

Child Passenger Safety TECH REPORT • Fall 2001



ICPSTC Conference Highlights

Over 900 people attended the four-day International Child Passenger Safety Technical Conference in Indianapolis, Ind., on June 2 through 6. Over 10 percent attended with scholarship assistance. The conference, with about 70 separate workshop topics in addition to general sessions and exhibits, kept everyone busy and interested. Billed as a “paperless” conference, handouts or electronic presentations are being put onto a CD-Rom for all attendees.

One special event was a trip by several hundred participants to the nearby factory and test facility of Indiana Mills and Manufacturing Inc. (IMMI). This company designs, tests, and makes much of the hardware found in child restraints and safety belts (buckles and tether hooks, for instance).

Three awards were given. The Annemarie Shelness Award for Lifetime Achievement in Child Passenger Safety was given to Howard Willson, recently retired safety engineer for DaimlerChrysler. The Dana Hutchinson Memorial Award went to Dr. Marilyn Bull, a pediatrician who chairs the American Academy of Pediatrics Committee on Injury and Poison Prevention and has spearheaded the efforts to develop restraint systems for children with special needs. An award named for Janet Graham, San Benito, Calif, SAFE KIDS Coalition coordinator, who was killed in a traffic crash earlier this spring, was given to all SAFE KIDS coordinators nationwide for their tireless and often unsung work for child passenger protection.

There were so many workshops that it is impossible to summarize them. Following are some highlights.

Real World Crash Data: Researchers from Children’s Hospital of Philadelphia (CHOP) shared some preliminary results from its Partners for Child Passenger Safety study. This 5-year project analyzes real-world crash data from State Farm-insured motorists in 16 states. Results released included:

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CPS Curriculum Revision for 2001

The National CPS Board issued its revised curriculum in early July. All certified technicians and instructors received updated curriculum manuals with a cover page highlighting major changes. Instructors received updated presentation CDs and additional teaching tools.

The standardized CPS curriculum enters a new phase with its third revision. The processes for revision and communication have been evolving as well. The 2001 edition shows decisions and policy taking shape, as well as improved predictability for the future.

REVISION CYCLES: Predictable, annual roll-outs of curriculum revisions are planned each spring. All certified technicians and instructors received entirely new manuals this summer. (Next year’s materials will be posted for downloading off the internet to save printing costs.) Implementation was expected by October.

FEEDBACK: The process is increasingly accessible, systematic, and interactive. A feedback form has been added to the curriculum manual resources. The expanded website (www.cpsboard.org) now solicits direct feedback, which should be routed to Managing Editor Bill Hall at bill_hall@unc.edu. After each revision, the Curriculum Committee and Board plan to review feedback for six months, then revise the curriculum and plan aids and distribution in the following six months.

REPRESENTATION: The CPS Board serves in an oversight capacity. Terms of office have been clarified and staggered. Board representation is divided into organizations guaranteed a spot, other constituencies (such as public health and law enforcement), one slot for an advocate at-large, one for diversity, and another for a CPS advocate.

STANDARDS AND NORMS: The latest curriculum revision carefully distinguishes between compliance requirements and other advice, ideas, options, recom-

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Booster Activity Mounts

The talk and activity surrounding restraints for children over 40 pounds has reached an all-time high.

- April Conference of the Association for the Advancement of Automotive Medicine
- April Senate Hearing
- Legislation passing in several states
- NHTSA public meeting July 10th on booster seat promotion
- Ford’s BoostAmerica campaign underway
- New legislation (SB 980) introduced by Senator Peter Fitzgerald in June addresses standards and state laws
- State legislation for children 4 to 8

Booster Conference on Science, Public Policy

A booster seat conference, Closing the Gap Between Science and Public Policy, was held in Washington D.C. in April. It brought together researchers, engineers, policy makers, and advocates/educators to look at the latest knowledge about belt-positioning boosters and to make recommendations. The conference was organized by the Association for the Advancement of Automotive Medicine (AAAM) with support from State Farm Insurance Companies, Volkswagen of America, and the Children’s Hospital of Philadelphia.

Twelve recommendations were generally agreed upon. They range from the need for focused educational programs

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Booster Conference, from page 1

and better parameters than age and weight for state laws covering children over 40 pounds, to expedited certification of the 10-year dummy and a requirement for all rear seating positions to have three-point safety belts. The full text is on the AAAM website: www.carcrash.org/recs.html.

There was general consensus that strict height and weight criteria for booster and safety belt use were not useful or correct. The 5-Step Test for correct safety belt fit developed by SafetyBeltSafe U.S.A. was seen by many to be a useful tool. (Find the test at www.carseat.org)

Conference Highlights:

Kathleen Weber, University of Michigan Child Passenger Protection Research Program, reviewed the state of dynamic testing in North America. She explained how current test dummies available in the U.S. are old designs with built-in limitations or quirks. Some designs that work well in the field show high chest accelerations in the test, apparently the result of the test set-up rather than real differences in products. The test can be “fooled” by using a shoulder belt clip to hold the belt on the outboard side of the shoulder.

Weber recommended:

- a new standard governing all belt guidance devices, tying maximum weight to hip breadth limits
- upgrade requirements for booster seat testing, including a test to make sure that shoulder belt retraction is not inhibited by guides
- a “catch all” term for “occupant-appropriate restraint systems” for use in state legislation for larger children.

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Dennis Durbin, MD, reported findings from the Partners for Child Passenger Safety study in the U.S. It includes children involved in crashes in the State Farm-insured population. Booster seat use in the study peaks at age 3 and most children aged 4 to 8 are not restrained optimally. In the group as a whole, booster use increased in 2 years from less than 5 percent to 18 percent. Approximately half used each type of booster. There were wide differences in usage rates among states in the study. Among children aged 4 to 5, “children in safety belts were noted to be over 3 times more likely to suffer a significant injury than children in booster seats.” There was significantly greater risk of head injuries to children in safety belts in side-impact crashes, “while abdominal and spine injuries were extremely rare among children in boosters.”

Kathy Kruger of the Safety Restraint Coalition reported on a Washington state survey of booster use in 2000. It found that only 22 percent of children from 40 to 59 pounds used booster seats. Among children 60 to 80 pounds, use fell to 8.1 percent. Nearly half of children in this group used lap or lap/shoulder belts. However, almost half of the children of all sizes observed using a safety belt from 20 pounds up to 100 pounds had the lap belt on the abdomen, not down on the hips.

Flaura Winston, MD, of the Children’s Hospital of Philadelphia reported on focus groups of parents who used boosters for their children and those who did not. There were significant differences between the groups in parenting style, risk perception, knowledge. Those who already used boosters made safety non-negotiable in their vehicles. The others had a constant struggle with their children and restraint use was a negotiable option. They also did not understand the purpose of boosters, believing that they must be less safe than restraints for younger children. They tend to look to the language of the state law for guidance.

Winston concluded that interventions must take these two divergent groups into account. Parents’ and children’s perceptions of comfort may differ, and once the child has been moved out of a special restraint, it is very difficult to get them back into a booster.

LATCH Updates

Current LATCH Seats

- Cosco Triad: convertible
- Fisher-Price Safe Embrace II: convertible, recently discontinued
- Britax Expressway: forward-facing only (20 lb. and 1 year, to 40 lb.)

The new LATCH seat by Britax, the **Expressway**, is a forward-facing seat for children from 20 to 40 pounds. Its “ISOFIT” (LATCH) attachment straps use new connectors that have a trigger-type release. Check the Britax website for retailers: www.childseat.com

LATCH Retrofit Kits

Two companies have produced LATCH lower anchor kits so far. Both kits have webbing with a hook at each end, which is routed through the safety belt path. The hooks connect to the vehicle lower anchorages and the strap is tightened with an adjuster mechanism. These should be used only with the manufacturer-designated products. They are:

- Century: EZ Latch kit for all Century restraints made since Sept. 1997
- Columbia Medical: kit available on request for forward-facing Columbia Orthopedic Positioning Seat

The Century EZ Latch strap can be used to stabilize a Century combination CR/belt-positioning booster seat being used as a BPB. This is useful when a child is getting in or out of the vehicle and to hold an unoccupied booster in place.

NHTSA’s compliance office reports: “We are looking at the LATCH kit issue. Legal will have to interpret whether they are aftermarket devices or not.”

Contacts:

Columbia: 800/454-6612

www.columbiamedical.com

Century: 800/837-4044

www.centuryproducts.com

—Sue Miller Smith



Call for Abstracts for ICPSTC 2002

Do you want to present or organize a workshop for the 2002 ICPSTC?

Applications due by November 16

For a form, call 800/344-7580, or check at www.cipsafe.org.



ICPSTC Conference Highlights, from page 1

- Unrestrained children were three times more likely than restrained children to suffer a serious injury.
- Thirty percent of infants were incorrectly turned to face forward before age 1.
- Eighty-three percent of children between 4 and 8 were inappropriately restrained in adult safety belts alone. Among 3-year-olds, 29 percent were using booster seats and 16 percent were in adult belts. No 7- or 8-year-olds in the study rode in BPBs.
- Sixteen percent of children 12 and under rode in the front vehicle seat.

During seminars, CHOP researchers also noted that facial injuries, while not life-threatening, are common, can be disfiguring, and often indicate presence of other skull injury that might not be immediately apparent. For more information, refer to www.traumalink.chop.edu.

Pitfalls of Ranking CRs: In a discussion of ranking CRs for consumers, Britax President Tom Baloga showed how superior test numbers can be misleading and unrelated to actual safety. He posted a chart showing how successive engineering improvements to a hypothetical “Newly Optimized Occupant System Enhancements” system showed better and better test numbers. Then he revealed that the “excellent” N.O.O.S.E. system amounted to two parallel straps, one across the neck, one across the abdomen of the dummy.

Safety, Baloga said, must be for real children, not crash dummies. “A rating system will provide an incentive for better numbers at the expense of real world performance.” His talk was a reprise of one he gave to the Society of Automotive Engineers.

Manufacturers Forum: Most restraint producers said retailers won’t stock LATCH-compatible restraints until all the CRs are required to have them (September 2002) or until the buying public demands them. Currently, they said, the demand is not there. SafetyBeltSafe U.S.A. noted, however, many requests on its helpline for information about available LATCH seats, since many vehicles now have LATCH anchors.

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Liability insurance for technicians: Competing CPS-related liability insurance policies were compared and clarified. Both include property damage coverage. Both insure only certified technicians. The aggregate insurance difference: \$3 million for AAA, \$7 million for ICIP. (Aggregate totals are guaranteed coverage for all policyholders total per year.) The price difference: \$55 for AAA, \$250 for ICIP.

AAA insurance is “claims-based,” requiring the policy holder to be covered both at the time of the incident and the time of the claim. The ICIP policy covers subsequent claims so long as the policyholder was insured at the time of the incident. AAA said it stressed a low price to serve those for whom price was top issue.

The ICIP version also will add the site of an event as an additional insured at no charge. The ICIP plan aimed to eliminate frequently mentioned barriers to individual technicians’ activities and create the most financial security.

Both organizations consider the effort an experiment to see what market and claims history develops. Neither has claims experience on which to base this coverage, given that no similar insurance existed and actual CPS-related claims so far have been rare. (Contact information was printed in January/February SRN.)

— Sue Miller Smith, contributing writer

Good News, Bad News

The **Laptop**, Britax’s new energy-absorber, is now available in selected stores nationwide. This is not a booster, but a shield-like device of reinforced foam that fits against the hips and abdomen, spreading the force of the lap belt. It is specifically for use with a lap-only belt and so can be used in school buses. If used with a lap-shoulder belt, the shoulder belt goes in the belt slot with the lap belt. Check the Britax website for retailers: www.childseat.com.

The **Cherish car bed** is expected to be available again soon from Mercury Distributing.

Contact Mercury at 800/815-6330 or tjones@mercurydistributing.com.

Fisher-Price has stopped producing all of its child restraints. Retailers and the buying public did not support the company’s niche, according to company spokesperson Laurie Oravec.



Certification Notes

CPS Board

The new members of the CPS board will be announced in December.

Reminder for All Certified Technicians and Instructors

Please remember that only a certified instructor or officially approved instructor candidate is allowed to teach the modules of the standardized training class. Certified technicians may assist certified instructors and/or approved instructor candidates with the hands-on portions of the training, but are prohibited from actual classroom teaching/practice teaching of the course. A guest speaker brought in to supplement module information by addressing the particular state’s occupant protection law or a special state program is permitted.

For quality assurance purposes and to assure the integrity of the certification process, all requirements must be followed.

Recertification Paperwork

Bill Wen of AAA recommends that all people applying for recertification keep track of their paperwork. Keep copies of what you send in. If you have not received any response from AAA within 45 days, please call the office:

Nicola Taveres, 407/444-7958, ntaveres@national.aaa.com
All recertification documents must be addressed to Mail Stop 77 at AAA.



Consumer Reports' Latest Child Restraint Evaluation

Consumers Union reported on its latest evaluation of child restraints in the July 2001 issue of *Consumer Reports* ("Traveling with Kids: Child Car Seats"). It was mailed to subscribers in late May and was due to reach news stands in mid-June. The report covered dynamic tests of 33 restraints and also analyzed ease of use and fit in the vehicle.

One finding raises concerns. Shoulder belt guides on some of the tested combination child restraint/belt-positioning boosters (BPBs) restricted movement of the belt. Guides that restrict shoulder belt movement can permit too much slack in the system, slack that cannot be taken up by the retractor. This could occur if the child leans forward while riding or if the parent does not remove the shoulder belt from the guide between uses. The slack decreases crash protection. The article noted that the concern is moot for taller children, for whom the shoulder belt fits well without being routed through the guide.

Out of the eight combination CR/boosters with clips that were tested, CU rated only the Fisher-Price Grow with Me (discontinued since the CU article was written) as having a belt positioner that would not restrict belt retraction. None of the three simple BPBs that were tested had restrictive guides.

The Evenflo Right Fit booster earned a "Best Buy" rating for use in vehicles with seatbacks of adequate height. Since its shoulder belt height adjuster is on a strap and moves with the child, potential slack was not an issue.

The tests also found a tendency for dummies to slide under the lap belt (submarine) in two Cosco high-back BPBs. This was probably due to the relatively high lap belt paths over the sides of the shells. This was noted only in the fine print of the rating chart.

The full report and ratings are posted on www.ConsumerReports.org.

EDITOR'S NOTE

Technicians and advocates should make sure that parents whose BPBs have restrictive belt guides pay attention to keeping the shoulder strap snug when it is routed

through the guide. They should counsel discontinuing use of the guide as soon as the child is tall enough so the shoulder belt fits well without it.

As children continue to use boosters to a higher weight/height and higher age, they are able to buckle themselves into their boosters. They cannot be expected to thread the shoulder belt through a guide. Fortunately, as they grow taller, the guide becomes unnecessary.

Shoulder belts should not be relied upon to keep children upright. Children who sleep in BPBs tend to slump against the shoulder belt and get out of position. More attention needs to be given to innovative ways for sleeping children to be supported without increasing slack in the belt system or getting out of position. Deeper sidewings, less upright boosters, or boosters with movable backs that conform to the vehicle seat back, could improve the situation. This is especially important as side-impact air bags become more common in the back seat, which make it dangerous for children to sleep leaning against the side of the vehicle.



CPS Curriculum Revision, from page 1

mentations, and hopes. Agendas and templates are samples, not required scripts. In addition to technical changes, each revision increases clarity or emphasis about technical and administrative expectations for technicians and instructors.

CONVENIENCE AND PRACTICALITY: Revision enhancements, especially for instructors, include easier access to teaching tools and templates. This year's CD (in response to a request) includes text files for exercise cards that instructors previously had to input and format themselves.

—Sue Miller Smith

Recalls

Peg Pérego "Primo Viaggio" Infant Car Seat

Peg Pérego is voluntarily recalling its Primo Viaggio infant car seats. Some seats produced from Feb. 1 through June 10, 2001, may have been assembled incorrectly, so that the left latching mechanism (from baby's view) may not engage the latching rod in the base completely.

These infant seats were sold with a base as the Primo Viaggio infant seat or (in the U.S.) bundled with a stroller and sold as Pliko Travel System or Primo Viaggio Travel System.

Contact the company via www.perego.com or call:

- in the U.S., 877/737-3468
- in Canada, 800/661-5050

Safeline Sit'n'Stroll Recall

Safeline Kids Inc. has issued a voluntary recall regarding two issues on Sit 'n' Stroll (model 3240) seats:

- Lack of the correct air bag warning label on certain seats made between June 9, 1997, and Aug. 9, 1997
 - Noncompliance of seats made from November 1996 to June 1999 with 213 test criteria for certification above 22 pounds rear-facing, with failure of seat belt anchor tabs in tests
- Sit 'n' Stroll seats should **no longer** be recommended over 22 pounds rear-facing.

Contact Safeline Kids Inc. at 800/829-1625 for replacement seat pads (with the correct air bag warning label) or labels for the maximum rear-facing weight..

CALENDAR

SafeUSA Conference, Dec. 3–5, Atlanta, Ga. Contact: The Centers for Disease Control and Prevention, www.cdc.gov/safeusa

Internat'l. Child Passenger Safety Technical Conference, April 20–24, 2002, Sacramento, Calif. Contact: ICIP, 800/344-7580 www.cipsafe.org

National SAFE KIDS Week, May 4–11, 2002. The focus will be on brain injuries and helmet use in sports-related activities.

Lifesavers, June 9–11, 2002 Lake Buena Vista, Fla. Contact: 703/922-7944 www.lifesaversconference.org