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- Hall, W.L. (1994). Report to the NC Child Fatality Task Force: Injury Experience of Children and Adolescents in North Carolina Motor Vehicle Crashes. Chapel Hill, NC: University of North Carolina Highway Safety Research Center.

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**REPORT TO THE NC CHILD FATALITY TASK FORCE:**  
**INJURY EXPERIENCE OF CHILDREN AND ADOLESCENTS IN**  
**NORTH CAROLINA MOTOR VEHICLE CRASHES**

January 19, 1994

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Child Passenger Safety has been a concern in North Carolina since 1979. At that time, the NC Governor's Highway Safety Program (GHSP) began funding activities designed to convince parents to buckle up their children in cars due to the large number of children who were being killed or seriously injured in car crashes. Since that time, educational activities and legislation have had a tremendous impact on child transportation safety in North Carolina. As will be seen, benefits have been much greater for infants and young children than for those in the six to fifteen year group,

Overview of North Carolina Restraint Legislation

Child passenger safety educational efforts were begun in North Carolina in 1979. As a result of these efforts, there was a slow but steady increase in the percentage of children who were reported to be buckled up in crashes. In July 1982, the first Child Passenger Safety Law went into effect in North Carolina. The elements of this law covered:

Ages: Children less than age two.

Drivers: Parents transporting their own children.

Vehicles: • "Family purpose" vehicle  
• Registered in NC  
• Required by federal standards to be equipped with belts.

Penalty: Two-year warning phase after which violators were subject to \$10 fine. Violations incurred court costs.

Exemptions: • Vehicles registered in another state  
• Ambulances and other emergency vehicles  
• When child's "personal needs" were being tended to.  
• When all available belted positions were occupied.

In July 1985, this law was expanded and strengthened. The elements of this expanded law covers:

Ages: Children less than age six.

Drivers: All drivers.

- Vehicles:
- Registered in NC
  - Required by federal standards to be equipped with belts.

Penalty: Violators are subject to fine not to exceed \$25. Violations incur court costs.

- Exemptions:
- Vehicles registered in another state
  - Ambulances and other emergency vehicles
  - When child's "personal needs" were being tended to.
  - When all available belted positions were occupied.

In October 1985, the North Carolina Seat Belt Law also went into effect. The elements of the Seat Belt Law covers:

Ages: Age six and older.

Occupants: Drivers and front-seat passengers.

Vehicles: Required by federal standards to be equipped with belts.

Penalty: Drivers are responsible for themselves and front-seat passengers less than age sixteen. Front-seat passengers age sixteen and older are responsible for themselves (and thus receive the ticket). Violators are subject to a \$25 fine. Violations do not incur court costs.

- Exemptions:
- Medical or physical condition preventing appropriate restraint by a belt or with certified mental phobia against wearing a belt.
  - Rural letter carriers and newspaper carriers while performing duties.
  - Vehicles making frequent stops and not exceeding 20 mph between stops.
  - Vehicles with "farm" or "commercial" plates while being used for agricultural or commercial purposes.
  - Not required by federal standards to be equipped with belts.

In summary, North Carolina has two occupant restraint laws covering the majority of drivers and occupants. In the most simplistic of terms, North Carolina requires that in vehicles required to have seat belts, all children (front or back seat) less than age three must be secured in a child restraint device (CRD) meeting federal standards, all three, four and five year-olds (front or back seat) must be restrained by either a CRD or seat belt, and that all drivers and front-seat occupants, regardless of age, must be buckled. Rear-seat occupants age six and older are not required to wear seat belts.

## Comparison of North Carolina CPS Legislation with Other States

The most current National Highway Traffic Safety Administration (NHTSA) list of child passenger protection laws in all fifty states, Puerto Rico and the District of Columbia has been included as an attachment. As can be seen, there are wide range of ages, weights and/or heights for both the upper limits and circumstances for which restraint is required and for which safety belt are allowed to be substituted for safety seats. Also attached is a chart that presents a listing of upper age limits for restraint use requirements with states grouped according to the ages. Nineteen states have restraint requirement ages less than North Carolina, six other states are the same, and eighteen have upper age limits higher than North Carolina. Of the eighteen with higher limits, the for which restraint is required ranges from seven to eighteen with the most prevalent ages being ten, twelve, and fifteen.

### Gaps in Coverage

While North Carolina has Child Passenger Safety and Seat Belt Laws that are considered to be good, there are significant gaps in coverage. For the Child Passenger Safety Law, the gaps occur primarily as a result of the exemptions. Current exemptions include children riding in vehicles registered in another state, when the child's "personal needs" are being tended to, and when all available belted positions are occupied. These exemptions were included in the original law that went into effect in 1982 when North Carolina was one of the first states to pass such a law. Inclusion of these exemptions helped to assure passage of an initial child passenger safety law but should be removed to extend as much protection to as many children as possible (see attached handout "Child Passenger Protection Laws: Much Remains to be Done" reprinted from the American Academy of Pediatrics *Safe Ride News*, Summer 1992).

The North Carolina Seat Belt Law covers children age six and older as well as adults, but only when riding in the front seat. Motor vehicle occupants above the age of five in North Carolina are not required to be restrained in any manner when riding in the rear seat.

### Restraint Use for North Carolina Children

Safety seat and belt use for children less than age six as well as seat belt use for drivers and front-seat passengers has been well documented in North Carolina through efforts to evaluate effects of the restraint laws (Hall, et al., 1993, Reinfurt, et al, 1990). Less is known about children above the age of six, especially when riding in the rear seat.

Figure 1 shows trends in observed restraint use in North Carolina for children less than six and drivers/front-seat occupants, groups covered by North Carolina's restraint laws. Observations have consistently shown children to have higher use rates than adults until recently in November, 1993. The rate for drivers/front-seat occupants in 1993 reflects the high levels of restraint use achieved

through the NC Governor's Highway Safety Initiative *Click It or Ticket* program.

Table 1 presents more detailed data for children less than age sixteen. Children less than six have been the target of observational surveys for many years. The only wave of observations in which 6-15 year-olds were targeted were in the fall of 1993. Table 1 reflects the fact that as children get older they are much less likely to be buckled up. The youngest children, those less than age two, were observed to be restrained 92 percent of the time. In contrast, 57 percent of the 2-5 year-olds, 46 percent of the 6-10 year-olds, and 50 percent of the 11-15 year-olds were observed to be restrained in September 1993.

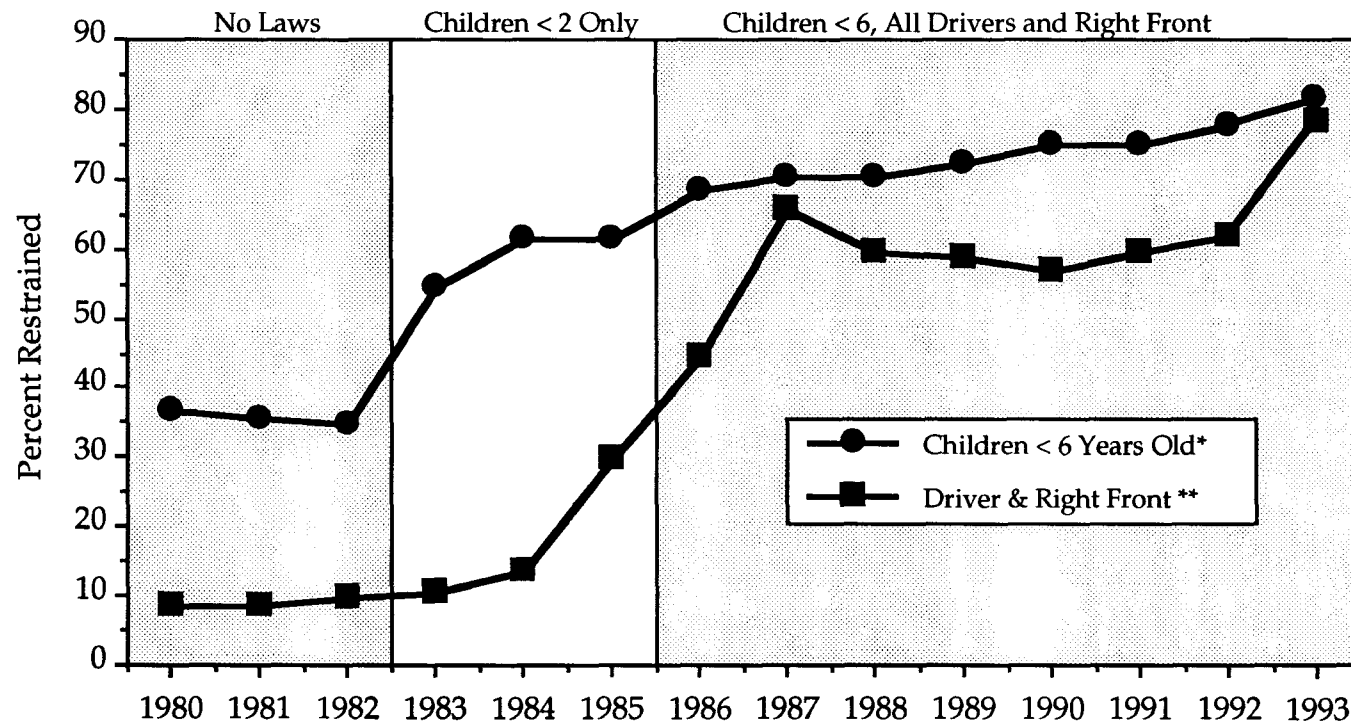
Table 1 also shows the levels of restraint use for children observed in front vs. rear seats. There was essentially no difference for restraint use between the front and rear seats for the 0-1 year-olds. There were large decreases for the rear seat for all other age groups. Even the 2-5 year-olds showed a decrease from a front-seat rate of 69 percent to 48 percent in the rear seat, but this level was much larger than the rear-seat use rates of 33 percent for the 6-10 year-olds and 24 percent for the 11-15 year-olds.

Figure 2 shows the level of police-reported restraint for children less than sixteen contained in the accident files supplied by the NC Department of Transportation, Division of Motor Vehicles. As can be seen, the reported usage rate for children less than two (covered by the initial law) has increased from 28 percent, in the year prior to the July 1, 1982 effective date, to a current rate of 94 percent. The reported usage rate for 2-5 year-olds also increased substantially (from 8% to 91%) since 1982, with the largest increase coming after the expanded law went into effect in 1985. The same trend holds true for the 6-10 (from 4% to 83%) and 11-15 (from 3% to 76%) year-olds as well. These children became covered under the NC Seat Belt Law in October 1985 if riding in the front seat. Reported restraint usage rates for these children increased substantially only after it was legislatively mandated, but still the level of reported belt use lags behind the younger children.

Codes for restraint use contained in the accident files cannot be used as an accurate indicator of actual use rates due to possible biases in these restraint usage rates. In the "typical" accident in North Carolina, the investigating officer arrives at the accident scene some time after the crash. Many times, the investigating officer will have to rely on the statements of the occupants to determine use or non-use of restraints. With the use of restraints for children and front-seat occupants now mandatory, drivers may or may not be truthful in their statements of restraint use for themselves, their children, or other occupants. Observational surveys conducted for North Carolina consistently find restraint use levels well below reported rates from the accident files, a situation that suggests that the restraint use variable from the accident files should not be used for analyses. For this reason, additional analyses of accident data will not differentiate between those reported to be restrained or unrestrained but instead will look at age groups as a whole.

Accident data, both nationally and for North Carolina, indicates that the rear seat tends to be safer than the front seat regardless of restraint status. General child transportation safety information as well as instructions from safety seat manufacturers recommend that children be placed in the rear seat. As Figure 3 shows, a much larger proportion of children 0-10 years old were riding in the rear

Figure 1. Observed Seat Belt And Safety Seat Use For North Carolina: 1980 - 1993



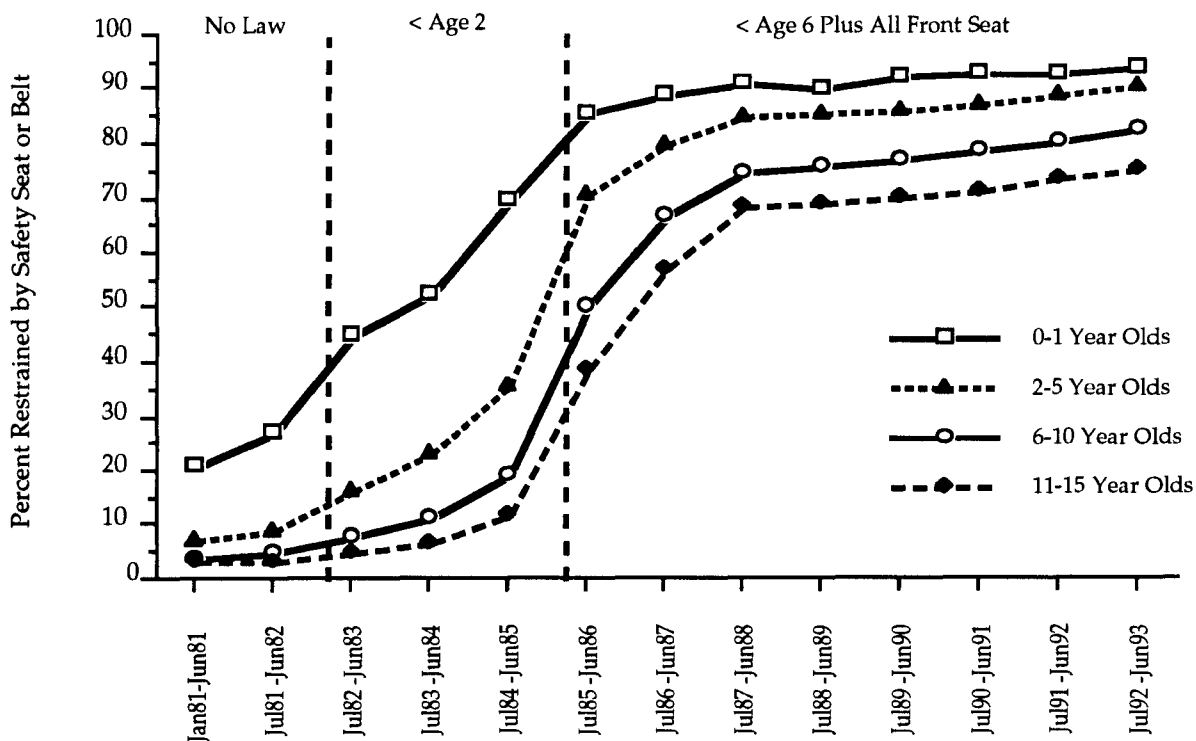
\*Observational data available for years 1980, 1982, 1983, 1986 and 1989, 1992 and 1993. Additional data points are averages between years.

\*\*Observational data available after 1984. Figures for 1980 - 1984 based on crash data.

Table 1. Observed Safety Seat and Seat Belt Use for North Carolina Children Less than Age Sixteen.

Age	July 1992				September 1993					
	None	Seat Belt	Safety Seat	Total	None	Seat Belt	Safety Seat	Total	Front Seat	Rear Seat
	Row %/(N)				Row %/(N)				% Restrained/(N)	
0-1	4.6 (12)	2.3 (6)	93.1 (243)	(261)	8.2 (7)	2.4 (2)	89.4 (76)	(85)	92.1 (35)	90.9 (40)
2-5	26.4 (275)	41.7 (433)	31.8 (330)	(1038)	42.6 (113)	32.8 (88)	25.0 (67)	(268)	68.6 (81)	47.6 (69)
6-10	NA	NA	NA		54.0 (155)	46.0 (132)	0.0 (0)	(287)	63.9 (78)	32.9 (53)
11-15	NA	NA	NA		49.7 (78)	50.3 (79)	0 (0)	(157)	65.7 (65)	23.6 (13)

Figure 2. Police Reported Restraint Use by Children Less Than Sixteen in NC Crashes.





seat in 1993 than were ten years earlier. In the first six months of 1981, only 27 percent of the 0-1 year-old children in crashes were in the rear seat. Older children were in the rear about 40-50 percent of the time. During recent years, two-thirds of the children less than eleven were riding in the rear seat. There has been essentially no change for the 11-15 year-olds. North Carolina data shows that the percent of children who are seriously injured or killed in the front seat is consistently larger than that for the rear seat.

Figure 4 shows the fatal plus serious injury (K+A) rates for children in the 0-1, 2-5, and 6-10 and 11-15 year-old age groups since 1981. The overall K+A rates for all age groups have been declining since 1982 with some fluctuations. With few exceptions, the K+A rates have been lowest for the 0-1 year-olds and highest for the 11-15 year-olds. The higher fatal and serious injury rates for the older children would appear to be a result of lower restraint use rates.

Table 2 shows the actual number of fatal and serious (K+A) injuries (with the number of fatalities noted in parentheses), fatal and serious injury rates, and the injury and crash-involved population figures for crash-involved 0-15 year-old children during three legislative time periods. Time period "(A)" consists of the 18 months immediately preceding the implementation of any child passenger safety law in North Carolina. Time period "(B)" consists of the three years (July 1982 - June 1985) that the original Child Passenger Safety (CPS) Law was in effect. During this time, only children less than age two being driven by their parents were required to be restrained. Period "(C)" includes the years after the effective date of the expanded CPS Law (July 1985 - March 1993). This expanded law requires all drivers to restrain all children through age five. Also, drivers and front seat occupants of any age have been required to be buckled up since October 1985. Yearly averages have been presented for fatalities, fatal plus serious injuries, and number of children involved in crashes. Furthermore, fatal plus serious injury rates have been computed for the three time periods in an attempt to measure the effects of legislation upon these rates.

When reviewing Table 2, it is more important to compare the combined fatal plus serious injury rates as opposed to the number of fatalities. The fatalities are relatively few in number and tend to fluctuate from year to year and thus, no meaningful trends can be established for fatalities. Comparing the combined fatal plus serious injury rates clearly indicates trends and the effects of restraint legislation.

The youngest age group, 0-1 year-olds, showed a fatal plus serious (K+A) injury rate of 1.74 per 100 children involved in crashes during the first time period. This rate was reduced by 17 percent to 1.45 during the second time period. The K+A rate dropped 32 percent to 0.98 between the second time period and the third time period representing the expanded law. Overall, the K+A rate for 0-1 year-olds was reduced by 44 percent (from 1.74 to 0.98) between the first and third time periods.

K+A rates have also been reduced for the 2-5 year-olds, though not by the same degree. The second period K+A rate of 1.72 was a nine percent reduction from the rate of 1.88 for the first time period. During this time, the 2-5 year-olds were not covered by the CPS Law, but their restraint usage had increased nonetheless. After they became covered by the CPS Law during the third time period, their K+A rates

Figure 3. Percent of Crash-Involved 0-15 Year Olds Riding in Rear Seat.

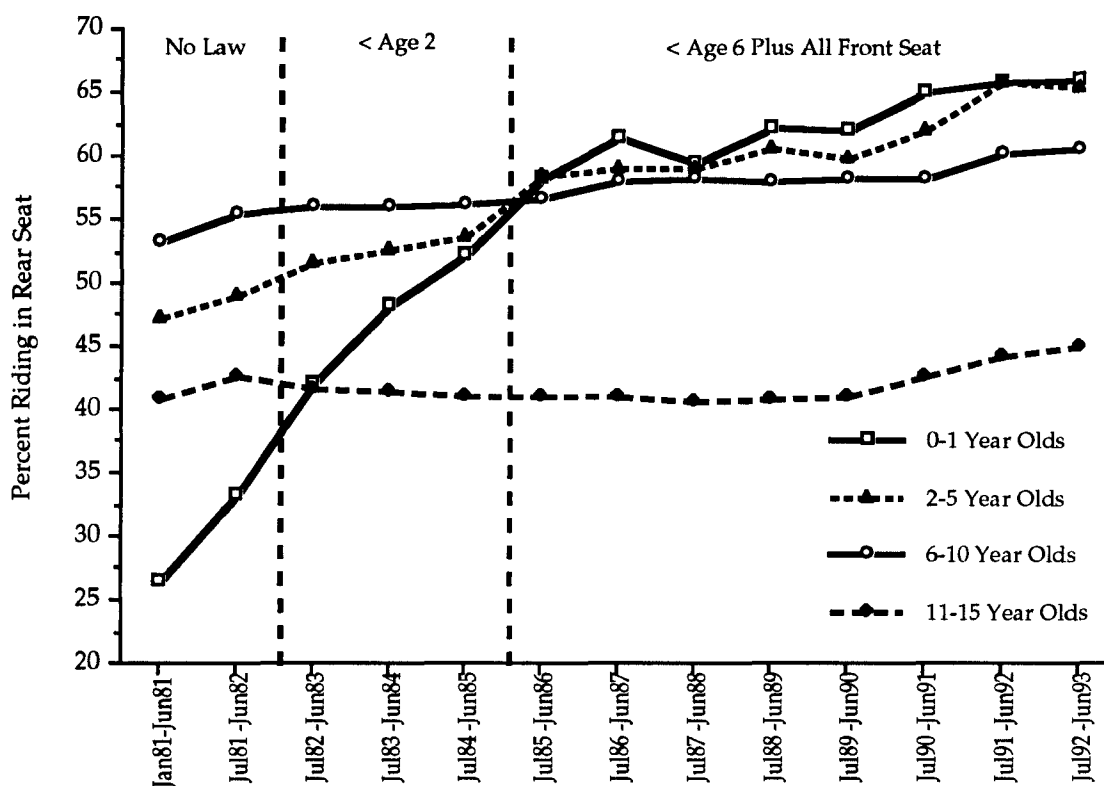


Figure 4. Fatal Plus Serious Injury Rates for Crash-Involved 0-15 Year Olds.

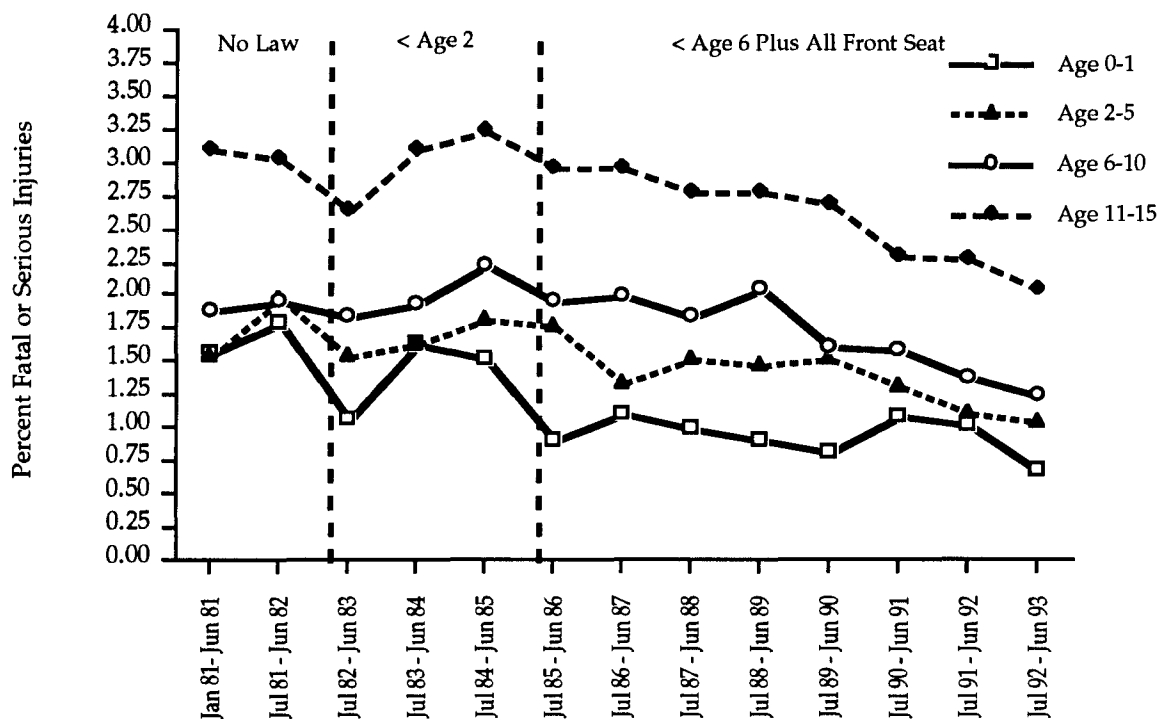


Table 2. Average Fatal Plus Serious Injury (K+A) Rates and Percent Change for Children <16 Associated With NC Child Passenger Protection and Seat Belt Legislation, 1981 through March 1993.

		(A) Pre-Law January, 1981 - June, 1982		(B) <2 CPS Law July, 1982 - June, 1985		(C) <6 CPS + Belt Laws July, 1985 - March, 1993		PERCENT K+A CHANGE		
		Yearly Average	Total	Yearly Average	Total	Yearly Average	Total	(A) → (B)	(A) → (B)	(A) → (B)
<u>Age</u>	# K+A*	43 (4)	65 (6)	36 (4)	107 (12)	33 (6)	255 (44)			
<u>0-1</u>	Total #**	2490	3735	2462	7387	3341	25,896			
	% K+A***		1.74		1.45		0.98	-16.7	-32.4	-43.7
	# K+A	187 (13)	280 (19)	189 (14)	566 (41)	196 (16)	1515 (125)			
<u>2-5</u>	Total #	9955	14,933	10,962	32,887	13,532	104,877			
	% K+A		1.88		1.72		1.44	-8.5	-16.3	-23.4
	# K+A	192 (9)	288 (14)	205 (11)	616 (34)	212 (12)	1640 (96)			
<u>6-10</u>	Total #	9931	14,896	10,203	30,608	12,244	94,899			
	% K+A		1.93		2.01		1.73	+4.2	-13.9	-10.4
	# K+A	445 (28)	667 (42)	488 (28)	1465 (83)	465 (27)	3604 (206)			
<u>11-15</u>	Total #	14,485	21,728	16,224	48,671	17,675	136,978			
	% K+A		3.07		3.01		2.63	-2.0	-12.6	-14.3

\* Number of children within age group killed or seriously injured. Number of reported fatalities indicated within parentheses

\*\* Total number of children within age group involved in crashes.

\*\*\* Percent of children within age group killed or seriously injured ((# K+A/Total #) x 100).

were reduced another 16 percent to 1.44. The total reduction in the K+A rate for the 2-5 year-olds was 23 percent (from 1.88 to 1.44) between the first and the third time periods.

K+A rates have also been reduced for the 6-10 and 11-15 year-olds, again by a smaller degree than for the younger children. The 6-10 year-olds showed a K+A rate of 1.93 before any laws went into effect. During the second period, the K+A rate actually showed an increase of 4 percent to 2.01. During the last period, this rate was reduced 14 percent to 1.73. The total reduction in the K+A rate for the 6-10 year-olds was 10 percent (from 1.93 to 1.73) between the first and the third time periods. The 11-15 year-olds showed the highest K+A rate of 3.07 before any laws went into effect. During the second period, their K+A rate showed a 2 percent decrease to 3.01. During the last period, this rate was reduced 13 percent to 2.63. The total reduction in the K+A rate for the 11-15 year-olds was 14 percent (from 3.07 to 2.63) between the first and the third time periods.

In an effort to determine where most of the above effects can be found, Figures 5 shows the fatal and serious injury rates for 0-5 year-olds in the front vs. rear seat and Figure 6 presents the same information for the 6-15 year-olds. As seen in Figure 5, the front and rear seat K+A rates for the 0-5 year-olds have both been decreasing at about the same rate (as indicated by the parallel plotted trend lines) with the rate for the front-seat children consistently higher. In contrast, Figure 6 shows that the K+A rate for the front-seat 6-15 year-olds (covered by the seat belt law since 1985) have been declining at a greater rate than for the 6-15 year-olds in the rear seat (not covered by any law). In addition, the K+A rates for the older children, with their lower restraint use rates, have been consistently higher than for the 0-5 year-olds shown in Figure 5.

The trends indicated by Figures 5 and 6 clearly indicate that the older children would benefit from extending coverage of North Carolina's restraint laws to cover them in the rear seat as well as the front seat. Coverage of the younger children by restraint laws has lead to increased restraint use and much greater benefits than have been experienced by children above the age of five.

Figure 5. Percent Fatal and Serious Injuries for 0-5 Year Olds: Front vs. Rear Seat

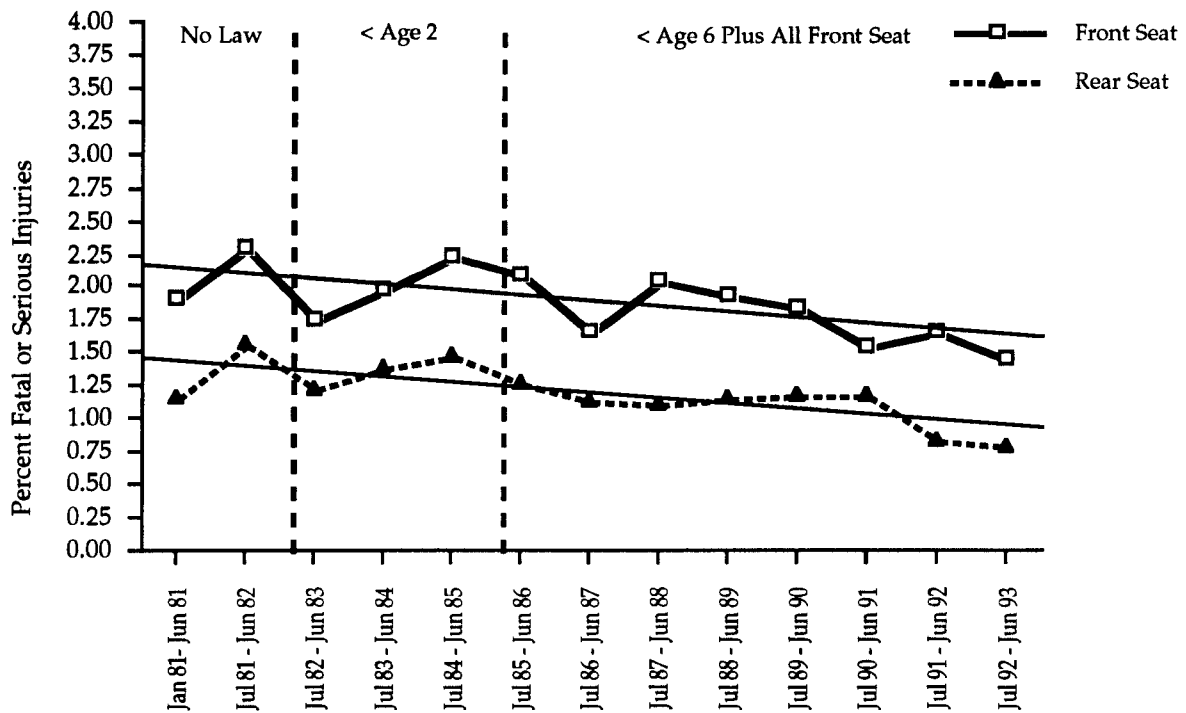
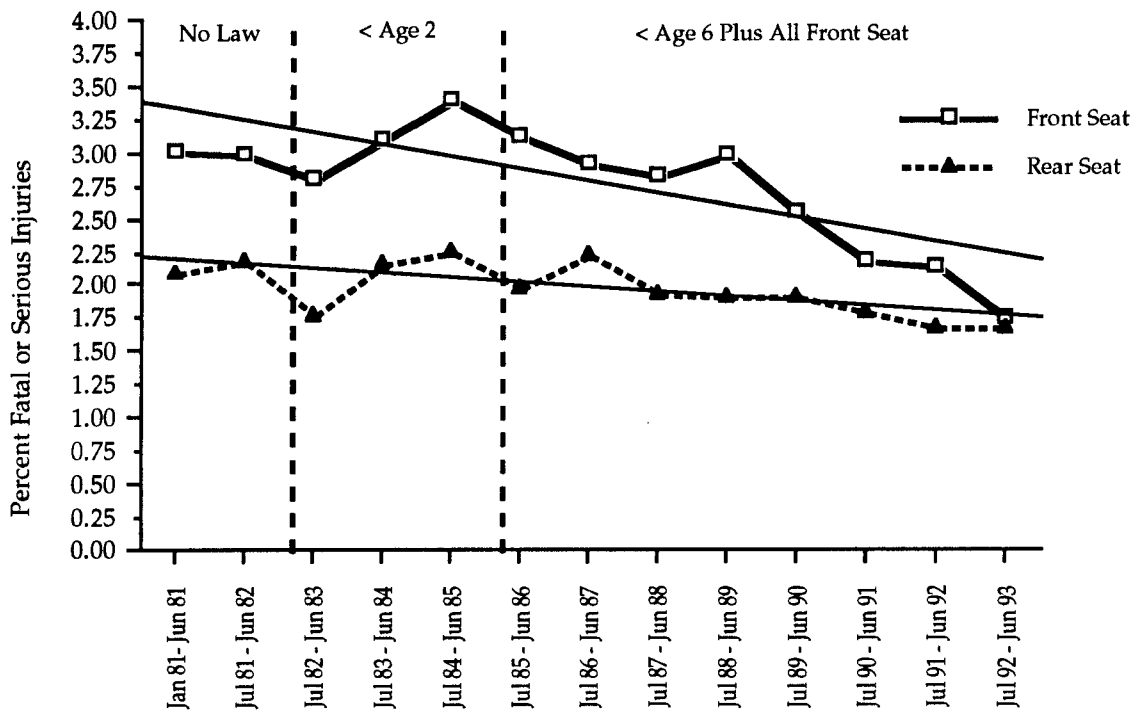


Figure 6. Percent Fatal and Serious Injuries for 6-15 Year Olds: Front vs. Rear Seat



## Conclusions

The following conclusions can be drawn based on this analysis of 0-15 year-old children involved in North Carolina crashes:

a) The North Carolina Child Passenger Safety and Seat Belt Laws, along with associated public information and education efforts, have resulted in large increases in restraint use as reported on police accident forms and has been observed through observational surveys. On all measures, infants have the highest rate of restraint and levels of restraint use decline with increasing age.

b) Average fatal plus serious (K+A) injury rates for children involved in crashes during the time period covered by these restraint laws (since July, 1982) have declined. Mirroring decreasing levels of restraint use as age increases, the youngest children, 0-1 year-olds, have experienced the greatest decline in injury rates while older children have experienced reduced benefits. During the 18 months (January 1981 - June 1982) immediately preceding the implementation of the original CPS Law, K+A rates were 1.74 for 0-1 year-olds, 1.88 for 2-5 year-olds, 1.93 for 6-10 year-olds, and 3.07 for 11-15 year-olds. During the July 1985 - March, 1993 time period, average K+A rates were reduced 44% to 0.98 for 0-1 year-olds, by 23% to 1.44 for 2-5 year-olds, by 10% to 1.73 for 6-10 year-olds, and by 14% to 2.63 for the 11-15 year-olds.

c) North Carolina's Child Passenger Safety and Seat Belt Laws have been beneficial to North Carolina children, but could provide greater benefits to older children by expanding the age range covered in the rear seat and by removing major exemptions that exclude otherwise covered children.

The Child Passenger Safety Law citations incur court costs that pay for processing tickets whereas Seat Belt citations do not. For this reason, as well as the fact that most of the major exemptions are contained within the Child Passenger Protection Law, the most expedient way to enable additional and significant injury reduction benefits would be to:

- 1) Increase the age range of the Child Passenger Safety Law to cover children less than age sixteen,
- 2) Increase the age where children must be in a safety seat rather than a belt from less than age three to less than age five,
- 3) Remove the following exemptions:
  - Vehicles registered in another state
  - When child's "personal needs" are being tended to.
  - When all available belted positions are occupied.

## REFERENCES

Hall, W.L., Tolbert, W.G., and Lowrance, J.C. "Program for Increasing Use of Safety Seats and Seat Belts for Children and Young Adults: Final Report." UNC Highway Safety Research Center, Chapel Hill, North Carolina, December, 1993. (UNC/HSRC-93/12/4)

Reinfurt, D.W., Weaver, N.L., Hall, W.L., Hunter, W.W., and Marchetti, L.M. "Increased Seat Belt Use Through Police Actions." UNC Highway Safety Research Center, Chapel Hill, North Carolina, November, 1990 (HSRC-A144)

## Upper Age Limits for State Child Passenger Protection Laws

State	Restraint Required Thru Age	#*	Safety Seat Required Thru Age	State	Restraint Required Thru Age	#*	Safety Seat Required Thru Age
Mississippi	1	1	1	Utah	7	1	1
Wyoming**	2	1	2	Wisconsin	7		3
Montana**	3		1	West Virginia	8	1	2
Texas	3		1	Maryland	9	2	3
Hawaii	3		2	New York	9		3
Virginia	3		2	North Dakota	10		2
California**	3		3	Minnesota	10	3	3
Colorado	3		3	New Mexico	10		4
Connecticut	3	7	3	New Hampshire	11	1	4
Delaware	3		3	Rhode Island	12		3
Idaho**	3		3	Massachusetts	12	3	4
Missouri	3		3	Vermont	12		4
Ohio**	3		3	Kansas	13	1	3
Pennsylvania	3		3	Alaska	15		3
Puerto Rico	3		3	Georgia	15	4	3
Tennessee	3		3	Oregon	15		3
South Dakota	4		1	Michigan	15		4
Arkansas	4		2	Dist. of Columbia	16	1	2
Indiana	4		2	Maine	18	1	4
Nebraska**	4		3				
Oklahoma	4	10	3				
Arizona**	4		4				
Kentucky***	4		4				
Louisiana	4		4				
Nevada	4		4				
New Jersey	4		4				
Washington	5		1				
Iowa	5		2				
North Carolina	5		2				
Florida	5	7	3				
Illinois	5		3				
South Carolina	5		3				
Alabama	5		5				

\* Number of states with restraint required through each age.

\*\* Or less than 40 pounds

\*\*\* Upper limit for required restraint use is 40". Estimated age limit.



# Child Passenger Protection Laws Much Remains to Be Done



An analysis of child restraint and seat belt laws in the 50 states and the District of Columbia reveals that a great deal of work remains to be done to ensure the protection of child passengers. While some states began with laws that were better conceived than others, and many have upgraded theirs since first enacted, only one state, Alaska, has a statute on the books which can be regarded as "ideal." Oregon comes in a close second.

Many laws contain exemptions that may be unjustified, make no provision for protecting older children, or permit seat belt use at too young an age. It should also be taken into account that enforcement is a critical factor in compliance. Laws must not only be enforceable, but police have to be willing and able to enforce them. Inconsistencies are a hindrance.

The publicity alone which usually surrounds legislative activities would alert the public to the issues once more and help enlist police cooperation.

## What Needs to Be Addressed

- ✓ Exemptions and loopholes included in laws
- ✓ At what age to switch from child restraint to belt
- ✓ Person responsible for child passengers
- ✓ Age and/or weight ranges covered by the law
- ✓ Vehicles operated by public or private agencies
- ✓ Applicability of law to out-of-state vehicles
- ✓ Penalties for violating the law
- ✓ Too few belts to restrain all children

The political climate has changed since the seventies when Robert Sanders, M.D., F.A.A.P., launched his campaign for child restraint legislation in Tennessee and that state became the first to adopt such a law. In the face of overwhelming opposition in that and many other states, compromises had to be made.

For example, the original Tennessee law allowed children to be held on the laps of adults. This was later eliminated. Today, there is far greater understanding and acceptance of the rationale for safety legislation. Discussed below are aspects of child passenger protection laws in need of attention.

## Tending to the Child's Needs

This is one of the most glaring loopholes. Seven states allow removing children from the restraint to "attend to their personal needs." Some states specifically spell out breast-feeding. It can be presumed that

comforting a fussy child by holding him is also "legal."

While this is taking place, the child is riding at risk, either lying on the seat of the vehicle or, worse, held in someone's arms. Furthermore, no doubt this provision makes enforcement highly problematical, since the child may be receiving permitted attention at any time.

On-lap travel is still common today, even in states without the "personal needs" exemption. A recent study cites a 17 per cent incidence nationally. But for infants killed in crashes, 37 per cent were believed to be riding on someone's lap at the time. The authors project significant reductions in injuries to infants if on-lap travel were eliminated and call for renewed efforts for parent education and stricter enforcement of laws.\*

## Child Restraints or Lap Belts

In 18 states lap belts are permitted for children under age three, and 12 allow one-year-olds to use lap belts, though the latter is usually limited to back seats. Oregon, Washington, and Wyoming allow one-year-olds to be restrained with a seat belt in any seating position.

There is ample evidence that lap belts alone do not provide effective protection, regardless of the age of the child. In a serious crash, a lap belt does not provide optimal protection for an adult, either. The benefits of distributing crash forces over a large area of the child's body—a function superbly performed by correctly-used child restraints—has been well documented these past years.

Now that car booster seats are available, the requirement for the use of child restraints could be extended beyond age four and 40 pounds.

## Adult Responsible for Child Passengers

In nine states the person responsible for children riding protected is not necessarily the driver of the vehicle. Only a parent, legal guardian, and in some instances the "person who regularly transports the child" in his or her own vehicle can be held accountable. Yet children often ride with grandparents, sitters, or family friends who would not be required to comply.

Five states make no mention of the person responsible for the protection of child passengers covered under the adult seat belt law.

\*Agran, Phyllis F., MD, MPH; Diane G. Winn, RN, MPH;  
Dawn N. Castillo, MPH: On-Lap Travel: Still a  
Problem in Motor Vehicles. *Pediatrics*; 90:27-29.

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## Age and/or Weight Ranges Covered

Child restraint laws vary greatly in the ages they cover. Many states include older children in the adult belt law, instead of the child restraint law. The adult belt law is often limited to front seats and/or is enforceable only as a secondary offense, whereas child restraint laws apply to all seating positions and are enforceable as primary violations.

Currently belt laws in 32 states are enforceable only as a secondary offense; of those, 25 apply only to the front seats. Under "secondary" enforcement police are not permitted to stop a vehicle solely for non-use of restraints. But if stopped for another violation, a citation for failure to use restraints may be issued.

Ideally, children up to age 16 or even 18 should be included in an "all position," primary law. It seems consistent to cover all minors. Maine makes no provision for adult belt use, but has a restraint law which covers everyone under 19 and is enforceable as a primary offense. Alaska's restraint law, which covers all ages, is primary for all under age 16. Massachusetts, New Hampshire, Rhode Island and Vermont, all without adult belt use laws, include children up to age 12 in their child restraint statutes.

## Day Care, Nursery School and Public Transportation

Three states specifically exclude day-care center vehicles from the law, one also exempts car pools.

Various classes of commercial, for-hire, and para-transit vehicles; taxis; and school buses are excluded from the child restraint requirement in 18 states. Yet taxis and vans have been equipped with seat belts for almost as long as passenger cars. Small (Type II) school buses made since 1977 also have lap belts in every seating position. These exemptions should, therefore, be reconsidered.

Ambulances pose a different, more complex problem, one of space and other restrictions. Some pilot programs are currently addressing passenger protection issues unique to ambulances. Until a workable solution is found, the exemption for ambulances may have to continue.

## Out-of-State Vehicles

In 21 states the law applies only to in-state vehicles. Such exemptions are not justified. After all, speeding, drunk driving and other traffic violations apply to all drivers, regardless of their permanent residence or the state in which their vehicle may be registered.

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*The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend on the individual facts and circumstances.*

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## Penalties

Fines range from \$25 or less in 29 states to a maximum of over \$100 in California, New York, and Hawaii. In some states court costs are added to the fine.

While some safety advocates believe that heavy fines are conducive to compliance, others insist that punitive fines may in fact deter enforcement: police officers may be reluctant to issue citations when large amounts of money are involved for what they may regard as a minor infraction.

Fines are waived in most states if the parent can show that a child restraint has been acquired. This provision may lend itself to abuse. A child restraint can be borrowed from a friend to present in court.

Violators are the target of education programs in some states. One approach is requiring those convicted to attend a class on belt and child restraint use. Another is "citizen reporting" of drivers observed with children riding unrestrained. Police send a polite warning letter explaining the importance of using child restraints and the consequences of violating the law.

## Too Many Children--Too Few Belts

In many states children are exempted from restraint use if there are not enough belts available. An attempt to repeal this provision raises a dilemma. Today, especially, some families may lack the means to purchase and maintain a vehicle large enough to provide a belt for each child. Families struggling to put food on the table and keep a roof over their heads may not be able to protect their children in cars. But the exemption should apply only to children in the immediate family, otherwise it could lend itself to abuse.

## Medical Exemptions

There no longer appear to be reasons for medical exemptions. At one time children in spica casts or suffering from spina bifida or other disorders could not be secured in child restraints. Now, however, child restraints meeting most medical needs are available.

## Conclusion

This country has come a long way these past 15 years in recognizing that children must be protected. Every effort should, therefore, be made to bring laws in line with today's knowledge of the requirements of effective crash protection.

To assist advocates and professionals in working toward this end, a forthcoming packet will provide more detail. Write to:

Safe Ride Program, AAP, P.O. Box 927,  
Elk Grove Village, IL 60009-0927

# CHILD PASSENGER PROTECTION LAWS

State	Effective Date	Restraint Age	Safety Seat Age	May Substitute Safety Belt	Penalty*
Alabama	July 1982	Under 6	Under 6	Either 4 or 5	\$10
Alaska	June 1985	Under 16	Under 4	4 thru 15	\$50, 2 points
Arizona <sup>1</sup>	August 1983	Thru 4 <sup>2</sup>	Thru 4 <sup>2</sup>	No	\$50
Arkansas	August 1983	Under 5	Under 3	Between 3 & 5	\$10-\$25
California	January 1983	Under 4 <sup>2</sup>	Under 4 <sup>2</sup>	No	\$100
Colorado	January 1984	Under 4	Under 4	No	\$59
Connecticut	May 1982	Under 4	Under 4	Between 1 & 4 in rear seat	\$25-\$100
Delaware	June 1982	Under 4	Under 4	No	\$25
Dist. of Columbia	July 1983	Up to 16	Under 3	Between 3 & 6	\$55, 2 points
Florida	July 1983	Under 6	Under 4	Between 4 & 6	\$150, 3 points
Georgia	July 1984	Under 16	Under 4	Over 4	\$25
Hawaii	July 1983	Under 4	Under 3	Between 3 & 4	\$100 maximum
Idaho <sup>1</sup>	January 1985	Under 4 <sup>2</sup>	Under 4 <sup>2</sup>	No	\$100 maximum
Illinois	July 1983	Under 6	Under 4	Between 4 & 6	\$25-\$50
Indiana	January 1984	Under 5	Under 3	Between 3 & 5	\$50-\$500
Iowa	January 1985	Under 6	Under 3	Between 3 & 6	\$10
Kansas	January 1982	Under 14	Under 4	Between 4 & 13 all seat positions	\$20
Kentucky <sup>1</sup>	July 1982	Under 40"	Under 40"	No	\$50
Louisiana	September 1984	Under 5	Under 5	Between 3 & 5 in rear seat	\$25-\$50
Maine	September 1983	Under 19	Thru 4	Between 1 & 4 if not in parent's vehicle	\$25-\$50
Maryland	January 1984	Under 10	Under 4 <sup>2</sup>	Between 4 & 10	\$25-\$50
Massachusetts	January 1982	Thru 12	Under 5	Under 5	\$25
Michigan	April 1982	Thru 15	Thru 4	1 thru 4 in rear seat	\$10
Minnesota	August 1983	Under 11	Under 4	4 thru 10 in rear seat	\$50
Mississippi	July 1983	Under 2	Under 2	No	\$25
Missouri	January 1984	Under 4	Under 4	Under 4 in rear seat	\$25
Montana <sup>1</sup>	January 1984	Under 4 <sup>2</sup>	Under 2	Between 2 & 4	\$10-\$25
Nebraska	August 1983	Under 5 <sup>2</sup>	Under 4 <sup>2</sup>	Between 4 & 5	\$25
Nevada	July 1983	Under 5	Under 5	Under 5 in rear seat	\$35-\$100
New Hampshire	July 1983	Under 12	Under 5	Under 5 thru 12 all seat positions	\$500 maximum
New Jersey	April 1983	Under 5	Under 5	Between 4 & 5 in rear seat	\$10-\$25
New Mexico	June 1983	Under 11	Under 5	Between 1 & 5 in rear seat	\$25
New York	April 1982	Under 10	Under 4	Between 4 & 10 in rear seat	\$100 maximum
North Carolina	July 1982	Under 6	Under 3	Between 3 & 6	\$25
North Dakota	January 1984	Thru 10	Under 3	3 thru 10	\$20
Ohio	March 1983	Under 4 <sup>2</sup>	Under 4 <sup>2</sup>	Between 1 & 4 if not in parent's vehicle	\$10
Oklahoma	November 1983	Under 5	Under 4	Under 4 in rear, 4-5 in front or rear	\$25 maximum
Oregon	January 1984	Under 16	Under 4 <sup>2</sup>	Between 1 & 5	\$50 maximum
Pennsylvania	January 1984	Under 4	Under 4	Over 4	\$25
Puerto Rico	January 1989	Under 4	Under 4	Over 40 pounds	\$10
Rhode Island	July 1980	Thru 12	Thru 3	No	\$100 maximum
South Carolina	July 1983	Under 6	Under 4	Between 1 & 6 in rear seat	\$25
South Dakota	July 1984	Under 5	Under 2	Between 2 & 5	\$20
Tennessee	January 1978	Under 4	Under 4	No	\$25-\$50
Texas	October 1984	Under 4	Under 2	Between 2 & 4	\$25-\$50
Utah	July 1984	Under 8	Under 2	Between 2 & 8	\$20
Vermont	July 1984	Thru 12	Under 5	Between 1 & 5 in rear seat	\$25
Virginia	January 1983	Under 4	Under 3	Between 3 & 4	\$50
Washington	January 1984	Under 6	Under 2	Between 2 & 6	\$30
West Virginia	July 1981	Under 9	Under 3	Between 3 & 5	\$10-\$20
Wisconsin	November 1982	Under 8	Under 4	Between 5 & 8	\$10-\$200
Wyoming	April 1985	Under 3 <sup>2</sup>	Under 3 <sup>2</sup>	No	\$25

<sup>1</sup>Law applies only to parents and legal guardian <sup>2</sup>Or less than 40 pounds. \*Most States waive fines upon proof of safety seat acquisition.