



TECH

UPDATE

THE NEWSLETTER OF THE NATIONAL STANDARDIZED CHILD PASSENGER SAFETY TRAINING PROGRAM

SUMMER 2006

CERTIFICATION NEWS

Classes Worldwide

In 2005, 7,802 new technicians were certified. Of these, 9 percent had been certified previously and completed the new renewal course. There were 629 certification courses held worldwide, a 2 percent increase over 2004, including classes in Germany, Israel, and the British Virgin Islands. 158 renewal courses were held between August and December, including one in Israel.

The total number of instructors, as of June 2006, was 1,306. Technicians totaled 26,491. As of March 28, the recertification rate was 45 percent. Updated statistics are

continued on page 2

INSIDE THIS ISSUE

Curriculum Update _____	2
NHTSA Grant Funding for CPS _____	2
Model CPS Law _____	2
Landmark Legislation _____	2
CPS Board Leadership _____	3
Boosters in Side Impacts _____	4
Traumatic Stress After Crashes _____	4
Technical Updates _____	5
Infant CR Use Only with Bases _____	
Washing Harness Straps _____	
CPS Resources in Health Care and EMS Settings _____	6

TECHNICAL INFORMATION

Protecting 4- to 8-Year-Olds

NHTSA issued a progress report last November on the state of occupant protection for children aged 4 to 8. The report offers a good summary of the issue and data, pointing out improvements made, identifying continuing problem areas, and recognizing the need for continued efforts. It cites the in-depth research by Partners for CPS, showing that the risk of injury is reduced by 59 percent for children using boosters—instead of safety belts—at least through age 7.

Appropriate restraint use (harness-type restraints and boosters) remains much lower among children aged 4 to 8 than among younger children. In addition, in 2004, 27 percent of children in this age range rode completely unrestrained while 14 percent were observed in the front seat. As a result, “older child passengers are at unacceptably high risk,” according to the report.

Restraint use

The 2002 National Occupant Protection Usage Survey (NOPUS), showed significant progress in the use of restraints of any type. Restraint use in 2002 rose to 83 percent for ages 4 to 7, up from 63 percent in 1999. However, use of any restraint unexpectedly declined to only 73 percent in 2003–04. NHTSA’s goal is to reach 85 percent usage. (Current usage for toddlers is 93 percent.)

The rate of **appropriate** restraint use remains very low: between 10 and 20 percent nationwide. There is difficulty in accurately observing how many children ride in backless booster seats.

Over a 5-year period (1999-2003), the percentage of children who died in crashes while unrestrained dropped from 63 to 49 percent.

Fatality and injury reduction

Fatalities to children 4- to 8-year-old totaled 331 in 2003 (334 in 2004), a 4 percent rise from 2002. This was a considerable drop, though, from 1999, when fatalities totaled 499.

The goal of reducing the rate of incapacitating injuries by 13 percent has been met and exceeded. The number of incapacitating injuries is estimated to have declined to 4,930 per 100,000 child occupants in 2003 from 6,540 in 1999.

No demonstrable improvement was found in reducing the rate of moderate to severe injuries. The rate in 1999 was 1,509 per 100,000.

continued on page 2

available on the CPS Certification web site: <http://www.safekids.org/certification/about/statistics.html>.

Curriculum Revision Update

Lorrie Walker, Curriculum Leader,
National CPS Board

The curriculum revision process is on schedule, with the CPS Board Curriculum Committee now expecting a roll-out in the spring of 2007. The revision is a complete one, with a focus on making sure that the students are able to “Learn, Practice, Explain” all the key concepts.

The draft is not simply a rewrite of the existing curriculum. It is very different in format with more and shorter chapters and shorter hands-on activities spread throughout the course. It was developed with input received from active technicians and instructors who submitted ideas to the curriculum committee. In many cases, similar ideas were combined. Everyone who sent in suggestions, photos, or teaching tools will be recognized in the revision.

Students will learn to use their workbooks (and LATCH manuals) for exercises and “open book” review throughout the course. Some assignments require workbook “surfing” to complete them. The workbook will have an index and a glossary. Knowing how and where to find information in the book will be a key element. Students will be encouraged to make use of the workbook for curbside reference once they are technicians and working outside the classroom.

Recently, the first draft was sent to a curriculum development company for review and evaluation. Specialists are determining appropriate testing measures necessary to meet core competencies. They will also determine the literacy level.

Once that draft has been reworked, based on the curriculum specialist comments, the peer review process will take place. This process will allow volunteer CPS Technicians and Instructors, to have an opportunity to give input on a selected

continued on page 3

Protecting 4- to 8-Year-Olds, cont.

Future efforts

NHTSA also reported that private partners continue their efforts to raise awareness. The agency committed itself to continuing program, research, and regulatory efforts to address injuries for ages 4 to 7 and 8 to 15.

Reference

Improving the Safety of Older-Child Passengers: A Progress Report on Reducing Deaths and Injuries Among 4- to 8-Year-Old Child Passengers (November 2005), at: <http://www.nhtsa.dot.gov/people/injury/childps/BoosterSeatProgress/images/BSProgressReport.pdf>

(from SRN, March/April 2006)

NHTSA Grant Funding Encourages States to Upgrade CPS Laws

The Safe Accountable Flexible Efficient Transportation Equity Act—A Legacy for Users (SAFETEA-LU) signed into law August 10, 2005, authorizes NHTSA programs. It includes incentive grants for states that have or adopt child restraint laws that cover children through at least age 7. The grants will help states implement these laws.

The Child Safety and Child Booster Seat Incentive Grants program provides a total of \$25 million over four years. Up to half the money can be used for purchase and distribution of child restraints (CRs) to families with incomes up to 185 percent of the federal poverty level. The rest is intended to support enforcement efforts, training of CPS technicians, police and EMS providers, educators and parents, and public education.

The age of coverage (through age 7) is related to the fact that FMVSS 213 now covers restraints up for children weighing up to 65 pounds. The weight of an average 7-year-old is 50 pounds (the range being 40 to 70 pounds). At age 8, the average weight is 55 pounds, (the range being 45 to 82 pounds). NHTSA has posted a model child occupant protection law on its web site to aid in the upgrading process (see below).

Reference:

Federal Register, Vol 71, No. 20, January 31, 2006, pp. 5110–5112

(from SRN, March/April 2006)

New Model CPS Law for All Children

NCUTLO (the National Committee on Uniform Traffic Laws and Ordinances) has developed a model state child occupant protection law. Find it on the NHTSA web site: http://www.nhtsa.dot.gov/people/injury/childps/ChildRestraint_Model.pdf or at <http://www.ncutlo.org>

Landmark Laws Lead to CPS Gains

Two Congressional mandates have significantly changed child passenger protection today. The Transportation Recall, Accountability and Documentation (TREAD) Act (enacted in 2000) and Anton’s Law (2002) have influenced the direction of CPS resources and efforts. Products, regulations, technical knowledge, and consumer resources have all been improved.

Landmark Laws, continued

TREAD Act progress

Child restraint (CR) labeling, installation diagrams, and warnings on seats have been improved.

The Child Restraint Safety Ratings program was instituted. It focuses on ease-of-use. Product ratings have been published in the last three years.

The mandated Booster Seat Education Program has been implemented.

Legislation in 37 states and the District of Columbia has been enhanced to cover at least a portion of the children in the 4- to 8-year-old age range.

Changes due to the TREAD and Anton's Law

To meet provisions in both laws, NHTSA has improved the standards for child restraints by updating FMVSS 213. The most important changes are expansion to include devices for children weighing up to 65 pounds and inclusion of more advanced crash dummies.

Anton's Law developments

NHTSA has completed its evaluation of the Hybrid III 10-year-old dummy, and taken steps toward incorporating it into FMVSS 213 requirements.

Lap and shoulder belts are being mandated in center rear seating positions due to a revision of FMVSS 208 (occupant restraints). This applies to vehicles weighing less than 10,000 pounds, and must be phased-in to all vehicles by September 1, 2007 (Model Year 2008).

References

TREAD Act (enacted November 1, 2000):

http://www.nhtsa.dot.gov/nhtsa/Cfc_title49/publ414.106.pdf

Anton's Law:(enacted December 4, 2002):

http://www.nhtsa.dot.gov/nhtsa/Cfc_title49/318.107.pdf

Federal Motor Vehicle Safety Standards:

http://www.access.gpo.gov/nara/cfr/waisidx_05/49cfr571_05.html

Child Safety Seat Ease-of-Use Ratings:

<http://www.nhtsa.dot.gov/CPS/CSSRating/Index.cfm>

Booster Seat Study (2002):

<http://www-nrd.nhtsa.dot.gov/departments/nrd-11/childsafety/toc.htm>

Initial Plan: *A National Strategy—Improving Booster Seat Use for 4- to 8-year-old Children* (October 2002):

http://www.nhtsa.dot.gov/CPS/booster_seat/National_Strategy/index.htm

Progress Report: *Improving the Safety of Older-Child Passengers* (November 2005):

<http://www.nhtsa.dot.gov/people/injury/childps/BoosterSeatProgress/images/BSProgressReport.pdf>

(from SRN, January/February 2006)

Curriculum Revision, cont.

chapter. The Board Curriculum Team leader will determine which chapter is assigned to each volunteer. The timeframe for this process should be late summer or fall. We hope that between 75-100 volunteers will participate. For every concept or slide added, the volunteer will have to state which slides they would remove. The course can only get shorter, not longer!

CPS Technicians and Instructors can keep up with the process by visiting the CPS Board web site, www.cpsboard.org. When the time comes for the peer-review process, there will be a call for volunteer reviewers. To be sure to receive notification, join the e-mail update service available at the web site.

Following revision based on those comments, pilot testing will be done. Then NHTSA staff will do a final review for approval before release next spring. A Spanish version will follow.

CPS Board Leadership

At the January meeting of the National CPS Board in Washington DC, Pamella Holt was elected to a two-year term as Chairperson. Michele Mount was elected Vice Chair. The National CPS Board is a volunteer group with a mission to maintain the quality and integrity of the NSCPS Training Program by channeling insight to NHTSA and the Certifying Body.

Pamella, a CPS Instructor since 2002, is a registered nurse and the Trauma Prevention Education Coordinator at St. John's Hospital in Springfield, MO. Active with Missouri's legislature to improve passenger restraint laws, she serves lead roles in local, state, and regional injury prevention programs. She helped hospitals nationwide implement CPS programs and improve hospital provision of CPS education and services.

As Chairperson, Pamella looks to improve the training process and

continued on page 4

CPS Board, continued

technicians' community services, noting that "ideally, CPS technicians should be educators. With proper education, parents can be their own installer. We as technicians should teach the parent, rather than provide an installation service for them."

Michele is Public Affairs Manager for AAA New Jersey Automobile Club. A CPS Instructor, Michele helped found New Jersey's Child Passenger Safety Coalition. She works on local, regional and national CPS initiatives. As Vice Chair, she wants to achieve greater geographical, ethnic and gender diversity, and empower parents and caregivers to install their own seats with confidence.

Pamella and Michele share a goal of seeing every child in America properly restrained – seated, safe, and secure.

Deborah Trombley was appointed Secretariat by the National Safety Council in Itasca, IL, where she is Highway Traffic Safety Program Manager. She leads Board communications with the CPS community.

- New to the Board in 2006 are:
- Kristen Allen, NHTSA Regional CPS Representative from the Mid-Atlantic Region
 - Sharon Bilbrey, Arkansas Children's Hospital, Little Rock (At-Large Representative)
 - Emilie Crown, Montgomery County Fire and Rescue Service, Rockville, MD (CPS Advocate)
 - Yvonne Holguin-Duran, University Health System and San Antonio Safe Kids Coalition, Texas (Diversity)
 - Paul Rizzo, Schaumburg Police Department, Illinois (National Law Enforcement)

Every summer, the board accepts applications for its open positions. Consider applying if you would like to help shape the future of the certification program and the curriculum.

Visit <http://www.cpsboard.org> for more about current members and application process information.

RESEARCH

High-Back Booster Performance in Side Impacts

A significantly lower risk of injury (70 percent lower) has been found for 4- to 8-year-old children using high-back belt-positioning boosters compared to those restrained only by a seat belt. A study by Partners for Child Passenger Safety (PCPS) highlights some key aspects of side impacts, booster design, and restraint effectiveness. The study looked at 889 restrained children in side-impact crashes, ages 4 to 8 years and weighing 30 to 80 pounds. Only a slightly lower risk was found for backless boosters compared to safety belts, but the number of children in backless boosters was very small.

Overall, 78 percent of restrained children in the sample were using safety belts and 22 percent were in boosters. Most (84 percent) of those boosters were high-back models. All vehicles were 1990 models or newer, so they had rear outboard shoulder belts.

Seat belt syndrome-type injuries to the abdominal organs and lower spine did not occur in children using boosters. This is similar to findings related to booster seat use in frontal crashes. Belted children sustained injuries to the full range of body areas. Among children adjacent to the point of impact, contact with a protruding armrest on the door has been shown to cause injury. Near-side children in boosters are seated higher than those in seat belts, so the armrest would contact the stronger pelvic area of the body or the side of the booster.

Backless boosters did not provide the same reduction in head injuries shown by the high-back models. Studies of adult vehicle seats have demonstrated that, in lateral crashes, a vehicle seat with side-wings (similar to a booster) can contain a far-side adult dummy so it would not be thrown sideward out of the shoulder belt. (Ed. note: The high-back booster models in use in this study [1999–2004 crashes] likely included many older models with very shallow side-wings.)

Reference

Effectiveness of high back and backless belt-positioning booster seats in side impact crashes, Arbogast, Kallan, Durbin. Partners for Child Passenger Safety, Children's Hospital of Philadelphia and State Farm Insurance, 49th Annual Proceedings, Association for the Advancement of Automotive Medicine, 2005.
(from SRN, Nov/Dec 05)

Traumatic Stress After Crashes

Researchers at The Children's Hospital of Philadelphia recommend that all children involved in crashes be monitored for traumatic stress symptoms. Reviewing crashes involving child passengers reported to State Farm Insurance Companies®, the researchers found 2 percent of children and 5 percent of their parents experienced multiple traumatic stress symptoms that disrupted their lives. These include frequent or upsetting thoughts or memories about the crash; avoidance of reminders of the crash, like refusing to get into a car; jumpiness or constantly feeling in danger; and emotional detachment. Symptoms were felt regardless of injury, though children injured seriously enough to receive medical care after the crash, as well as their parents, were four times more likely to have serious symptoms.

continued on page 5

“The majority of these children, and their parents, are not diagnosed properly and do not receive the psychological care they need to recover and get back to normal activity,” says Flaura Winston, M.D., Ph.D., co-director of the study on which these conclusions are based.

The researchers recommend that clinicians screen for symptoms of acute stress in all children who have been in a crash, and in their parents, regardless of whether the child suffered injuries. Most children will recover with time and support, but in some cases symptoms will persist and impede daily functioning. If symptoms persist for a few weeks and are interfering with school or play, it is important to speak to a doctor or counselor.

Resources:

Fact sheets for parents and screening tools for physicians are available at <http://www.traumalink.chop.edu>.

Reference:

Acute Traumatic Stress Symptoms in Child Occupants and Their Parent Drivers After Crash Involvement, Flaura K. Winston; Chiara Baxt; Nancy L. Kassam-Adams; Michael R. Elliott; Michael J. Kallan, *Arch Pediatr Adolesc Med.* 2005;159:1074-1079.

(from SRN, January/February 06)

TECHNICAL UPDATES

Q. Which infant restraints can only be installed using their bases?

A. The new rear-facing Embrace 5 (Evenflo) and the I-400 (Compass) can only be installed with their bases. In the past, the Primo Viaggio (Peg Perego) and the Pioneered Infant Restraint also had this limitation. Peg Perego’s newest version allows use both with and without the base. The Pioneered (air bag-compatible) seat relied on special energy-absorbing features of its base for its crashworthiness, but is no longer made.

An Evenflo spokesperson stated the change in the Embrace was made to reduce the possibility of misuse due to installation difficulties using the shell alone. Elimination of the belt path was seen as a natural evolution of the infant-only restraint from the original rear-facing type with no base. The president of Compass also cited reducing mis-installation and studies showing that 90 percent of infant CR owners always used the base. Evenflo, Compass, and other makers offer additional bases for additional caregivers who often transport infants in their restraints.

This limitation could lead to inadvertent misuse. Purchasers should be made aware of this limitation and the availability of additional bases when purchasing the product. If the base were to be unavailable—in the family’s second car or a baby-sitters vehicle—for example, then the seat could not be installed at all.

(from SRN, November/December 2005)

Q. Why can’t harness straps be washed?

A. CR manufacturers often warn against laundering the harness straps because of several concerns, despite the fact that wiping them with a damp cloth may not be enough to remove a nasty odor or stain.

According to Mark Sedlack, a veteran of child restraint development, formerly with Century Products, “soaking nylon or polyester straps in plain water will NOT reduce [the] tensile strength or elongation properties” essential for proper strap function in a crash. The problem is the addition of cleaning agents, many of which CAN compromise those critical properties. If a

continued on page 6

RECERTIFICATION

Start recertification process early

Technicians and Instructors can begin the recertification process up to four months before their due date. In fact, completing the seat check activities and (for instructors) the teaching hours can be done much farther in advance.

There is no grace period, so do not wait to be notified by the Safe Kids Worldwide certification program. Guidance for completing recertification is available at <http://www.safekids.org/certification/>.

Installation videos available as teaching tools

The Children’s Hospital of Philadelphia TraumaLink is making available to educators/instructors a set of installation videos in response to requests from educators. The parent-oriented child safety seat installation videos, by the Partners for Child Passenger Safety (PCPS) program, were developed for the TraumaLink web site. The CD-ROM is intended for use by educators; it was not designed to be distributed directly to parents.

PCPS is offering one copy free; additional copies can be purchased at \$2.00 each. The CD-ROM that contains both the English and Spanish versions of the videos is formatted for both PCs and MACs.

The order form for the Partners for Child Passenger Safety CD-ROM is on the TraumaLink website: <http://www.chop.edu/traumalink>, which also contains a plethora of technical and consumer information. On the left side of the page, go to Education/Advocacy Resources, then PCPS Educational Materials; the information is at the top of the page. The direct link is: <http://www.chop.edu/consumer/jsp/division/generic.jsp?id=71421>

TECHNICAL, continued

cleanser were added to the water to conquer a persistent odor or a sticky stain, the harness could be weakened.

In addition, soaking in plain water can remove required (non-toxic) fire-retardant chemicals. As no process currently exists to restore these chemicals, **all soaking must be discouraged.**

Given that the integrity of current webbing materials of the harness is a vital part of the CR, and that there is no way to control laundering variables, manufacturers recommend only wiping the straps with a water-dampened cloth or sponge to ensure child safety.

If this is insufficient, or if the straps have already been washed using a cleaning product, at least one manufacturer, Graco, recommends calling customer service for a replacement strap.

(from SRN, November/December 2005)

CPS Resources for Technicians in Health Care and EMS Settings

Professional interest groups are growing within child passenger safety. The increasing institutionalization of CPS into a range of professional sectors means that trained individuals in those sectors increasingly seek research findings, specific models for CPS practice, and mentors. E-mail list-serves are offering these CPSTs and others the support of virtual communities for discussion and problem-solving.

A list-serve specific to CPSTs in health care settings grew out of needs within the state of Nebraska. The list-serve is moderated by Ann King, CPS instructor, Tri-Cities SAFE KIDS Coalition coordinator and RN/CPN at St. Francis Medical Center at Grand Island, NE. Contact King via <http://>

health.groups.yahoo.com/group/cpsforhealthcare or (safekids@sfmncgi.org)

Emergency Medical Services (EMS) is the newest technical community addressing both ground and air transport. It grew out of the response to a CPS presentation at an EMS conference by Sedley Tomlinson, a CPS Technician and EMS training and safety coordinator at Arkansas Children's Hospital. Contact Tomlinson via <http://health.groups.yahoo.com/group/CPS4EMS> or kingmedic@sbcglobal.net.

(from SRN July/August 2005 and January/February 2006)

TECH UPDATE

TECH UPDATE is produced by NHTSA and published and distributed quarterly by National SAFE KIDS Campaign.

Technical articles are reprinted with permission from copyrighted material originally published by Safe Ride News Publications, Shoreline, WA, in *SAFE RIDE NEWS (SRN)*.

Nonprofit
U.S. Postage Paid
Prince Frederick, MD
Permit No. 100

Safe Kids Worldwide
1301 Pennsylvania Ave., N.W.
Suite 1000
Washington, DC 20004