’s restraint use.
 - Recommend strategies that could overcome the barriers.



Discussions with Key Informants (Cont'd) (Telephone)


- Beth Ebel, MD, Assistant Prof., Pediatrician, Harborview Injury Prevention & Research Center, Univ. of Washington, Seattle, WA.
- Karen Hanawalt, Florida CPS State Coordinator, FL DOT/Tallahassee Community College, Tallahassee, FL.
- Cathy Hogan, Coordinator SAFE KIDS St. Louis, SSM Cardinal Glennon Children’s Medical Center, St. Louis, MO.
- Kathy Kruger, Exec. Dir., Safety Restraint Coalition, Kirkland, WA.
- Sherri Penchishen, Dir., City of Bethlehem Health Department & Northampton County Highway Safety Program, Bethlehem, PA.
- Janelle Rose, Exec. Dir., Program Professionals Inc., Wyandotte, MI.
- Stephanie Tombrello, Exec. Dir., SafetyBeltSafe U.S.A., Altadena, CA.



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Discussions with Key Informants (Cont'd)
(In-Person)


- Diane Batcher, Project Manager, Chester Co. (PA) Highway Safety Program.
- Cindy Cianciulli, Coordinator, Montgomery Co. PA Highway Safety Program.
- Gina Duchossois, Coordinator, Southeastern PA SAFE KIDS Coalition, Philadelphia, PA.
- Yvette Gayle, Volunteer for Safe Kids Chester Co., PA.
- Terri Lorentson, Coordinator of the Delaware Co. (PA) Comprehensive Highway Safety Program.
- Sally Williams, PA Traffic Injury Prevention Program, Underserved Population and Southeastern PA Regional Coordinator.



Strategies to Reduce the Percentage of Unrestrained Young Children

Brainstorming Session

- Location: Washington, D.C.
- Attendees: Experts in child development, child passenger safety, and health education.
- Purpose:
 - Identify the reasons for nonuse of restraints by children.
 - Suggest potential strategies to increase use.
 - Recommend discussion topics for subsequent focus group sessions.



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Brainstorming Session (Cont'd)

- Gilma Arguello, CPS Program Coordinator (Centro San Bonifacio, Chicago, IL).
- Nancy Bill, Injury Prevention Manager (Indian Health Service, Bureau of Indian Affairs, Rockville, MD).
- Beth Ebel, MD, Assistant Professor, Pediatrician (Harborview Injury Prevention and Research Center, University of Washington, Seattle, WA).
- William Hall, CPS Manager (Highway Safety Research Center, University of North Carolina, Charlotte, NC).
- Suzanne Hill, Director of Outreach and Advocacy (Center for Injury Research and Prevention, Children's Hospital of Philadelphia, Philadelphia, PA).



Brainstorming Session (Cont'd)

- Anne Jerzewski, Program Manager (Program Professionals, Inc., Wyandotte, MI).
- William King, Epidemiologist (University of Alabama at Birmingham, Birmingham, AL).
- Michele Mount, CPS Working Group (AAA New Jersey Auto Club, Florham Park, NJ).
- Janelle Rose, Executive Director (Program Professionals, Inc., Wyandotte, MI).
- Lorrie Walker, Training Manager/Tech Advisor (Safe Kids Worldwide, Washington, D.C.).
- Bob Wall, Master Police Officer (ret.), Traffic Safety Program Manager (Virginia Association of Chiefs of Police, Richmond, VA).



Focus Groups

- Purpose: To learn about
 - Parents' knowledge of the child restraint law and best practices.
 - Sources of information about child restraints.
 - Attitudes toward booster seat use and reasons for nonuse.
 - Perceptions of child restraint law enforcement.
 - Potential strategies and messages to increase the consistent use of booster seats.



Focus Groups

- Participants: Parents and other caregivers of unrestrained booster seat age children.
- Recruitment Method: Observed by project staff in shopping center parking lots transporting unrestrained young children, and asked to participate in a discussion about "personal safety on the highway."
- Locations: Detroit, MI; Pittsburgh, PA; Sacramento, CA; Tampa, FL.



Results - Literature Review

- National Occupant Protection Use Survey (Nationwide probability-based observation data on child restraint use in the U.S.)
 - Birth to age 1: 1% unrestrained (n=589)
 - Age 1 to 3: 8% unrestrained (n=11,530)
 - Age 4 through 7: 11% unrestrained (n=2,149)

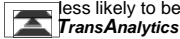
Pickerell, T.M. and Ye, T.J. (2009). Child Restraint Use in 2008 - Overall Results, Traffic Safety facts, Research Note, DOT HS 811 135.



Results - Literature Review (Cont'd)

Socioeconomic/Demographic Variables Associated with Non-Use of Child Restraints:

- Income Level: Lower socioeconomic status associated with non-restraint.
- Driver Race/Ethnicity: African American and Latino parents less likely to restrain children than White parents.
- Rural vs. Suburban: Mixed study findings.
- Driver Age: Drivers ages 16 to 29 less likely to restrain children than all other age drivers.
- Driver Sex: Males less likely to restrain children.
- Relationship of Driver to Child: Grandparents less likely to use child restraints than parents.
- Age and Weight of Child Occupant: Older and heavier children less likely to be restrained.



Results - Literature Review (Cont'd)

Perception, Knowledge, Awareness, and Beliefs of Drivers with Unrestrained or Improperly Restrained Children:

- Parents who perceive little or no risk of injury if crash involved are less likely to use booster seats and more likely to use seat belts or no restraint.
- Unrestrained drivers are more likely to transport children unrestrained.
- Belief that children 4-7 are large enough for the seat belt to fit properly.
- Belief that child restraint law meets optimum protection criteria.
- Belief that children are uncomfortable in booster seats.
- Hassle to move booster seats from vehicle to vehicle.



Results - Literature Review (Cont'd)

Situational Factors Related to Non-Use of Restraints or Improper Selection of Restraints:

- Lack of space for booster seats when transporting extra passengers; also less child restraint overall with more passengers.
- Higher percentage of unrestrained children in older vehicles than newer vehicles.
- Vehicle design or restraint system often incompatible with booster seat use.
- Lower booster seat use in States without a booster seat law.



Results - Literature Review (Cont'd)

Interventions and Message Delivery

- Booster seat laws and enforcement of child occupant protection laws is associated with higher booster seat and child safety seat use.
- Education of parents and children combined with booster seat give-aways has increased booster seat use in low socioeconomic communities.
- Programs in ethnic communities should address cultural and religious beliefs, and use bilingual CPS technicians to educate parents in small classes in health centers, daycares, churches, and local schools.



Results - Literature Review (Cont'd)

Interventions and Message Delivery (Cont'd)

- Injury prevention messages must shock and surprise parents to overcome the "immunity fallacy."
- Effective messaging for child passenger safety must inform, persuade, arouse alarm, evoke high emotion, create feelings of vulnerability, and instill in parents a high sense of efficacy for protecting their children.
- Healthcare providers (nurses, pediatricians) are viewed by parents as credible spokespersons for occupant protection message delivery.



Results – Discussion with Key Informants

- They estimate that approximately 20% of booster-seat-age children that come to car seat checkups are unrestrained.
- Unrestrained children are observed in all communities, but greatest numbers are observed among:
 - Minorities
 - Recent immigrants
 - Poor people
 - Pick-up trucks
 - Older vehicles
 - Vehicles transporting numerous people



Results – Discussion with Key Informants (Cont'd)

- Reasons parents give for booster seat age children riding unrestrained:
 - Inconvenient to use booster seats.
 - Booster seat doesn't fit in back seat with other seats or passengers.
 - They were in a hurry.
 - There are no shoulder belts in the middle seat.
 - Children disconnect seat belts from position over booster seats.



Results – Discussion with Key Informants (Cont'd)

- Strategies recommended to reduce percentage of unrestrained children:
 - Use TV and radio.
 - Education in elementary schools.
 - Stronger restraint laws for age 5 through 7.
 - Encourage manufacturers to make built-in seats to accommodate children up to age 8.
 - Identify car inspection stations and schedules.
 - Target programs in culturally diverse communities.
 - Use direct, brief (and bilingual) messages emphasizing risk, parental responsibility, enforcement, and where to get information.



Results – Brainstorming Session

Barriers:

- Child development factor: Power struggles between parents and children ages 4-7 who want to be independent.
- Children perceive booster seats as baby seats--peer pressure to be "big kids."
- Perception by parents that kids are safe if unrestrained as long as they are in the back seat.
- Perception by parents that driving is safe, they are making short trips close to home, they are not likely to be in a crash (low risk perception).



Results – Brainstorming Session

Barriers (cont'd):

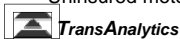
- Perceived cost of booster seats.
- Older vehicles without lap/ shoulder lap belts.
- Large families and no room for booster seats.
- Lack of booster seat laws.
- Lack of enforcement of child passenger safety laws.
- Language barriers prevent messages from getting through to non-English speaking minorities.
- Safety concerns with booster seats—they wobble.



Results – Brainstorming Session

Groups Associated with Low Restraint Use:

- Low education (high school degree or less).
- Low income.
- Minority groups (e.g., African-Americans, Latinos, American Indians).
- Part-time seat belt users.
- Rural families.
- Transporters of multiple children (e.g., parents carpooling children to sporting events; child care providers).
- Uninsured motorists.




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Results – Brainstorming Session

Messengers and Venues:

- After-school program staff.
- Cable programs.
- Car dealerships.
- Certified CPS technicians/instructors.
- Child care providers.
- Community centers/events/programs (e.g., health fairs).
- Congressional Black Caucus.
- Driver license manual and other material available at licensing centers.
- Educators (elementary school teachers).




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Results – Brainstorming Session

Messengers and Venues (Cont'd):

- Employers.
- EMS and fire department staff.
- Entertainment industry (e.g., integrated marketing; Hollywood showing everyone buckled in a scene and getting the buckle-up message into the plot line).
- Faith-based organizations.
- Fast-food establishments.
- Head Start programs.
- Health care centers.
- Health care providers (e.g., pediatricians, family physicians).




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Results – Brainstorming Session

Messengers and Venues (Cont'd):

- Insurance companies.
- Internet (e.g., pop-ups).
- Judges and prosecutors.
- Juvenile Products Manufacturers Association.
- Law enforcement (as educators).
- Libraries.
- Magazines (target subscribers mothers, families, and children).
- Media (radio, television, paid public service announcements).




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Results – Brainstorming Session

Messengers and Venues (Cont'd):

- Movie theaters (trailers).
- Pediatricians/general family physicians.
- Postal service (e.g. message on stamp).
- Retail stores (e.g., brochures and posters, message on the bill).
- Service clubs (e.g., rotary, scouts).
- Utility companies (e.g., message on the bill).
- Women, Infants, and Children (WIC) Food Service Program.




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Results – Brainstorming Session

Recommended Messages and Strategies

- Message content should focus on safety, risk, and enforcement.
- Acknowledge that parents love their children.
- Explain why they should buckle their children—to keep them safe.
- Increase awareness of risk by showing crash dynamics.
- Focus on safety benefits of booster seats.
- Promote consistent use of restraints for everyone on every trip.
- Identify the price of booster seats, and where to get them, especially attractive ones for this age group.



Strategies to Reduce the Percentage of Unrestrained Young Children

Results – Brainstorming Session

Recommended Messages and Strategies (Cont'd)


- Provide clear instructions about how booster seats work.
- Identify locations where child restraint installation can be checked by Certified CPS technicians.
- Identify the booster seat law and promote the fact that most States have them.
- Community leaders may be the best spokespeople in ethnic/minority communities where law enforcement officers and public buildings are feared.



Strategies to Reduce the Percentage of Unrestrained Young Children

Results – Focus Group Session

- Confusion among parents about appropriate restraint type after age 4. Most thought seat belts were fine for age 5 through 7, and that they were following the law.
- Belief that booster seats do not add any safety value.
- Parents feel powerless to enforce booster seat or seat belt use when their children resist.
- Parents don't use booster seats because they are large and bulky and don't fit well in their cars, especially with multiple children.
- Perception that child restraint law is not enforced—low risk of being ticketed for not restraining children (except in CA.)




Strategies to Reduce the Percentage of Unrestrained Young Children

Results – Focus Group Session (Cont'd)

Rank order of strategies to increase child safety use:

- #1: Education
- #2: Communication
- #3: Greater Enforcement of Child Restraint Law
- #4: Demonstrations of Proper CRS and Booster Seat Use
- #5: Stronger Child Restraint Laws
- #6: Assistance for Low-Income Households




Strategies to Reduce the Percentage of Unrestrained Young Children

Results – Focus Group Session (Cont'd)

4 Message Strategies Evaluated:

- RISK of injury or death associated with failure to restrain the child.
- ENFORCEMENT/CONSEQUENCES (fines and points) for failure to restrain the child.
- EASE of installing and using booster seats.
- DUTY of the parent/caregiver to properly protect the child.



Results – Focus Group Session (Cont'd)

Effective Messaging:

- Participants responded most to message strategies that directly addressed ignorance of the fatality and injury consequences of failure to restrain (RISK) and to the sense of loss and guilt that injury to the child would produce (DUTY).
- These concepts made participants think about the unnecessary and serious risks they had been taking up to that time in not consistently securing their children in the most appropriate restraint.



Results – Focus Group Session (Cont'd)

Participants suggested two ways to translate the "RISK" strategy into actual communications:

- Show the results of risk taking.
 - simulated crashes with unrestrained test dummies
 - actual crash footage or photographs.
- Employ testimonials.
 - Use interviews with parents whose children had been nearly or actually killed or injured in crashes due to lack of proper restraint.



Results – Focus Group Session (Cont'd)

- ENFORCEMENT Strategy would be more motivating if:
 - Perceived risk of being ticketed was greater.
 - Penalties for violations were more severe.
- The EASE Strategy was not compelling:
 - "Infant seats are hard....Booster seats are not hard."



Recommendations

- **Laws**
 - Stronger enforcement of existing child restraint laws.
 - More severe penalties for failing to comply with child restraint laws.
 - Publicized enforcement activities.
 - Train law enforcement officers in appropriate restraint type by age and weight.
 - Educate judges and prosecutors about restraint law and risks involved to unrestrained and inappropriately restrained children.



Recommendations (Cont'd)

- **Education**
 - Focus on best practices for properly securing 5 through 7-year olds.
 - Increase the perception of risk of injury/fatality.
 - Visuals—crash tests with appropriately restrained, inappropriately restrained, and unrestrained crash dummies.
 - Testimonials—story told by parent whose child was injured or killed in a crash and was unrestrained or inappropriately restrained.



Recommendations (Cont'd)

- **Education (Cont'd)**
 - Accessibility to education is critical for minority groups less likely to restrain children (African Americans, Latinos, American Indians).
 - In minority communities, message delivery/educational role should be filled by health care providers and child safety advocates.
 - Use culturally-sensitive, bilingual messages within reading level
 - Most impact when delivered in community-oriented and faith-based centers
 - Seat giveaways, low-cost seats, and store coupons increase accessibility to booster seats and is important.



Recommendations (Cont'd)

- Education (Cont'd)
 - In non-minority communities, educational providers/message delivery may include:
 - Health care providers
 - CPS technicians
 - Law enforcement officers
 - Elementary school teachers
 - Also deliver messages through the media (billboards, radio)



Questions?

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