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# Laws Prove to be Effective in Protecting Child Passengers New Research Shows That Booster Seat and Primary Enforcement Seat Belt Laws Increase Age-appropriate Restraint Use Among Children

PHILADELPHIA, March 5 — A study released today by The Children's Hospital of Philadelphia and State Farm® found that children aged 4 to 8 years are far more likely to be restrained in age-appropriate restraints, such as car seats and booster seats, if their state law requires booster seat use for their age group. A different study from the collaboration between Children's Hospital and State Farm also found that young teens, aged 13 to 15, are more likely to use seat belts if their state has primary enforcement of the seat belt law.

"These studies confirm that mandating age-appropriate restraint is a very effective way to address the leading cause of death and disability to children in these age ranges," states Flaura K. Winston, M.D., Ph.D., Scientific Director of the Center for Injury Research and Prevention at The Children's Hospital of Philadelphia. "Many people rely on state laws to tell them how to best protect occupants."

## **Booster Seat Laws Increase Restraint Use**

According to a study published in the March issue of *Archives of Pediatric and Adolescent Medicine*, children aged 4 through 7 in states with booster seat laws were 39 percent more likely to be appropriately restrained in a booster seat or child safety seat than children in states without such laws. Within those groups, the 6- and 7-year-olds in states with booster seat laws were twice as likely to be in child restraints as children of the same age in states without those laws. Four- and 5-year-olds were 23 percent more likely to be appropriately restrained if they lived in a state with booster seat laws.

"These results quantify the strong independent effect of booster seat laws on increases in appropriate restraint use by children aged 4 to 8," states Dr. Winston. "Booster seats are quickly becoming the accepted norm among families as parents learn the importance and purpose of booster seats through the promotion of these laws."

Dr. Winston's team was uniquely positioned to look at the effect of laws because they began collecting data on children in crashes before the first booster law was passed in the state of Washington in 2000. Currently, each state has a unique child restraint law, and not all include requirements for booster seat use by older children. The study of children

aged 4 to 8 included data from the Partners for Child Passenger Safety (PCPS) study on 6,102 children in 5,198 vehicles in 16 states and Washington, D.C. between December 1, 1998 and December 31, 2004 who were in crashes reported to State Farm.

During the study period, between 1999 and 2004, PCPS surveillance recorded large increases in child restraint use in motor vehicles, but the degree of increase varied among the states. Child restraint use among 4- and 5-year-olds increased from 22 percent to 75 percent, while increasing from 3 percent to 23 percent among six- and seven-year-olds.

Previous research from the PCPS study demonstrated that the use of booster seats decreases the risk of injury by 59 percent as compared to seat belts used alone for children ages 4 through age 7. In addition, child restraint systems including booster seats reduce the risk of death to children ages 2 to 6 years by 28 percent as compared to seat belts alone.

# The Positive Effect of Primary Belt Laws on Teens

When it comes to teen passengers buckling up, children ages 13 to 15 in a secondary enforcement state are twice as likely to be unrestrained than children in a primary state. This finding was reported this month in the study conducted by The Children's Hospital of Philadelphia and State Farm that is published in *Accident Analysis and Prevention*.

Primary enforcement laws allow a citation to be issued whenever a law enforcement officer observes an unbelted occupant. Secondary enforcement safety belt laws require the officer to stop a violator for another traffic infraction before writing a ticket.

Primary enforcement belt laws have an effect on belt use for pre-driving teens that is independent of the effects of driver belt use. However, age and restraint use of the driver were associated with the restraint use of 13- to 15-year-olds, suggesting that these teens may model the driver's behavior.

"These results provide further evidence to state and federal policymakers for the need to upgrade laws, even in states with relatively high baseline restraint use rates," states Dennis Durbin, M.D. M.S.C.E., the study's lead author and a pediatric emergency physician at The Children's Hospital of Philadelphia. "Primary belt laws can establish regular belt use patterns among this age group that may carry over to when they become new drivers– the highest risk period they will ever face as occupants of motor vehicles."

CHOP and State Farm collected data from 16 states and Washington D.C., which have a mix of primary and secondary belt laws. Four of the states transitioned from secondary to primary law status over the course of the study period (December 1, 1998 – December 31, 2004). Researchers conducted in-depth analyses of 5,372 children aged 13 to15 years old.

A special *CPS Issue Report* on the effect of laws on child occupants is available at <u>www.chop.edu/carseat</u> under "In the News", along with videos and information for parents looking for tips on how to protect their children in motor vehicles.

#### About The Children's Hospital of Philadelphia

The Children's Hospital of Philadelphia was founded in 1855 as the nation's first pediatric hospital. Through its long-standing commitment to providing exceptional patient care, training new generations of pediatric healthcare professionals and pioneering major research initiatives, Children's Hospital has fostered many discoveries that have benefited children worldwide. Its pediatric research program is among the largest in the country, ranking third in National Institutes of Health funding. In addition, its unique family-centered care and public service programs have brought the 430-bed hospital recognition as a leading advocate for children and adolescents. For more information, visit <a href="http://www.chop.edu">http://www.chop.edu</a>.

#### **About State Farm**

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#### About Partners for Child Passenger Safety (PCPS)

Partners for Child Passenger Safety (PCPS) is a research initiative of The Children's Hospital of Philadelphia and State Farm® and is the world's largest study of children in crashes. As of Dec. 31, 2005, more than 455,000 State Farm customers, transporting 669,000 children, had participated in the study. The study includes 29,675 in-depth interviews and more than 800 crash investigations. PCPS is also conducting research to develop, test and disseminate interventions to improve safe driving among teen drivers.

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