

MINUTES OF THE HOUSE TRANSPORTATION.

The meeting was called to order by Chairperson Gary Hazylett at 1:40 p.m. on March 6, 2001 in Room 519-S of the Capitol.

All members were present except:

Committee staff present:

Bruce Kinzie, Revisor  
Hank Avila, Research  
Ellie Luthye, Committee Secretary

Conferees appearing before the committee:

Representative Cindy Hermes  
Rosalie Thornburgh, Chief of Bureau of Traffic Safety, Kansas Department of Transportation  
Mark Goodloe, Kansas Highway Patrol  
James Keating, Safe Kids Coalition  
Donna O'Malley, Children's Mercy Hospital and Clinics  
Jane Ross, Kansas State Council of Emergency Nurses Association  
Lt. John Eichkorn, Kansas Highway Patrol  
Dr. Erik Mitchell, Shawnee County Coroner

Others attending:

See attached list

**SB 172 - traffic regulation relating to child passenger seat requirements and seat belts**

Chairman Hayzlett opened hearings on **SB 172** and called on Representative Cindy Hermes as the first conferee. She asked the committee to think of their children and grandchildren as they debated this bill and to remember that seat belts can save their lives. She said many people had worked hard for the bill and she asked for the committee to support it.

Rosalie Thornburg, Chief of the Bureau of Traffic Safety, Kansas Department of Transportation, spoke in support of the bill. She said saving lives and preventing serious injury is the purpose for asking for enhanced protection for children. The goal of a strengthened child restraint law is to reduce the number of deaths and disabling injuries resulting from motor vehicle crashes and the objective is increased use of occupant protection. She told the committee statistics prove that buckling up is the single most effective action that can be taken to reduce the risk of death and serious injury and this proposed legislation asks for two things that will assist in doing that: increased protection for children and stiffer fines. (Attachment 1)

Major Mark Goodloe, Kansas Highway Patrol, said according to KDOT's latest study, 81% of children four and under are protected in a child safety seat while traveling on Kansas's roadways, however, when the children outgrow their convertible seats around the age of four years, many parents stop using child safety seats and move kids directly into safety belts. He stated this could seriously harm small children in a crash since safety belts are designed for adults. He concluded **SB 172** makes it illegal for children to outnumber securing locations in a vehicle and increases the fine for violations of the child passenger safety law to \$25 plus court costs. (Attachment 2)

James Keating, Safe Kids Coalition, spoke in support of **SB 172**. He showed a short video showing the correct way of putting children in the proper safety device rather than the use of an adult sized seat belt. He then called on Lt. John Eickhorn, Kansas Highway Patrol, who demonstrated several types of safety seats - infant seat for children under 20 pounds, the convertible seat for children 40 pounds or 4 years of age (and this is where the Kansas law stops), the booster seat for children over 40 pounds but under 80 pounds, or 8 years of age, and over 80 pounds a child can be put in a regular seat belt. Mr. Keating concluded it has been proven that strong child passenger safety laws are effective at increasing restraint use and saving children's lives. Passage of **SB 172** will provide parents in our state with better guidance on how to protect their children and will send a clear message to motorists that the state considers child safety seat, booster seat and seat belt use necessary for the safety of all children. (Attachment 3)

MINUTES OF THE HOUSE TRANSPORTATION COMMITTEE, Room 519-S of the Capitol at 1:40 p.m. on March 6, 2001.

Donna O'Malley, Children's Mercy Hospital and Clinics, told the committee that seat belts and car seats save lives and in her years in the emergency room she has worked many trauma activations. She stated anything that can be done to prevent these tragedies from happening is a worthwhile effort. She also presented handouts as part of her testimony offering eight reasons she feels **SB 172** should be passed and also an article written by a group of doctors from the Children's Hospital in Philadelphia regarding statistics on the use of child safety seats. (Attachment 4)

The next proponent to present testimony was Jane Ross, President of the Kansas State Council of Emergency Nurses Association. She said parents are lulled into a false sense of security thinking their children are safe since they are in a seat belt - no matter the size or type. However, practicing emergency room nurses know this is not true and they see devastating spinal cord, neck and abdominal injuries from seat belts that are improperly placed due to the size of the child being restrained. (Attachment 5)

Dr. Erik Mitchell, Shawnee County District Coroner, also spoke in support of **SB 172**. He said as a coroner he sees the results of the accidents when proper seat restraints are not used and it is a tremendous experience that you don't forget easily. It was his opinion that passage of **SB 172** would greatly reduce these tragedies and hopefully make his job less necessary.

Written testimony was presented by Carolyn Ward, Executive Director, State Child Death Review Board, Office of the Attorney General (Attachment 6), Sally Finney, Executive Director, Kansas Public Health Association, Inc. (Attachment 7) and Natalie Haag, Director of Governmental Affairs, Office of the Governor (Attachment 8).

Following discussion and questions from the committee Chairman Hayzlett closed hearings on **SB 172**.

Chairman Hayzlett told the committee the sub-committee report on **HB 2145** would be postponed until the meeting on Wednesday, March 7<sup>th</sup>.

The minutes of the meetings on February 19<sup>th</sup> and 20<sup>th</sup> were presented for corrections or approval. Representative Dillmore made a motion to accept the minutes as presented, seconded by Representative Vickery and the motion carried.

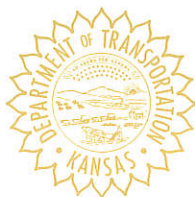
The next meeting of the House Transportation Committee will be held on Wednesday, March 7<sup>th</sup> in Room 519-S.



# HOUSE TRANSPORTATION COMMITTEE GUEST LIST

DATE: March 6, 2001

NAME	REPRESENTING
Phyllis Larimore	Alachua Residents
Donna O'Malley	OP Resident • Children Mercy Hosp.
Bill Watts	KDOT
Rosalie Thornburgh	KDOT
Jane Ross	KENA
Randy Mitchell	FNACK
Chris Bush	KDOT
Sherry Porter RN	Graduate Nursing Student WSU
Sandra Ott R.N.	Graduate Nursing Student WSU
Judy Shaw	KMCA
Carolyn Ward	AG's Office
Saya Scott	AGO
Sandy Braden	Alliance of Auto Manuf.
Cathy McVotton	Ks Trial Lawyers Assn.
Annie Lietze	Ks Safe Kids
LARRY BLUTHAST	KSDE
Ed O'Malley	OP Chamber of Commerce
Mark Simon	



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**KANSAS DEPARTMENT OF TRANSPORTATION  
OFFICE OF THE SECRETARY OF TRANSPORTATION**

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Secretary of Transportation

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Bill Graves  
Governor

**TESTIMONY BEFORE  
HOUSE TRANSPORTATION COMMITTEE**

**REGARDING SENATE BILL 172  
STRENGTHENING OF CHILD PASSENGER SAFETY LAWS**

**March 6, 2001**

Mr. Chairman and Committee Members:

I am Rosalie Thornburgh, Chief of the Bureau of Traffic Safety, Kansas Department of Transportation. On behalf of the Department of Transportation I am here today to testify in support of strengthening the child passenger safety laws.

The Department of Transportation is convinced that one of the most important contributions to transportation safety would be the proper use of occupant protection by every passenger in every motor vehicle every time. No one will argue with the studies that repeatedly conclude that increased use of safety belts and child restraint systems in motor vehicles is one of the most effective countermeasures for reducing the risk of injuries and fatalities in motor vehicle crashes.

Currently, Kansas law specifies that all children under the age of four must be in a federally approved child restraint system. For children four years and older the law then specifies that the child must be appropriately protected with a seat belt. We now know that children should ride in a child restraint system beyond age three for appropriate protection. Because of a child's size, a lap and shoulder belt alone does not provide an adequate fit and can result in young children being ejected out of the belt system or being injured with an inappropriate fit. Booster seats provide an appropriate transition from infant seat to lap/shoulder belts.

Providing an appropriate and safe transition from infant seats to lap/shoulder belts is important to insure that the child will continue to use safety belts throughout his/her life. KDOT's annual observational seat belt/child seat survey measures usage in three age

House Transportation Committee  
March 6, 2001  
Attachment 1



categories: birth to under four years (using a child seat), ages four up to 14 years, and over 14 years old. The 2000 survey showed 81 percent of children under the age of four years were in child seats. The usage rate in the next age group, four years up to 14 years old, dropped to 55 percent. The usage rate for the rest of the population, 14 years and older, is only slightly higher, at 61 percent, still below that of infants and toddlers. Keeping children in appropriate fitting child restraint systems will promote and encourage a life-long habit of safety belt use.

From 1990 through 1998, 35 children (ages four through six) incurred fatal injuries in motor vehicle crashes on Kansas roadways. Of those, only nine were restrained. Three fatalities was reported as restraint unknown. Washington State and California have recently passed booster seat laws. Washington State's law was adopted during the aftermath of the death of four year old Anton Skeen. Anton, weighing 45 pounds, was buckled into a lap/shoulder belt system and was ejected from a vehicle during a crash. The mother advocated for the change and the bill was subsequently dubbed *Anton's Law*.

This bill contains a provision to strengthen the penalties for violation of the current safety belt use law by increasing the fee to \$25.00. KDOT supports this provision and believes an increased fine may serve as an additional deterrent for noncompliance with the law.

In summary, saving lives and preventing serious injury is our purpose for asking for enhanced protection for children. The goal of a strengthened child restraint law is to reduce the number of deaths and disabling injuries resulting from motor vehicle crashes. The objective is increased use of occupant protection. Statistics prove beyond a shadow of a doubt that buckling up is the single most effective action we can take to reduce our risk of death and serious injury. In addition, the laws of physics and simple human logic tell us we are safer if every passenger remains in their seat rather than be catapulted within or out of the vehicle. Statistics also tell us that the most effective means to get to our objective of increased seat belt usage is a stronger law. This proposed legislation asks for two things that will assist in doing that: increased protection for children and stiffer fines. This is the means to our goal of reducing needless tragedy on Kansas' roadways.

# KANSAS HIGHWAY PATROL

*Service—Courtesy—Protection*

Bill Graves  
Governor



Col. Donald W. Brownlee  
Superintendent

## Summary of Testimony on SB 172 House Transportation Committee

**Presented by  
Major Mark Goodloe  
March 6, 2001**

Good morning Mr. Chairman and members of the committee. My name is Major Mark Goodloe, and I appear before you on behalf of Colonel Don Brownlee and the Kansas Highway Patrol to comment on Senate Bill 172.

Regrettably, Kansas' current laws regarding adult and child occupant protection have been identified as having provisions that do not necessarily provide the highest level of safety for passengers travelling Kansas' roadways. By amending both of these laws, SB 172 proposes to increase the level of protection for occupants of passenger cars.

Under current law regulating child passenger safety, children under the age of four years must be transported in an approved child safety seat and children four years but under fourteen years must be buckled by a safety belt, anywhere in the vehicle. Children fourteen years and older are not required to wear a safety belt in the back seat.

Encouragingly enough, more and more adults in Kansas are using child safety seats to protect their little ones. According to KDOT's latest observational study, 81% of children are protected in a child safety seat while travelling on Kansas' roadways. But when children outgrow their convertible seats around the age of four years and 40 pounds, many parents stop using child safety seats and move kids directly into safety belts. This can seriously harm small children in a crash since safety belts are designed for adults. Lap/shoulder belts are made to ride over the bony areas of the shoulders and hips. With small children, the lap belt tends to ride up into their abdomens and the shoulder belt cuts across their necks.

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House Transportation Committee  
March 6, 2001  
Attachment 2



The solution is for adults to use booster seats until their children reach the age of seven years or 80 pounds, when the safety belt fits them correctly. SB 172 expands coverage contained in current law to include the use of a booster seat to ensure the safety of children in this category.

When talking with the public about Kansas' current child passenger safety law, police officers find many people who are surprised to learn of the law's exception relating to overloaded vehicles. This exception specifically points out that there is no violation of law when the number of children outnumbers securing locations available for use by children. SB 172 strikes this language making it illegal for adults to place children in this dangerous situation.

In taking a step toward strengthening Kansas' current adult occupant protection law, SB 172 proposes a fine increase to \$25 plus court costs. Experience shows that safety belt usage goes up when occupant protection laws are actively enforced. With this in mind, an adequate fine is an excellent measure of effectiveness. A 1995 study conducted by the National Highway Transportation Safety Administration found that for each \$1 in fine, states tend to gain about .08% higher belt usage rate. That is, a state with a \$20 fine would tend to have a usage rate that is 8 percent higher than a state with a \$10 fine. Currently, a fine for violation of Kansas' safety belt law is \$10, which includes court costs. By raising the current fine, Kansas could see an increase in usage from this change alone.

There is no doubt the Patrol has countless hours of hands on experience with the benefits of buckling up and using child safety seats. Troopers have seen the unnecessary injuries and deaths associated with the failure of buckling up. Many of these gruesome experiences will live forever in the minds of these officers, especially those involving children. Just ask one of them to describe these experiences. Years later, details down to smell and touch are many times as clear as they were that tragic day of occurrence.

While the current safety belt and child passenger safety laws in Kansas have helped to reduce our fatality rates, there is more that should be done to reduce injuries and deaths. Because many Kansans look toward their occupant protection laws for guidance in assuring the highest level of safety for themselves and their loved ones, it is important the State provide statutes that will do just that. The Kansas Highway Patrol strongly urges this Committee to give SB 172 a favorable report. Let's all take credit for the life saving measures this bill has to offer.

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March 6, 2001

## Testimony Presented to the House Transportation Committee

### Senate Bill 172

I am pleased to provide testimony today on behalf of the Kansas SAFE KIDS Coalition which strongly supports Senate Bill 172. This bill provides Kansas parents with better guidance on how to best protect their children by closing gaps in our current Child Passenger Safety law.

Motor vehicle crashes are still the leading cause of death for Kansas children ages one through 17. It would appear that Kansas may indeed be failing its children in the area of child passenger safety - particularly after they reach the age of 4. While observational usage surveys done last year indicate that 81% of Kansas children ages 0-4 were in child seats, the same survey found that only 55% of children ages 4-14 were protected by a booster seat or seat belt. One reason for this drop may be that seat belts, which were designed for adults, do not fit a 4 year old child. At many of our events, parents who are following Kansas law are surprised to learn that a belt-positioning booster seat can not only make their child safer, but make the safety belt fit better and feel better to the child. Clearly parents in Kansas cannot depend on our state's current child passenger safety law to correctly guide them on the best way to protect their children.

A belt-positioning booster seat raises the child up so that the lap and shoulder belts are properly positioned around the child's body, with the shoulder strap snugly between the neck and arm and the lap belt flat across the upper legs. Current recommendations are that a booster seat be used for children over 40 pounds and up to 80 pounds.

Fortunately, booster seats that meet federal safety standards are readily available in our state for \$20 - \$40. Seats are also available in Kansas through 95 loaner programs, Ford's Boost America Program, KDOT voucher program, and the Kansas SAFE KIDS Coalition. Families with multiple children will be able to use the booster seat for more than one child as they grow since NHTSA guidelines state that a booster seat can safely be used for 5-7 years.

We recognize that education for parents and care givers will be necessary following passage of the bill. Fortunately, through KDOT initiatives such as the Safety Belt Education Office program and the Boosters to Belts program, and through the ongoing public education and information program of the Kansas SAFE KIDS Coalition and many of our member organizations, there will be plenty of opportunity to provide appropriate information to parents and families.

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Jan Stegelman

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*Medical Advisor*  
*American Academy of*  
*Pediatrics, Kansas*  
*Chapter*

Lt. John Eichkorn  
*Kansas Highway Patrol*

Sally Finney  
*Kansas Public Health*  
*Association*

Cindy Hermes  
*State Capitol Area*  
*Firefighters Association*

Ami Hyten  
*Kansas Trial Lawyers*  
*Association*

James Keating  
*Kansas State*  
*Association of Fire Chiefs*

Roseanne Rutkowski  
*Kansas State Nurses*  
*Association*



House Transportation Committee  
March 6, 2001  
Attachment 3





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*Association*

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Testimony Senate Bill 172  
House Transportation Committee  
March 6, 2001

We know that strong child passenger safety laws have been proven effective at increasing restraint use and saving children's lives. Passage of SB 172 will provide parents in our state with better guidance on how to protect their children and will send a clear message to motorists that the state considers child safety seat, booster seat and seat belt use necessary for the safety of all of our children. The end result will be fewer Kansas children injured and killed in motor vehicle crashes.

Testimony Presented by:

Jim Keating Chair, Executive Committee  
Kansas SAFE KIDS Coalition  
(785) 437-6287

attachments:

Kansas SAFE KIDS Coalition Member Organizations  
Fact Sheet about Senate Bill 172  
Booster Seat Brochure

The Kansas SAFE KIDS Coalition, Inc. Is a nonprofit group of 67 statewide organizations and businesses that have joined to protect Kansas children from unintentional injury-- the leading killer of Kansas kids. Local Coalitions and chapters are located in Barber, Clay, Ford, Johnson, Marion, Osage, Pottawatomie, and Shawnee Counties, as well as Hutchinson, Lawrence, Leavenworth, Manhattan, Norton, Salina, and Wichita. Kansas SAFE KIDS is part of the National SAFE KIDS Campaign.





## Kansas SAFE KIDS Coalition Member Organization

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*Kansas State  
Association of Fire Chiefs*

Roseanne Rutkowski  
*Kansas State Nurses  
Association*

AAA Kansas  
American Academy of Pediatrics  
American Red Cross - Wichita  
Attorney General of Kansas  
Barber County SAFE KIDS Chapter  
Board of Emergency Medical Services  
Brain Injury Association of Kansas  
Children's Mercy Hospital  
Clay County SAFE KIDS Chapter  
Dillon Stores  
Fire Education Association of Kansas  
Fire Marshal's Association of Kansas  
Ford County SAFE KIDS Chapter  
Hutchinson SAFE KIDS Chapter  
Johnson County SAFE KIDS Coalition  
Kansas Academy of Family Practice  
Physicians  
Kansas Association of Counties  
Kansas Association of Local Health Depts.  
Kansas Association of Osteopathic Medicine  
Kansas Association of School Boards  
Kansas Chapter International Association  
Arson Investigators  
Kansas Chiropractic Association  
Kansas Congress of Parents and Teachers  
Kansas Cooperative Extension 4-H  
Kansas Dental Association  
Kansas Department of Health & Environment  
Kansas Department of Human Resources  
Kansas Department of Transportation  
Kansas District of Kiwanis International  
Kansas EMS Association  
Kansas Emergency Nurses Association  
Kansas Farm Bureau  
Kansas Healthy Start Home Visitors  
Kansas Highway Patrol  
Kansas Hospital Association  
Kansas Insurance Department  
Kansas MADD  
Kansas Medical Society  
Kansas National Employers for Traffic Safety  
Kansas Public Health Association  
Kansas Recreation & Park Assoc.  
Kansas Rehabilitation Hospital  
Kansas SADD  
Kansas Safety Belt Education Office  
Kansas School of Nurses Organization  
Kansas State Association of Fire Chiefs  
Kansas State Board of Education  
Kansas State Fire Marshal  
Kansas State Nurses Association  
Kansas Trial Layers Association  
Kaw Valley Girl Scout Council  
KNEA  
KUMC Burn Center  
KUMC Child Development Unit  
Lawrence SAFE KIDS Coalition  
Leavenworth SAFE KIDS Chapter  
Manhattan SAFE KIDS Chapter  
Marion County SAFE KIDS Chapter  
NHTSA Regional Office  
Norton SAFE KIDS Chapter  
Office of the Governor  
Osage County SAFE KIDS  
Pottawatomie County SAFE KIDS  
Safety and Health Council of Western  
Missouri & Kansas  
Salina SAFE KIDS Chapter  
Shawnee Co. SAFE KIDS Coalition  
State Farm Insurance  
Stormont-Vail Regional Medical Cntr.  
United School Administrators of Kansas  
Via Christi - St. Francis Burn Center  
Western Resources  
Wichita Area SAFE KIDS Coalition





Testimony for Senate Bill 1,2

By Donna O'Malley  
6605 West 66<sup>th</sup> Street  
Overland Park KS 66202  
(913) 262-9442

Good morning. My name is Donna O'Malley, and I'm from Overland Park. I am a pediatric emergency room nurse by profession. In addition, last year I took the job of car seat program coordinator for the Children's Mercy Hospital and Clinics. My job includes educating hospital staff, parents and caregivers on how best to transport their children in motor vehicles.

I am here today on behalf of the children of Kansas and Children's Mercy Hospital and Clinics. I acknowledge that there are differing views on whether or not we need more seat belt laws. But it is my strong belief that motor vehicle safety can no longer be thought of as simply a personal rights issue or a simple safety issue. Motor vehicle safety is a public health problem that demands a solution.

Motor vehicle crashes are a leading cause of death for children. Infants and children secured in appropriate child passenger safety seats fare far better in crashes than their unrestrained counterparts. Child safety seats, when properly used and installed, reduce the risk of death by 71% for infants and by 54% for toddlers.

Riding unrestrained is the greatest risk factor for death and serious injury to children involved in motor vehicle accidents. The National Highway Transportation and Safety Administration finds that restraint use for children from birth to age one is 97 percent. From ages one to four, 91 per cent are properly restrained by car seats. But for children ages five to fifteen, restraint use plummets over 20 points to 68.7 per cent

It is reported that over 47 per cent of fatally injured children ages four to seven are unrestrained. One NHTSA study revealed that only a little over 6 per cent of children in this age group were properly restrained. It is my opinion that we must strengthen our seat belt and child passenger safety laws to mirror what we know to be the “best practice” available today to offer our children the best protection in the event of a crash.

Seat belts and car seats save lives. In my years in the emergency room I have worked many trauma activations. I know that anything we can do to prevent these tragedies from happening is a worthwhile effort. When a child dies, many hearts break. A child’s death goes against the natural order of how the world should be. Kids shouldn’t die, especially when we have effective and proven ways of preventing so many of these deaths.

I talk to parents every day who are confused about child passenger safety. I believe our current law contributes to this confusion. When the law states that children four years and younger need to be in appropriate child passenger restraints, many parents and caregivers take this to mean that over the age of four; kids are okay restrained in adult seat belt systems. This belief could not be further from the truth.

What we see so often in the emergency room is this age group, four to eight years, is either totally unrestrained, or improperly restrained in an adult seat belt. Children ages four to eight are at an increased risk of death or serious injury because of this gap in our current law. As adults, it is our responsibility to protect our children.

Last week I attended a luncheon at which the First Lady of Kansas, Linda Graves, was the speaker. She referred to Kansas kids as our “best crop”. I share the First Lady’s sentiment and applaud her efforts to make life better for our children. Things grow well here in Kansas, and Kansas is a good place to raise kids, and a good place for families. We need to do everything we can to protect our most



valuable crop, our kids, so they can grow up to be the artists, doctors, scientists, legislators and lawmakers of the future.

I believe there are three reasons to support Senate Bill 172.

First, I know that strengthening our seat belt and child passenger safety laws will result in lives saved from day one.

Secondly, I strongly believe that support and passage of this bill will clarify for parents and caregivers the best way to protect their children in a motor vehicle.

And third, I believe that passage of this legislation is simply the right thing to do for our children, and now is the right time to do it.

On behalf of the children of Kansas and Children's Mercy Hospital, I ask you to support this legislation. By doing so, I know that many lives will be saved, and many families will be spared the tragedy of losing a child.

Thank you for your time this morning. If there is anything I can do for this committee or any other group to foster support of this bill, I am at your service.

Testimony for Senate Bill 172  
By Donna O'Malley  
6605 West 66<sup>th</sup> Street  
Overland Park, Kansas 66202

- Motor vehicle safety is more than a personal rights issue. It is a public health problem that demands a solution.
- Motor vehicle crashes are a leading cause of death for children.
- Child passenger safety restraints reduce death and injury when used properly.
- Children ages four to eight are at an increased risk of death and injury due to gaps in our current law.
- Belt positioning booster seats offer protection to this age group.
- Support and passage of Senate Bill 172 would result in lives saved.
- Support and passage of Senate Bill 172 would clarify the safest way to transport children.
- Support and passage of Senate Bill 172 is the right thing to do to protect the lives of Kansas children.



# PEDIATRICS

Jun 2000  
VOL. 105  
NO. 6

## The Danger of Premature Graduation to Seat Belts for Young Children

Flaura K. Winston, MD, PhD\*; Dennis R. Durbin, MD, MSCE\*‡; Michael J. Kallan, MS‡; and  
Elisa K. Moll, BA\*

**ABSTRACT.** *Objective.* To determine the risk of significant injury associated with premature graduation of young (2- to 5-year-old) children to seat belts from child restraint systems (CRS).

*Background.* Advocates recommend use of child safety seats for children younger than age 4 and booster seats for children age 4 and older. Despite these recommendations, many children are prematurely taken out of these child restraints and placed in seat belts. Although data exist to support the use of child restraints over nonrestraint, no real-world data exist to evaluate the risk of significant injury associated with premature use of seat belts.

*Design/Methods.* Partners for Child Passenger Safety includes a child-focused crash surveillance system based on a representative sample of children ages 0 to 15 years in crashes involving 1990 and newer vehicles reported to State Farm Insurance Companies in 15 states and the District of Columbia. Driver reports of crash circumstances and parent reports of child occupant injury were collected via telephone interview using validated surveys. Results were weighted based on sampling frequencies to represent the entire population.

*Results.* Between December 1, 1998, and November 30, 1999, 2077 children aged 2 to 5 years were included and were weighted to represent 13 853 children. Among these young children, 98% were restrained, but nearly 40% of these children were restrained in seat belts.

Compared with children in CRS, children in seat belts were more likely to suffer a significant injury (relative risk: 3.5; 95% confidence interval: [2.4, 5.2]). Children in seat belts were at particular risk of significant head injuries (relative risk: 4.2; 95% confidence interval: [2.6, 6.7]) when compared with children in CRS.

*Conclusions.* Premature graduation of young children from CRS to seat belts puts them at greatly increased risk of injury in crashes. A major benefit of CRS is a reduction in head injuries, potentially attributable to a reduction in the amount of head excursion in a crash. *Pediatrics* 2000;105:1179-1183; *motor vehicle safety, child safety seat, seat belt, booster seat.*

ABBREVIATIONS. MVC, motor vehicle crash; CRS, child restraint systems; CSS, child safety seats; PCPS, Partners for Child Passenger Safety; CHOP/Penn, The Children's Hospital of Philadelphia/University of Pennsylvania; RAC, Response Analysis Corporation; AIS, Abbreviated Injury Scale; RR, relative risk; CI, 95% confidence interval; NASS, National Automotive Sampling System.

### BACKGROUND

Motor vehicle crashes (MVCs) are the leading cause of death and acquired disability for children older than age 1.<sup>1</sup> In 1998 alone, 697 children younger than age 6 years died as occupants in MVCs and nearly 100 000 were injured.<sup>2</sup> Advocates recommend the use of appropriate child restraint systems (CRS) to protect children in crashes. These recommendations include infant and convertible child safety seats (CSS) for children younger than age 4 and booster seats for children from age 4 until they fit properly in the vehicle seat belt (usually age 9).<sup>3</sup>

Despite these recommendations, many preschoolers are prematurely taken out of these child restraints and placed in seat belts.<sup>4</sup> Although data exist to support the use of child restraints over nonrestraint,<sup>5</sup> no real-world data exist to evaluate the risk of clinically significant injury associated with premature use of seat belts. The purpose of this study was to quantify the nature and risk of significant injury associated with premature graduation to seat belts in preschool-aged children.

### METHODS

Data were collected as part of Partners for Child Passenger Safety (PCPS), a child-focused crash surveillance system based on a representative sample of children ages 0 to 15 years in crashes

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Involving 1990 and newer vehicles reported to State Farm Insurance Companies in 15 states and the District of Columbia. Driver reports of crash circumstances and parent reports of child occupant injury were collected via telephone interview using validated survey instruments. Results (from December 1, 1998 through November 30, 1999) were weighted based on sampling frequencies to represent the entire eligible population.

### Case Identification by State Farm Automobile Insurance Company

State Farm Automobile Insurance Company is the largest insurer of automobiles in the United States, with >38 million vehicles under coverage, representing approximately 20% of the automobile insurance market in the country. The electronic insurance claims database was used as the mechanism to identify subjects for inclusion in the PCPS surveillance system. This database is updated continuously at the time of the initial report of a crash to a State Farm claim representative. Claims qualifying for inclusion were those reporting a crash including at least 1 child occupant  $\leq 15$  years of age riding in a model year 1990 or newer insured vehicle. Only children riding as occupants (nondrivers) in the insured vehicle were eligible for inclusion. Qualifying claims were also limited to crashes that occurred in 15 states (Delaware, Maryland, North Carolina, New Jersey, New York, Pennsylvania, Virginia, West Virginia, Illinois, Indiana, Michigan, Ohio, Arizona, California, and Nevada) and the District of Columbia, representing 3 large regions of the United States. These regions account for >50% of State Farm's claims volume, and were chosen to provide a mixture of tort and no fault states because this was presumed to influence the reporting of crashes to an insurance company. In addition, these states provided a representative sample of most vehicle types and driving conditions in the United States. Crashes resulting in bodily injury, as well as those resulting only in property damage, were eligible for inclusion. Excluded were claims occurring outside the designated geographic areas, or those involving rental or other fleet vehicles. Child occupants of non-State Farm insured vehicles (for crashes involving 2 or more vehicles) were also excluded from the surveillance system. Members of the Strategic Resources Department at State Farm Insurance Companies maintain summary information about all eligible claims to calculate the capture rate (the percentage of eligible claims for which claim representatives approached the policyholders for consent) and consent rate (among those claims captured, the percentage of policyholders who consented to be part of the study). This summary information includes vehicle model year, ages of the child occupants, and treatment status of the child (no treatment, ambulatory medical treatment including emergency department visits, and hospital admission).

Approximately 7750 claim representatives from 365 field offices throughout the 3 study regions were trained to obtain a minimum amount of standardized data on all qualifying claims and to obtain consent from the insured for inclusion in the surveillance system. On a daily basis, data from consenting claims were transferred electronically from all field offices to State Farm corporate headquarters in Bloomington, Illinois. After several quality assurance checks at State Farm headquarters, the data were then forwarded via e-mail to researchers at The Children's Hospital of Philadelphia/University of Pennsylvania (CHOP/Penn) on a daily basis, 6 days per week (no transmissions on Sundays).

### Subject Selection Via Electronic Sampling

After passing through several additional quality assurance procedures, the data were then subjected to an automated sampling algorithm to select claims for in-depth telephone interviews to obtain information about the crash and all child occupants. Each claim was classified based on the medical treatment received by child occupants after the crash. Crashes were then sampled with known probabilities according to the highest treatment status of its child occupants. Specifically, crashes involving children who were treated in emergency departments, physician's offices, or admitted to the hospital were oversampled to ensure the capture of all injured children while maintaining a representative sample of all crashes.

### Telephone Interview

Contact information from sampled claims was then transferred electronically on a daily basis, on the same day that the data were

originally received from the Farm, to Response Analysis Corporation (RAC), a telephone survey firm based in Princeton, New Jersey. Within 24 hours of receipt of the data, RAC initiated telephone contact with the insured. The firm conducted a 25-minute survey with the driver of the vehicle and parent(s) of the involved children. After completion of the interview, data were transferred electronically back to CHOP/Penn on a daily basis for inclusion in the surveillance system.

### Survey Design and Validation

A survey instrument was developed for this project. Among other information, the instrument was designed to ascertain the seating position (eg, front row, right passenger position) restraint use (restrained versus unrestrained), and restraint type (child safety seat, booster seat, lap only seat belt, lap/shoulder seat belt) for each child occupant. Questions regarding the description of restraint type and use were validated on a separate population by comparing parent responses to direct observation of the restraint system by trained child passenger safety technicians.<sup>6</sup> Further, restraint questions were validated by on-site professional investigations of crashes involving 101 children on whom interviews were conducted and demonstrated a high degree of agreement (89%) between parent report and the investigator's report of restraint use (unpublished data).

Questions regarding injuries to children were designed to provide responses that were classified by body region and severity based on the Abbreviated Injury Scale (AIS) system.<sup>7</sup> The AIS is the most widely used severity scoring system based on anatomic injury data. The AIS rates the severity of an injury from 1 (eg, contusions and minor lacerations) to 6 (uniformly fatal) for each of 7 body regions. Significant injuries were defined as AIS 2 or more, and included concussion and more severe brain injuries, internal organ injuries, and most fractures. These questions were previously validated to differentiate AIS 2 or more from minor injuries.<sup>8</sup>

Reliance on electronic transfers of data and automated quality assurance and sampling procedures has resulted in a system capable of collecting and analyzing interview data and initiating a crash investigation within 72 hours of the crash. Data encryption techniques were used to ensure maximum security of the data during all transfers among entities. The institutional review boards of both The Children's Hospital of Philadelphia and the University of Pennsylvania School of Medicine approved the study protocol. In addition, the project is in compliance with all relevant state insurance laws in the involved regions.

### Analyses

The study sample was weighted, based on the sampling proportions corresponding to the treatment status of each claim, to represent the total eligible population of claims consenting for participation in the surveillance system. All analyses were then conducted on the weighted population. Simple descriptive statistics were calculated, including frequencies for categorical variables and mean, standard deviation, median, and range for continuous variables. The  $\chi^2$  or Fisher's exact test, when indicated, were used to examine the association between restraint type and significant injury, both overall, and significant head injury, in particular. Relative risks (RR) with 95% confidence intervals (CI) were calculated.

## RESULTS

Between December 1, 1998, and November 30, 1999, 56 053 crash claims meeting inclusion criteria were reported to State Farm Insurance Companies. From among all eligible claims, 38 557 claims involving 59 643 child occupants (1.5 children per claim) were transferred to CHOP/Penn for inclusion in the surveillance system and represented a capture rate of 87%. The consent rate among policyholders asked to participate in the project was 81%. Among the consenting claims received by CHOP/Penn, 11 123 (29%) were sampled for a telephone interview. The average time to first contact with the policyholder by the telephone survey firm was 16 hours from receipt



of the data. The consent rate (completion of the telephone survey) was 99%.

Complete interview data were obtained on 8334 children who were then weighted to represent 48 108 child occupants 0 to 15 years of age. Overall restraint usage among all children was high at 95%. However, as noted in Fig 1, compliance with current recommendations<sup>9,10</sup> regarding the proper type of restraint device varied widely with age. In general, the majority of children older than 8 years were in compliance with current recommendations (use of a seat belt). Similarly, the majority of children younger than age 3 were in compliance with current recommendations (use of a child safety seat, rear-facing for infants). However, few children between 4 and 8 years of age were properly restrained for their age, because of their failure to use a booster seat. As noted in Fig 2, seat belt use began at age 2 and was the most common form of restraint by age 4. Booster seat use in our population peaked at age 3 (29% of 3-year-olds) and declined dramatically with each succeeding year so that <1% of children older than age 5 were restrained in booster seats.

To address the aim of risk of seat belts to preschoolers, the weighted sample of children ages 2 to 5 formed the basis of this study. These 13 853 children accounted for 28.7% of all children included in the surveillance system. There were 7036 (51%) boys and 6817 (49%) girls. See Table 1 for representative descriptive data on the crashes included in the study sample. A broad distribution of vehicle model year was represented, as well as a broad distribution of principal impact area and crash severity, as represented by the driveable status of the vehicle. All states in the study regions contributed crashes to the surveillance system with California, Illinois, Michigan, and Pennsylvania contributing approximately half of the cases.

Among 2- to 5-year-old children, restraint usage was 98%. In this age group, seat belt usage overall was 38.5% but varied widely with 5.5% of 2-year-olds, 16.3% of 3-year-olds, 54.8% of 4-year-olds and 81.3% of 5-year-olds in seat belts. Among children in seat belts, 19% were using only the lap belt. Among children restrained in boosters, 50% were using shield boosters and 50% were using belt-positioning boosters. Overall, 1331 young children (9.6%) suffered some type of injury, with 135 children (1% of all children) suffering significant injuries. Significant injuries occurred to all body regions with head injuries the most common (58% of all significant injuries).

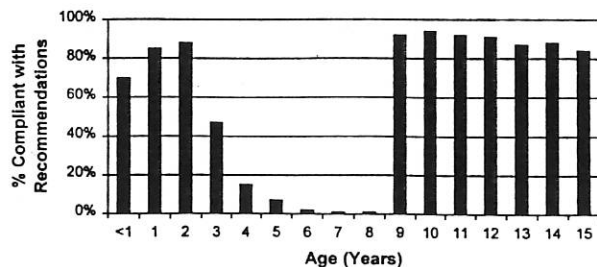
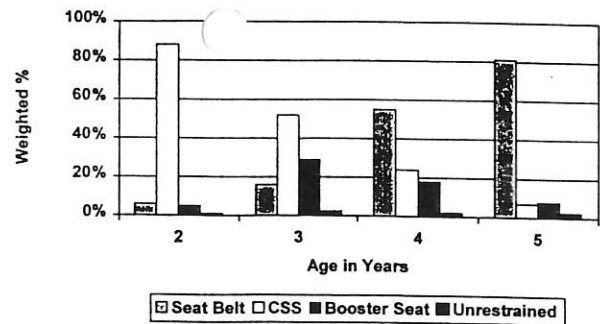


Fig 1. Compliance with current recommended restraint use guidelines ( $n = 48\ 108$ ).



CSS = Child Safety Seat

Fig 2. Variation in restraint type by age in the study sample ( $n = 13\ 853$ ).

TABLE 1. Descriptive Statistics on the Crashes Included in the Study Population

Variable	Number (%)
Total $n = 11\ 973$ Crashes	
Vehicle model year	
Median/range	1995/1990–2000
Crash state	
California	2194 (18.3%)
Illinois	1930 (16.1%)
Michigan	1120 (9.4%)
Pennsylvania	1113 (9.3%)
New York	1034 (8.6%)
Indiana	959 (8.0%)
Ohio	910 (7.6%)
Maryland	706 (5.9%)
New Jersey	516 (4.3%)
Virginia	377 (3.2%)
North Carolina	354 (3.0%)
Arizona	271 (2.3%)
West Virginia	243 (2.0%)
Washington, DC	174 (1.5%)
Delaware	48 (.4%)
Nevada	24 (.2%)
Vehicle nondriveable	3596 (31%)
Crash direction	
Front	6025 (50.5%)
Side	1559 (13.1%)
Rear	3695 (30.9%)
Other/unknown	694 (5.8%)

Young children in seat belts were more likely to suffer a significant injury (RR: 3.5; 95% CI: [2.4, 5.2]) than young children in CRS. Young children in seat belts were at particular risk of significant head injuries (RR: 4.2; 95% CI: [2.6, 6.7]) when compared with children in CRS. Children in CRS suffered significant injuries primarily to the head (51% of significant injuries), with additional injuries to the face (13%), and extremities (16%). Of note, young children in seat belts suffered the only significant abdominal injuries ( $n = 8$ ) in the entire population. These 8 children were all restrained in lap/shoulder belts, however, 3 of the children had placed the shoulder portion of the belt behind their backs.

The risk of significant injury from premature graduation to seat belts was somewhat greater for 2- to 3-year-olds (RR: 4.0; 95% CI: [2.0, 7.9]) than for 4- to 5-year-olds (RR: 2.4; 95% CI: [1.4, 4.3]). The increased risk of injury to children in seat belts was similar when compared separately with children in child

safety seats (RR: 3.4; 95% CI: [2.2, 5.2]) and children booster seats (RR: 4.0; 95% CI: [2.7, 7.9]). There was no difference ( $P = .23$ ) in risk of injury for children restrained in lap only versus lap/shoulder belts.

## DISCUSSION

This study provides the first real-world evidence for an increased risk of injury in preschool-aged (2- to 5-year-old) children attributable to inappropriate restraint in vehicle seat belts rather than CRS. Despite high restraint usage, more than one-third of children in this age range were inappropriately restrained by vehicle seat belts. This inappropriate restraint resulted in a 3.5-fold increased risk of significant injury and a more than fourfold increased risk of significant head injury. These data bolster the recent emphasis on the proper restraint of children to prevent injuries in crashes, in particular the use of booster seats for children 4 years and older.

A vehicle seat belt fits correctly when the lap portion of the belt rides low over the hips and is held in place by mature anterior superior iliac spines.<sup>11</sup> A well-fit shoulder portion of the belt crosses the sternum and shoulder. Correct seat belt fit is not usually achieved until a child is 9 years old, the age at which the child's femur length is long enough for the child to sit against the back of the seat, the anterior superior iliac spines are sufficiently developed to anchor the belt, and the child's sitting height is sufficient for the shoulder belt to fit properly over the shoulder and sternum. By these guidelines, virtually no child younger than the age of 6 is large enough to be properly restrained in a seat belt.<sup>12</sup>

When a child is prematurely graduated to a seat belt from a CSS, the lap portion of the belt rides up over the abdomen and the shoulder portion crosses the neck or face. This places the child at risk for submarining or sliding out of the lap belt during a crash. Rapid, jack-knife bending about a poorly positioned vehicle seat belt increases the risk of intra-abdominal and spinal cord injuries, also known as seat belt syndrome, and brain injury resulting from the impact of the head with the child's knees or the vehicle interior.<sup>9,13,14</sup> The data presented in this study point to the high risk of head injuries in young children restrained by vehicle seat belts, likely attributable to increased head excursion. In addition, although abdominal injuries were not common, they only occurred in children in seat belts not those in CRS. Of note, the risk of injury was similar for children in lap belts and lap/shoulder belts, suggesting that the addition of a poorly fitting shoulder portion of the belt offers no added protection for young children.

In this study, many 2- and 3-year-old children were restrained in booster seats; a younger age than current guidelines recommend.<sup>9,10</sup> Limited sample sizes precluded meaningful analysis of the risk of injury associated with shield versus belt-positioning booster seats. A shield booster has a shield that crosses in front of the child to restrain the child's hips instead of using the vehicle seat belt. A belt-positioning booster, either with or without a high back, raises the child up to improve the fit of both the lap

and shoulder portions of the seat belt. Of note, for children aged 2 and 3 years, the risk of injury associated with booster seat use was similar to the risk of injury for children in CSS. This result may be attributable to a high degree of CSS misuse as reported in previous studies,<sup>15</sup> which may serve to reduce the effectiveness of CSS. This misuse frequently involves loose fit of the child in the CSS harness and loose fit of the CSS in the vehicle.<sup>3</sup> Both of these forms of misuse result in excessive excursion of the child and would result in increased head excursion with the potential for resultant head injury. Reductions in CSS misuse might further improve the effectiveness of CSS in preventing head injuries. Shield boosters are no longer recommended for use because of risk of submarining and ejection<sup>9</sup> and these accounted for half of the booster seats used in this study. Further reductions in injury might be achieved by the specific promotion of belt-positioning boosters rather than shield boosters.

Before PCPS, sources of child crash injury data were inadequate for estimating the exposure of children to specific crash circumstances, particularly children who are uninjured or who receive only minor injuries.<sup>16</sup> Although the Fatality Analysis Reporting System provides data regarding mechanisms of child occupant injury, this data source only includes fatal crashes and cannot provide estimates for child exposure to nonfatal or noninjury crashes. Similarly, trauma center-based investigations can elucidate mechanisms of injury but cannot provide any estimates of exposure because of the nature of trauma system triage in which more seriously injured children are cared for in these centers. The National Automotive Sampling System (NASS), a third data source, has the potential for providing exposure estimates but as described by Newgard and Jolly,<sup>17</sup> is fraught with missing data elements and, as a population-based sampling system, includes relatively few children. PCPS was created to overcome some of the deficiencies in current sources of child occupant injury data by including large numbers of injured and noninjured children in a broadly representative exposure-based surveillance system.

The estimate of overall restraint usage in this study was higher than current national estimates of child restraint usage.<sup>2</sup> This difference was attributable, in part, to the contemporary nature of PCPS results that were based on 1999 data. In a recent study using NASS data from 1988 through 1995, Edwards<sup>18</sup> found that child restraint use was significantly related to driver restraint use; children of restrained drivers were more than twice as likely to be restrained than children of unrestrained drivers. Our results on age-specific child restraint usage are, in fact, strikingly similar to those for restrained drivers in the Edwards study: 97% of preschool-aged children were restrained when the driver was restrained. This suggests that, although estimates of restraint use from PCPS may not be generalizable to children in all crashes, they are likely generalizable to children in crashes with restrained drivers. Currently, national driver restraint use is estimated at 69%, with

California reporting restraint use of 88% in the general population.<sup>5</sup>

Information regarding restraint use and type were obtained via telephone interview with the driver/parent of the child. Previous studies have questioned the validity of self-reported restraint use.<sup>19,20</sup> We have attempted to reduce this potential source of bias in several ways. Rather than simply asking whether or not the child was restrained, questions regarding restraint use in the telephone survey were designed to require the respondent to describe specific characteristics of the restraint system and the way it was used. In addition, responses to multiple questions were analyzed to identify inconsistencies that would suggest incorrect responses. Finally, as noted above, preliminary evaluation of the agreement between parent-reported restraint use and the results of on-site crash investigations suggest that the vast majority of respondents provide valid and accurate assessments of restraint use and type.

PCPS has the potential for limitation because of its reliance on >7000 insurance claim representatives to identify qualifying cases and to obtain initial consent for inclusion in the study. Mechanisms to ensure continuous updating and training of these individuals have been created by State Farm to maintain high rates of capture of qualifying claims. As a result, this system with reports of >1000 crashes involving children per week provides the largest child-focused crash surveillance system in the world. The surveillance system is limited, however, to children occupying model year 1990 and newer vehicles insured in 15 states and the District of Columbia. Results of this study may, therefore, not be generalizable to children occupying older or uninsured vehicles, or to children residing in nonstudy states. Finally, the results of this study are not generalizable to children older than 5 years. As demonstrated in Fig 1, few children above the age of 5 were restrained in booster seats and, as such, the risk of injury associated with the use of seat belts as compared with that associated with booster seat use could not be assessed.

### CONCLUSIONS

Premature graduation of young children from CRS to seat belts puts them at greatly increased risk of significant injury in crashes. A major benefit of CRS is a reduction in head injuries, potentially attributable to a reduction in the amount of head excursion in a crash. Results of this study support public health efforts directed toward ensuring appropriate restraint of children, particularly the use of belt-positioning booster seats by children who have outgrown CSS. To reduce the risk of injury, children should remain in CSS until they are at least 4 years old and weigh 40 pounds (18 kg), at which point children should be placed in belt-positioning booster seats. Children should remain in booster seats until they are the appropriate height and weight for seat belts.

### ACKNOWLEDGMENTS

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# Clinical Auscultation Skills in Pediatric Residents

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**ABSTRACT.** *Objective.* The aim of this study is to determine the level of clinical auscultation skills in pediatric residents at Duke University Medical Center.

*Methods.* Forty-seven residents from pediatrics and joint medicine/pediatrics training programs at Duke University Medical Center were enrolled in this study. They were asked to examine the cardiovascular patient simulator, Harvey, and report their findings. Five common conditions seen in the pediatric population were presented: ventricular septal defect, atrial septal defect, pulmonary valve stenosis, combined aortic valve stenosis and insufficiency, and innocent systolic ejection murmur. The responses were scored by the number of features and diagnoses accurately reported. Five pediatric cardiologists and cardiologists in training were also asked to participate in a manner similar to the trainees.

*Results.* The mean score of features identified for the resident group was  $11.4 \pm 2.6$  of a possible 19. The diagnostic accuracy was 33%. There was no significant difference between residents by year of training or by type of residency program, although there was a trend toward improved performance with more training. The difference in performance between the pediatric cardiology group and the residents group was striking. The condition that was most frequently misdiagnosed was the innocent systolic ejection murmur.

*Conclusions.* The clinical auscultation skills of pediatric residents in this study were suboptimal. There was a trend toward improvement as training progressed, although not statistically significant. These skills are likely to improve further with increased exposure to patients with cardiovascular disease especially in the ambulatory care setting. *Pediatrics* 2000;105:1184-1187; *auscultation, Harvey, murmur.*

ABBREVIATION. PGY, postgraduate year.

Cardiac auscultation has long been considered 1 of the cornerstones of the cardiovascular evaluation. Competence in auscultation is important for pediatricians because cardiac murmurs are very common in children. Up to 50% of children are reported to have innocent murmurs,<sup>1</sup> whereas structural heart defects are present in nearly 1% of births. Pediatricians must be competent at cardiac

auscultation to screen these patients appropriately and cost-effectively, while not overlooking those with serious structural heart defects. Recently, the performance of clinicians in training at cardiac auscultation has come under scrutiny, and the reported results for residency programs in internal medicine have been disappointing.<sup>2,3</sup> The auscultatory performance of residents in pediatric training programs, however, has not been similarly evaluated. The purpose of this study was to assess the auscultatory performance during training of pediatrics and medicine/pediatric residents.

## METHODS

This study was performed at Duke University Medical Center in Durham, North Carolina in the Department of Pediatrics by the Division of Pediatric Cardiology, where there is an approved 3-year fellowship training program in pediatric cardiology. The Medical Center also sponsors approved training programs in medicine and cardiovascular diseases. Forty-seven of the 64 residents in the pediatrics and medicine/pediatrics programs (>90% of onsite residents) were enrolled in this study of clinical auscultation skills on a voluntary basis. There was only 1 refusal. Testing was performed on each resident with the aid of the cardiovascular patient simulator, Harvey.<sup>2</sup> Harvey is an adult-sized mannequin that produces realistic simulations of arterial pulses, blood pressure, jugular venous pulsations, precordial activity, heart sounds, and respiratory sounds, alone or in synchrony.

We limited our assessment to clinical findings of 4 common congenital heart lesions and an innocent murmur. The congenital heart lesions included were pulmonary valve stenosis (with ejection click), ventricular septal defect, atrial septal defect, and combined aortic valve stenosis and insufficiency.

The testing was performed early in the academic year (August 1998) over a 5-week period yielding a cross-sectional survey of the current group of residents. The resident physician was given the opportunity to examine the mannequin for 5 minutes for each situation programmed. Each participant was then asked to complete a data response sheet by characterizing the programmed auscultatory findings. The only history provided was that "this asymptomatic child presented in their clinic for evaluation."

The pediatric cardiology group consisted of 5 pediatric cardiologists (2 attending and 3 cardiologists in training). They were tested in the same manner to confirm that the physical findings presented by the mannequin were appropriate. Three residents were excluded from the study. Two 4th-year medicine/pediatric residents were excluded because there were no pediatric residents at a similar level of training with whom to compare them. The other resident excluded was visiting from a British residency program.

## Scoring

One point was scored for each key feature correctly identified for a maximum score of 19 points (Table 1).

## Statistics

Results are reported as a mean score  $\pm$  1 standard deviation. Analysis of variance was used to test the significance of the

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# KENA

Kansas Emergency Nurses Association

Good afternoon members of the House Transportation Committee. My name is Jane Ross. I am the current president of the Kansas State Council of the Emergency Nurses Association as well as a practicing emergency nurse. I am here today to speak in favor of SB 172 regarding child passenger safety legislation.

During my almost 20 years of practice in various emergency settings I have seen many times when children have been injured due to not being properly restrained in the appropriate sized seat. In addition, and just as importantly, children who were restrained in an adult restraint system or inappropriate sized child safety seat were injured just as severely as children who were not restrained at all. Parents are lulled into a false sense of security thinking their children are safe since they are in a seat belt - no matter the size or type. We, as practicing emergency nurses know this is not true. We see devastating spinal cord, neck and abdominal injuries from seat belts that are improperly placed due to the size of the child being restrained. Seat belts must ride over the hips in order to absorb the force of the impact. In children they ride up and the abdomen is the area that receives the major force. A child's abdomen is like a balloon and can explode with the force of an impact.

It is our belief based on years of practice that children are safer in the seat that is the proper size for them just as adults are safer in adult restraints. Children over the age of 4 need restraints just as much as those under 4 and as much as adults do and they need to be the appropriate size for them - whatever that might be. We support the passage of this bill to ensure the safety of all passengers in vehicles on the highways of Kansas.

Thank you very much for your time and attention to this matter affecting the future of our children.

President Jane Ross, P. O. Box 8733, Wichita, KS 67208, 316.687-1616

House Transportation Committee  
March 6, 2001  
Attachment 5

# STATE CHILD DEATH REVIEW BOARD



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State Capitol  
Topeka, KS 66612-1504

Dear Chairman Hayzlett and Members of the House Transportation Committee:

The State Child Death Review Board (SCDRB) strongly supports Senate Bill 172. SCDRB statistics reveal that more Kansas children ages one through 17 die in motor-vehicle crashes than from any other cause of death. Car crashes are the leading cause of unintentional-injury deaths among all children through age 17.

We review these deaths by the hundreds each year, and see the promise of young lives unfulfilled because of inadequate restraint use or no restraint at all. It is difficult to understand how, in this climate of focused educational efforts and increased media attention, confusion and ignorance about child passenger safety still abound. We do know that parents and caregivers look to the law to provide them with guidance on how to best protect their children. As a result, gaps in the law directly equate to gaps in the understanding of basic safety requirements. Parents often don't realize they need to alter the type of safety restraints they use as children grow, unwittingly putting their children at risk.

According to National Highway Transportation Safety Administration and the American Academy of Pediatrics, adult safety belts do not adequately protect small children (about 40 to 80 pounds) from injury in a crash. Car booster seats are the best way to protect them. However, it is estimated that only five percent of booster-age children are properly restrained in car booster seats. Child passenger safety seats and booster seats are readily available in Kansas through Child Safety Seat Loaner Programs located in 95 of the 105 Kansas counties. This enhanced child passenger safety legislation, combined with loaner programs, ongoing education efforts and strong enforcement, will help significantly reduce needless injuries and fatalities of our Kansas children.

Sincerely,

OFFICE OF THE ATTORNEY GENERAL  
CARLA J. STOVALL

A handwritten signature in cursive script that reads "Carolyn Ward".

Carolyn Ward  
Executive Director, SCDRB

House Transportation Committee  
March 6, 2001  
Attachment 6





**KANSAS PUBLIC HEALTH ASSOCIATION, INC.**

*AFFILIATED WITH THE AMERICAN PUBLIC HEALTH ASSOCIATION*

**215 S.E. 8TH AVENUE**

**TOPEKA, KANSAS 66603-3906**

**PHONE: 785-233-3103 FAX: 785-233-3439**

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**WEB SITE: [WWW.KPHA.MYASSOCIATION.COM](http://WWW.KPHA.MYASSOCIATION.COM)**

To: House Committee on Transportation  
From: Sally Finney, M.Ed., Executive Director  
Date: Tuesday, March 6, 2001  
Re: SB 172

I am submitting this testimony on behalf of the members of Kansas Public Health Association to ask your support of Senate Bill 172.

The evidence on the benefits of child safety seats and safety belts is compelling and overwhelming. These devices save lives and prevent injury. The National Injury Prevention and Control Center of the Centers for Disease Control and Prevention cites the following data in support of requiring proper restraints for children:

- When properly installed in passenger cars, child safety seats reduce fatal injury by 71% for infants (younger than one year old), and by 54% for toddlers (between 1 and 4 years of age).
- In 1998, about 57% of motor vehicle occupants 0-15 years old who were killed in fatal crashes were unrestrained.

While KPHA's members are deeply disappointed at the Senate's actions in removing the bill's original provisions making failure to use safety restraints a primary moving violation, the association supports any measure that gives greater protection to our children. The Kansas Public Health Association therefore ask you to support SB 172.

House Transportation Committee  
March 6, 2001  
Attachment 7

STATE OF KANSAS

BILL GRAVES, Governor  
State Capitol, 2nd Floor  
Topeka, Kansas 66612-1590



(785) 296-3232  
1-800-748-4408  
FAX: (785) 296-7973

OFFICE OF THE GOVERNOR

**Before the House Transportation Committee  
March 6, 2001**

**Testimony by Natalie G. Haag  
Chief Legal Counsel  
Director of Governmental Affairs  
Senate Bill 172**

Thank you for the opportunity to testify in support of SB 172. Governor Graves requested SB 172 to address two concerns: (1) protecting our children by modifying child restraint laws; and (2) authorizing primary enforcement of seatbelt laws. Rosalie Thornburgh is here to explain the booster seat provisions. Trista Beadles, Assistant Legal Counsel to the Governor, has worked closely with Kansas Department of Transportation and the child safety advocacy groups. She is available to respond to questions regarding the Governor's intent. SB 172 no longer contains the primary enforcement provisions for adult occupants.

SB 172 addresses serious child safety restraint deficiencies in current law. On behalf of Governor Graves, I request your support of SB 172.

House Transportation Committee  
March 6, 2001  
Attachment 8