

Injury Research in Action

Child Booster Seat Research Saves Lives

Public Health Issue

Motor vehicle crashes are the leading cause of death for children ages 5–14. In 2005, 842 children who were 14 and younger were killed and 178,000 children were injured in 2007 as occupants during motor vehicle crashes. The total lifetime cost of child and adolescent injury in the year 2000 was \$34.6 billion, with over \$5 billion of that amount due to motor vehicle injuries among 5–14-year-olds.

Injuries of the head, neck, and spine, in addition to abdominal and internal organ damage, are all tragedies that can occur when children ages 4–8 are not in booster seats or are wearing only adult seatbelts as a safety device. Children in this age group are often too large to fit into a child restraint seat and too small to use a regular seatbelt. Children who are restrained by adult seatbelts too early are four times more likely to be injured than children in child passenger safety seats or booster seats. Booster seats provide the added height or “boost” that children need so that the adult-sized seatbelts are positioned properly across their smaller bodies.

Led by Dr. Beth Ebel, researchers at the Harborview Injury Prevention Research Center (HIPRC) in Seattle have increased awareness of the importance of seating children ages 4–8 in booster seats. Dr. Ebel and HIPRC faculty are helping people recognize that booster seats prevent severe injuries and even death.



“Booster seats are inexpensive and easy to use,” says Dr. Ebel. “Our campaign let parents know that children between 4 and 8 need a booster seat so that the car’s seat belt can fully protect them in a crash.”

– Beth Ebel, MD, MSc, MPH
HIPRC Director & Lead Research Investigator

Successful Outcomes

Dr. Ebel and her colleagues gathered a diverse group of community members in Seattle to form a coalition to develop a multi-faceted booster seat campaign. The goals of the campaign were to increase parent’s awareness of the need for booster seats, reduce their motivational and financial barriers to purchasing a seat, and reinforce booster seat use through

(Successful Outcomes, cont’d)

public health messages delivered from multiple sources. HIPRC researchers conducted focus groups before the campaign to measure parents’ beliefs and behaviors toward booster seat usage. This information guided development of relevant, consistent, and culturally appropriate messages. The campaign included community partnerships, radio messages, television ads, flyers distributed at clinics, childcare centers and schools, and discount coupons for booster seats.



The booster seat campaign was successful at increasing booster seat use in target communities. From January 2000 to March 2001, HIPRC researchers conducted a study to evaluate the booster seat campaign. The rates of observed booster seat use in the intervention communities doubled from 13% to 26%, a significant rise in booster seat usage over 15 months, as compared to the usage rate of control communities.

As a next step, the researchers worked with state partners to design innovative ways to reach Latino families with the message. Dr. Ebel and the HIPRC continue their partnership with state organizations to plan, develop, implement, and evaluate a campaign to increase child passenger safety practices among Latino families—supported by a grant from the Centers for Disease Control and Prevention’s National Center for Injury Prevention and Control. Materials developed in this campaign are widely available throughout Washington State and on the campaign websites (www.boosterseat.org and www.abrochatuvida.org).

Effect on Public Policy

Dr. Beth Ebel and the HIPRC faculty worked with community partners and parent advocates to pass the first booster seat law in the country in Washington State. This law was named after Anton Skeen, a young boy who was killed when he was ejected from his seat belt. HIPRC contributed to Washington’s strengthened booster seat law passed in 2007, which now covers children under 8 years of age who are under 4’9” in height. As of 2007, booster seat laws have been adopted in 38 states and the District of Columbia.



Using booster seats will help parents protect the ones they love.

