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ARTICLE PACKET

BACKGROUND INFORMATION ON SEAT BELTS IN SCHOOL BUSES

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

Federal Motor Vehicle Safety Standards; Denial of Petition for Rulemaking

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Denial of petition for rulemaking.

SUMMARY: This notice denies a petition for rulemaking filed by Physicians for Automotive Safety (PAS), asking this agency to mandate the installation of seat belts on all school buses. NHTSA believes that the currently mandated occupant protections in school buses provide an adequate level of safety protection, and that seat belts would not raise the level of protection for the occupants unless States and local jurisdictions were willing to take steps to ensure that the seat belts were actually used. Any jurisdiction willing to take such steps is free under the existing requirements to order seat belts in school buses. Those jurisdictions which are unable to take such steps or which would find adoption of such measures inappropriate or not effective would be forced to purchase safety equipment which would not improve the level of passenger safety in their school buses. For these reasons, the first part of this petition is denied.

PAS asked alternatively that seat belt anchorages be mandated on school buses if seat belts were not because "it is not possible to retrofit belts correctly in any buses on the road today." The agency rejects this rationale because PAS offered no evidence to support it. More important, agency calculations indicate that seat belts can be safely retrofitted on almost all school buses. Therefore, the second part of the PAS petition is also denied.

FOR FURTHER INFORMATION CONTACT: Robert N. Williams, Office of Vehicle Safety Standards, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, D.C. 20590 (202–426–2264).

SUPPLEMENTARY INFORMATION: PAS has filed a petition requesting this agency to mandate the installation of seat belts on all new school buses or, alternatively, to mandate the installation of seat belt anchorages on all new school buses. In support of its requests, PAS asserted that school bus seats meeting the requirements of Standard No. 222, *School Bus Passenger Seating and Crash Protection*, do not offer restraint to passengers in lateral and rollover crashes unless seat belts are used. As evidence to support this assertion, PAS cited the March 25, 1983, crash of a school bus near Newport, Arkansas, which resulted in 9 deaths and 27 injuries.

PAS' request for the agency to require the installation of seat belts was made in two previous petitions, both of which were denied. As NHTSA explained in those denials, adequate passenger protection is provided in school buses by compartmentalizing the occupants between high-backed, well-padded, sturdy seats. The compartmentalization process protects occupants whether or not seat belts are used.

Fatalities in school buses have declined since the compartmentalization requirement took effect for new school buses on April 1, 1977. For the years 1975 to 1979, there were 87 people killed while riding in school buses, with an average of 17 persons killed each year. For 1980, there were 15 fatalities while riding in school buses, and for 1981, the last year for which complete statistics are available, there were 10 fatalities in school buses. These data support the agency's position that the "compartmentalization" concept does provide an adequate level of safety and that the safety protection for passengers has been raised over what it was before Standard No. 222 became effective.

Mandating seat belts in school buses would not raise the level of safety protection afforded to the occupants unless State and local jurisdictions were willing to take steps to ensure that the seat belts were actually used. Any jurisdiction willing to take such steps is free, under existing requirements, to order seat belts in their school buses. Those jurisdictions which are unable to take such steps or which would find adoption of such measures inappropriate or not effective would be forced to purchase equipment which would not improve the level of safety in their school buses.

It is important to emphasize that Standard No. 222 specifies only the minimum safety requirements applicable to all school buses. Nothing prohibits a State or local jurisdiction from requiring a higher level of safety protection in their school buses. Thus, any school district that wants to order seat belts in its school buses in free to do so. In its petition, PAS cited the experience of a Greenburgh, New York, school district with seat belts installed in school buses, and reported that the belts were being worn. NHTSA is pleased to hear of the success of this program, and believes that it shows the wisdom of allowing local jurisdictions the option of choosing whether to equip their school buses with seat belts. Those districts which choose that option will presumably take some additional steps to ensure that the belts are used, and will achieve results similar to those experienced in Greenburgh.

The only new information cited in the PAS petition concerned the tragic school bus accident in Arkansas on March 25 of this year. That accident showed, according to PAS, that the compartmentalization concept of passenger protection does not work. The National Transportation Safety Board (NTSB) investigated this accident and concluded that it is doubtful that seat belts could have prevented any of the deaths in this case, given the nature of the crash impact. Further, the school bus involved in that accident was built before Standard No. 222 became effective on April 1, 1977, and was never certified as complying with the standard. It is not clear why PAS believes that an accident involving a bus built prior to the effective date of a safety standard indicates that the requirements of that safety standard are ineffective.

Since PAS has presented no new data or analyses in support of their contention that seat belts should be required on all new school buses, this part of the petition is denied for the same reasons earlier PAS petitions on this topic were denied.

PAS alternatively requested that seat belt anchorages be installed in all new school buses. PAS asserts in their petition that "it is not possible to retrofit belts correctly in any buses on the road today." PAS sought to support this assertion with two arguments. First, according to PAS, only two school bus manufacturers will install seat belts in the buses at the factory. The other school bus manufacturers, according to PAS, "claim that seats are not strong enough to carry belt loads."

To check this argument, NHTSA asked the School Bus Manufacturers Institute to conduct a poll of its six largest members. That poll found five of the six manufacturers would install seat belts at the factory if so asked by a purchaser. Further, none of the polled manufacturers attempted to justify not providing seat belts on the basis that the seats in the buses are not strong enough to withstand the loading.

The agency has no knowledge of any data or analyses which suggest that seats in school buses complying with Standard No. 222 are not strong enough to withstand such loading. Before Standard No. 222 was originally promulgated, NHTSA ran a series of

calculations which showed that seats complying with the requirements of the standard could withstand 1500 pounds seat belt anchorage loads, and this ability would allow seat belts to be safely installed. Those calculations have not heretofore been challenged as erroneous. Further, this agency has no knowledge of any tests or analyses conducted by itself, the school bus manufacturers, PAS, or any other party which cast doubt on the continuing validity of those calculations. NHTSA will continue to rely on those calculations until some tests or analyses are run which suggest there may be reason to doubt their validity.

The second argument offered by PAS to explain its assertion concerning retrofitting problems was that the seat designs in some school buses cause seat belts to fail to perform properly. PAS asserted that installation of seat belts is possible in those school buses only if the belts are fed through the crack between the seat cushion and the seat back in an S-shaped path. PAS claims the belt, when so installed, would cause the seat cushion to depress in a crash situation, thereby creating a large amount of slack in the belt. According to PAS, this slack would defeat the energy absorption purpose of the belt and might even result in small passengers submarining under the belt.

Contrary to the PAS assertions, the limited padding thickness on current bus seat cushions and the angle of the seat belt from the anchorage to the point where it passes around the occupant's pelvis is such that only a very small amount of slack could be created in a crash situation. In fact, the situation differs little from that of seat belts in passenger cars, except that the seat cushions in passenger cars generally have much thicker padding than do school bus seats. The accident data for passanger cars indicate that the amount of slack in seat belts which results from seat cushion depression is negligible. Further, the agency is unaware of any data suggesting that the negligible slack gives rise to any safety problems. Accordingly, the agency denies the second part of PAS' petition, asking for seat belt anchorages to be mandated on all school buses. Anchorages can be installed along with seat belts, if a purchaser wishes to install seat belts on its school buses.

The denial of this PAS petition is based on a consideration of the currently available data. Should some new data become available indicating that current safety protection for occupants of school buses might be inadequate, the agency will take appropriate steps.

(Sec. 103, 119, Pub. L. 89-563, 80 Stat. 718 (15 U.S.C. 1392, 1407); delegations of authority at 49 CFR 1.50 and 49 CFR 501.8)

Issued: October 11, 1983.

Kennerly H. Digges,

Acting Associate Administrator for Rulemaking.

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PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

School Bus Passenger Seating and Crash Protection

This notice responds to two petitions for reconsideration of Standard No. 222, *School Bus Passenger Seating and Crash Protection*, as it was issued January 22, 1976.

Standard No. 222 (49 CFR 571.222) was issued January 22, 1976 (41 FR 4016, January 28, 1976), in accordance with section 202 of the Motor Vehicle and Schoolbus Safety Amendments of 1974, Pub. L. 93-492 (15 U.S.C. 1392(i)(1)) and goes into effect on October 26, 1976. The standard provides for compartmentalization of bus passengers between well-padded and well-constructed seats in the event of collision. Petitions for reconsideration of the standard were received from Sheller-Globe Corporation and from the Physicians for Automotive Safety (PAS), which also represented the views of Action for Child Transportation Safety, several adult individuals, and several school bus riders.

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Monday, July 12, 1976, p.28506

PAS expressed dissatisfaction with several aspects of the standard. The organization objected most strongly to the agency's decision that seat belts should not be mandated in school buses. PAS disagreed with the agency conclusion (39 FR 27585, July 30, 1974) that, whatever the potential benefits of safety belts in motor vehicle collisions, the possibility of their non-use or misuse in the hands of children makes them impractical in school buses without adequate supervision. In support of safety belt installation, PAS cited statistics indicating that 23 percent of reported school bus accidents involve a side impact or rollover of the bus.

While safety belts presumably would be beneficial in these situations, PAS failed to provide evidence that the belts, if provided, would be properly utilized by school-age children. The agency will continue to evaluate the wisdom of its decision not to mandate belts, based on any evidence showing that significant numbers of school districts intend to provide the supervision that should accompany belt use. In view of the absence of evidence to date, however, the agency maintains its position that requiring the installation of safety belts on school bus passenger seats is not appropriate and denies the PAS petition for reconsideration. The agency continues to consider the reduced hostility of the improved seating to be the best reasonable form of protection against injury.

PAS asked that a separate standard for seat belt assembly anchorages be issued. They disagree with the agency's conclusion (41 FR 4016) that seat belt anchorages should not be required because of indications that only a small fraction of school buses would have belts installed and properly used. However, PAS failed to produce evidence that a substantial number of school buses would be equipped with safety belts, or that steps would be taken to assure the proper use of such belts. In the absence of such information, the agency maintains its position that a seat belt anchorage requirement should not be included in the standard at this time, and denies the PAS petition for reconsideration.

The NHTSA does find merit in the PAS concern that in the absence of additional guidance, improper safety belt installation may occur. The Administration is considering rulemaking to establish performance requirements for safety belt anchorages and assemblies when such systems are installed on school bus passenger seats.

PAS also requested that the seat back height be raised from the 20-inch level specified by the standard to a 24-inch level. In support of this position, the organization set forth a "common sense" argument that whiplash must be occurring to school bus passengers in rear impact. However, the agency has not been able to locate any quantified evidence that there is a significant whiplash problem in school buses. The crash forces imparted to a school bus occupant in rear impact are typically far lower than those imparted in a car-to-car impact because of the greater weight of the school bus. The new and higher seating required by the standard specifies energy absorption characteristics for the seat back under rear-impact conditions, and the agency considers that these improvements over earlier seating designs will reduce the number of injuries that occur in rear impact. For lack of evidence of a significant whiplash problem, the PAS petition for a 24-inch seat back is denied.

PAS believed that the States and localities that specify a 24-inch seat back height would be precluded from doing so in the future by the preemptive effect of Standard No. 222 under section 103 (f) of the National Traffic and Motor Vehicle Safety Act (15 U.S.C. 1392(f)):

Section 103 • • •

(d) Whenever a Federal motor vehicle safety standard under this subchapter is in effect, no State or political subdivision of a State shall have any authority either to establish, or to continue in effect, with respect to any motor vehicle or item of motor vehicle equipment any safety standard applicable to the same aspect of performance of such vehicle or item of equipment which is not identical to the Federal standard. Nothing in this section shall be construed to prevent the Federal Government or the government of any State or political subdivision thereof from establishing a safety requirement applicable to motor vehicle equipment procured for its own use if such requirement imposes a higher standard of performance than that required to comply with the otherwise applicable Federal standard.

Standard No. 222 specifies a minimum seat back height (S5.1.2) which manufacturers may exceed as long as their product conforms to all other requirements of the standards applicable to school buses. It is the NHTSA's opinion that any State standard of general applicability concerning seat back height of school bus seating would also have to specify a minimum height identical to the Federal requirement. Manufacturers would not be required to exceed this minimum. Thus, the PAS petition to state seat back height as a minimum is unnecessary and has already been satisfied, although it does not have the effect desired by the PAS.

With regard to the PAS concern that the States' seat-height requirements would be preempted, the second sentence of section 103(d) clarifies that the limitation on safety regulations of general applicability does not prevent governmental entities from specifying additional safety features in vehicles purchased for their own use. Thus, a State or its political subdivisions could specify a seat back height higher than 20 inches in the case of public school buses. The second sentence does not permit these governmental entities to specify safety features that prevent the vehicle or equipment from complying with applicable safety standards.

With regard to which school buses qualify as "public school buses" that may be fitted with additional features, it is noted that the agency includes in this category those buses that are owned and operated by a private contractor under contract with a State to provide transportation for students to and from public schools.

Sheller-Globe Corporation (Sheller) petitioned for exclusion from the seating requirements for seating that is designed for handicapped or convalescent students who are unable to utilize conventional forward-facing seats. Typically, side-facing seats are installed to improve entry and egress since knee room is limited in forward-facing seats, or spaces on the bus are specifically designed to accommodate wheelchairs. The standard presently requires that bus passenger seating be forward-facing (S5.1) and conform to requirements appropriate for forward-facing seats. Blue Bird Body Company noted in a March 29, 1976, letter that it also considered the standard's requirements inappropriate for special seating.

The agency has considered the limited circumstances in which this seating would be offered in school buses and concludes that the seat-spacing requirement (S5.2) and the fore-and-aft seat performance requirements (S5.1.3, S5.1.4) are not appropriate for side-facing seats designed solely for handicapped or convalescent students. Occupant crash protection is, of course, as important for these students as others, and the agency intends to establish requirements suited to these specialized seating arrangements. At this time, however, insufficient time remains before the effective date of this standard to establish different requirements for the seating involved. Therefore, the NHTSA has decided to modify its rule by the exclusion of side-facing seating installed to accommodate handicapped or convalescent passengers.

School bus manufacturers should note that the limited exclusion does not relieve them from providing a restraining barrier in front of any forward-facing seat that has a side-facing seat or wheelchair position in front of it.

Sheller also petitioned for a modification of the head protection zone (S5.3.1.-1) that describes the space in front of a seating position where an occupant's head would impact in a crash. The outer edge of this zone is described as a vertical longitudinal plane 3.25 inches inboard of the outboard edge of the seat.

Sheller pointed out that van-type school buses utilize "tumble home" in the side of the vehicle that brings the bus body side panels and glazing into the head protection zone. As Sheller noted, the agency has never intended to include body side panels and glazing in the protection zone. The roof structure and overhead projections from the interior are included in this area of the zone. To clarify this distinction and account for the "tumble home," the description of the head impact zone in S5.3.1.1 is appropriately modified.

In accordance with recently-enunciated Department of Transportation policy encouraging adequate analysis of the consequences of regulatory action (41 FR 16201; April 16, 1976), the agency herewith summarizes its evaluation of the economic and other consequences of this action on the public and private sectors, including possible loss of safety benefits

The decision to withdraw requirements for side-facing seats used by handicapped or convalescent students will result in cost savings to manufacturers and purchasers. The action may encourage production of specialized buses that would otherwise not be built if the seating were subject to the standard. Because the requirements are not appropriate to the orientation of this seating, it is estimated that no significant loss of safety benefits will occur as a result of the amendment. The exclusion of sidewall, window or door structure from the head protection zone is simply a clarification of the agency's longstanding intent that these components not be subject to the requirements. Therefore no new consequences are anticipated as a result of this amendment.

In an area unrelated to the petitions for reconsideration, the Automobile Club of Southern California petitioned for specification of a vandalism resistance specification for the upholstery that is installed in school buses in compliance with Standard No. 222. Data were submitted on experience with crash pads installed in school buses operated in California. Vandalism damage was experienced, and its cost quantified in the submitted data.

The Automobile Club made no argument that the damage to the upholstery presents a significant safety problem. While it is conceivable that removal of all padding from a seat back could occur and expose the rigid seat frame, the agency estimates that this would occur rarely and presumably would result in replacement of the seat. Because the agency's outhority under the National Traffic and Motor Vehicle Safety Act is limited to the issuance of standards that meet the need for motor vehicle safety (15 U.S.C. 1392(a)), the agency concludes that a vandalism resistance requirement is not appropriate for inclusion in Standard No. 222.

In light of the foregoing, Standard No. 222 (49 CFR 571.222) is amended as follows:

§ 571.222 [Amended]

1. In S4, *Definitions*, the definition of school bus passenger seat is amended to read:

* * * * *

"School bus passenger seat" means a seat in a school bus, other than the driver's seat or a seat installed to accommodate handicapped or convalescent passengers as evidenced by orientation of the seat in a direction that is more than 45 degrees to the left or right of the longitudinal centerline of the vehicle.

2. In S5, *Requirements*, the first paragraph of S5.3.1.1 is amended to read:

* * * * *

S5.3.1.1 The head protection zones in each vehicle are the spaces in front of each school bus passenger seat which are not occupied by bus sidewall, window, or door structure and which, in relation to that seat and its seating reference point, are enclosed by the following planes;

* * * * *

Effective date: October 26, 1976. Because the standard becomes effective on October 26, 1976, it is found to be in the public interest that an effective date sooner than 180 days is in the public interest. Changes in the text of the Code of Federal Regulations should be made immediately.

(Sec. 103, 119, Pub. L. 89-563, 80 Stat. 718 (15 U.S.C. 1392, 1407); delegation of authority at 49 CFR 1.50)

Issued: July 7, 1976.

JAMES B. GREGORY,
Administrator.

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LOS ANGELES COUNTY SUPERINTENDENT OF SCHOOLS

AD HOC COMMITTEE REPORT ON THE USE OF

SEAT BELTS IN SCHOOL BUSES

Prepared by
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November 1983

LOS ANGELES COUNTY SUPERINTENDENT OF SCHOOLS
AD HOC COMMITTEE REPORT ON THE USE OF
SEAT BELTS IN SCHOOL BUSES

At the July 12, 1983, meeting of the Los Angeles County Board of Supervisors, Supervisor Hahn requested that a study be conducted to determine: 1) if any state, county, or city in the United States requires seat belts in school buses; 2) whether seat belts might have saved lives in accidents involving school buses; and 3) appropriate action the Board should take regarding installation of seat belts in school buses after consultation with the California Highway Patrol and the Los Angeles County Superintendent of Schools.

The Los Angeles County Superintendent of Schools established an ad hoc advisory committee to assist in this investigation. Members of this committee included representatives from the Automobile Club of Southern California, the California Highway Patrol, the State Department of Education, a joint powers agency for school transportation, and a number of Los Angeles County school and community college districts (one business manager and several transportation directors).

With input from the committee, research was done on the feasibility of installing seat belts in school buses and the ramifications of doing so. A number of reports and articles on seat belts were reviewed, and associations/organizations having an interest in this area were contacted.

CONCLUSIONS

The findings of this report are that school buses are statistically the safest form of ground transportation in the United States today. Federal standards, which improved passenger safety and became effective in 1977, implemented a new concept called compartmentalization. This concept is based on reducing injury and fatality by keeping a child contained in a small space (passive restraint). This concept is designed to take care of the greatest number of children (both in the variance of age and size and in most types of school bus accidents). In addition, California's requirements for school bus driver training and yearly inspection of vehicles have resulted in low fatality rates for pupil passengers. Based on the findings in this report, it is considered that: 1) the absence of a federal standard to mandate seat belts in school buses, and 2) the current policy to not install seat belts in school buses, are appropriate.

Although we have found two school districts which have chosen to have belts installed on their buses for their regular home to school transportation program, we have found no legal requirements for seat belts to be installed on school buses in the United States.

Schools are educational facilities. We believe that the installation of seat belts on school buses could provide beneficial training for students to use seat belts in the family automobile. However, the question of reduced safety due to the incompatibility of seat belts and compartmentalization, the additional cost, and liability relating to their installation far outweighs this benefit of training. Schools have curriculum programs available to instruct students (not just bus passengers) on the

use and importance of seat belts in the family automobile. Education on the use of seat belts is important. This instruction is designed to increase seat belt usage by the motoring public where current statistics on usage, though increasing, are low--14 percent usage of seat belts nationwide and 18 percent usage in California.

The National Safety Council's statistics show that school buses have the lowest fatality rate per passenger mile in the United States. Factors contributing to the safeness of school buses are the size, color and markings which identify school buses to the public.

In California, the fatality rate per passenger mile is even lower than the nationwide figure. We believe that the additional safety of school buses in California results in part from the school bus driver training program, preventive maintenance undertaken by school districts, and yearly inspection of school bus vehicles by the California Highway Patrol.

Jack Baird, a leading safety expert in the Southern California area (member of research teams at the UCLA Institute of Transportation and Traffic Engineering and the USC Safety and Systems Management Department), believes that seat belts in school buses will not "take care of the greatest number of people." His opinion is that improved seats and compartmentalization are more appropriate in dealing with the safety of children in school buses.

In view of the past safety records of school buses and until such time as school buses are redesigned to accommodate the installation of seat belts in school buses, it is considered that the current policy and federal standards to not install seat belts in school buses are appropriate.

FEDERAL REQUIREMENTS ON SEAT BELTS IN SCHOOL BUSES

The National Highway Traffic Safety Administration (NHTSA) is the federal agency responsible for establishing federal standards (minimums) for all motor vehicles. Their province includes the safety and crashworthiness of all motor vehicles, including school buses.

The NHTSA does not require seat belts in school buses. They have been petitioned to require seat belts; however, they have denied the petitions stating that the existing safety of school buses does not warrant further expense or federal regulations at this time. The NHTSA does not, however, discourage the implementation of seat belts in school buses, but does state that prior to doing so, the "overall picture" should be examined (age of bus, age of students, structural integrity of bus, etc.).

Since seat belts are not required, there is no federal standard dealing with seat belt load requirements. The NHTSA believes that some buses have the structural strength to withstand seat belt loads and others do not. The determination of capability to withstand seat belt loads would need to be done on an individual bus basis.

Federal Standards

All bus-type vehicles, both commercial and school, must comply with the same Federal Motor Vehicle Safety Standards. In addition, school buses must comply with four additional standards, all of which became effective on April 1, 1977:

1. Roll Over Protection

2. Bus Body Joint Strength

3. Passenger Seating and Crash Protection

4. Fuel Integrity

These additional standards required several changes in bus construction which resulted in passenger safety. One of the major changes is the concept of compartmentalization--keeping a child contained in a small space. This required interior seating changes--seat back heights were raised from 20" to 24" (federal standard was originally proposed as 32"); and seats were spaced closer together.

Padding became a requirement on all contactable surfaces, especially seats, and seats were made to have some degree of flexibility. Structural improvements to the body of the bus were also required.

SEAT BELT USAGE BY SCHOOL DISTRICTS

We are unaware of any state law requiring seat belts on school buses for home to school transportation. In our research we have found two districts in the United States which have installed seat belts on school buses.

Greenburgh Central School District #7

The Greenburgh Central School District #7, in New York, is the first school district to use seat belts in their regular transportation program. This was a district decision and not a legal requirement.

Last year, the district's transportation service was split between district-operated transportation (17 buses) and a private contractor (20 buses). This year, the district will provide all transportation services and will have seat belts installed on all buses purchased to provide service to those students previously transported by the contractor. All of Greenburgh's buses were manufactured after April 1977 and therefore comply with federal standards.

The Greenburgh District began installing belts in 1978 and apparently has had no problems with them. A major concern prior to installing seat belts was that they would be used as weapons. However, Salvatore Corda, Assistant Business Superintendent, stated " . . . we have never had an instance where a child has been struck with a seat belt. I'm not saying it doesn't happen, but there's been no incident serious enough for a driver to report it."

The district does some monitoring of usage of seat belts for elementary school children, and spot checks usage for high school students. The district estimates 80 percent usage of seat belts. To date, no district bus equipped with seat belts has been involved in an accident.

The Greenburgh District is located about 25 miles north of New York City, in a middle class area and serves a mixed ethnic population. The district serves kindergarten through 12th grade pupils and transports 3200 students (2500 public and 700 private school students) approximately 540,000 miles per school year.

Hartland Elementary School District

The Hartland Elementary School District in Vermont purchased a new school bus with seat belts at the beginning of the 1983-84 school year.

The bus is a 48-passenger bus and transports students a maximum of ten miles one-way per day. The Superintendent, Philip Hammond, reports that he has received no reports of vandalism or use of the belts as weapons.

The Hartland District is located in a middle class area and serves a predominantly white population.

Seat Belt Usage for Special Education

There is no legal requirement to have seat belts on special education buses although many children are restrained in some manner depending upon their disability.

School district transportation directors specifically stated that, for the purpose of restraint, not safety, some special education children may be belted or restrained in some manner while riding the bus.

REVIEW OF CURRENT RESEARCH STUDIES ON SEAT BELTS IN SCHOOL BUSES

Many of the research studies on seat belts in school buses were undertaken in the 1960s and 1970s. Those involved in this industry (transportation directors, safety officials, researchers) have indicated that there had not been any further studies in this area due to: the safety record of school buses, lack of funds to perform research, and available funds going for research in those areas where the fatality rates are higher.

UCLA Institute of Transportation and Traffic Engineering Study

In 1972, the UCLA Institute of Transportation and Traffic Engineering published a study in which school bus vehicles were crash tested. The study states, "The unacceptable safety performance of lap-belted school children riding in conventional seats was established by the . . . (1966) school bus experiments and again emphasized by these . . . findings." They further state that "the average size school child (13-year old) would sustain less head impact forces if left unbelted than if lap-belted, provided he was protected by a 28" high energy absorbing, UCLA-design seat back." (The UCLA-design seat or safety seats in addition are well padded seats.) They concluded that seat belts are not recommended for school buses having conventional seats with hard surfaces, weakly structured frames, lack of side-force restraint, and grossly inadequate back rest height.

The UCLA study further concluded that seat belts would contribute a significant measure of safety during severe, upset collisions (accidents in which the bus overturns) if the bus is equipped with safety seats.

However, in moderately severe impacts, seat belts were regarded by the authors to be of minor importance when safety seats are used. The size, color, and markings of a school bus tend to give them "special protection" due to public recognition of these vehicles.

UCLA researchers noted that they are strong advocates of lap belts in passenger vehicles. However, because school bus seats are designed differently and positioned closer together, installation of lap belts was inadvisable unless seat structures were designed in conformance with lap belt requirements. (It should be noted that the UCLA study was published in 1972, and has contributed to the standards [such as safety seats] which were adopted in 1977.)

Southwest Research Institute Study

The Southwest Research Institute prepared "A Study Relating to Seat Belts for Use in Buses" under a contract with the California Highway Patrol in January 1977.

Their recommendation not to install seat belts was based on the following:

- California's accident and fatality records for the preceding five years showed that school buses were 16.2 times more safe than automobiles (less than one child per year was killed in school bus accidents during that period).

- Stringent training, inspection, maintenance, identification, licensing, and monitoring can accomplish more than trying to confine the passenger.

- An estimated cost in 1977 of $42,900,000 to install seat belts in school buses and estimated cost of $45,670,000 per year for monitors on school buses to ensure that passengers wear belts.

ORGANIZATIONS CONCERNED WITH SCHOOL BUS SAFETY

Physicians for Automotive Safety

The Physicians for Automotive Safety, located in New York, has endorsed both the installation of belts and higher seat backs in school buses for a number of years. They feel that restraint is the best means of protection against serious injury in the event of an accident.

Los Angeles Area Child Passenger Safety Association

The Los Angeles Area Child Passenger Safety Association (LAACPSA) is a non-profit corporation engaged in promoting child passenger safety in the Los Angeles area (includes a portion of Orange and Ventura counties). This association was actively involved in the passage of the child safety seat law which became effective in January 1983 and sponsors workshops to train individuals on the proper use of car safety seats.

Currently, LAACPSA has formed a school bus safety committee which is investigating all aspects of school bus safety. At the time of this report, they have reached no formal conclusions although they do recommend that seat belts be installed on post-1977 manufactured buses for the purposes of safety and training.

National Transportation Safety Board

The National Transportation Safety Board, a federal agency which reports directly to Congress, prepares accident reports on all forms of transportation. These reports are in-depth analyses of transportation accidents citing causes of accidents, findings of conditions (e.g., weather, condition of road, drivers, etc.), injuries and fatalities, and recommendations. There have been several reports done on accidents in which a school bus has been involved.

In the studies, the investigation team has theorized whether occupant restraint would or would not have reduced injury or prevented fatality. Occupant restraint in reducing injury or preventing fatality appears to depend on severity of the accident, the vehicles involved, cause of accident (e.g., equipment failure) as well as a number of other circumstances (e.g., speed of vehicles, point of impact, etc.).

Studies by the National Highway Traffic Safety Administration show that safety belts are 50-65 percent effective in preventing fatalities and injuries in automobiles. Thus safety belts may not be the cure to preventing all injuries and/or fatalities in school buses. Seat belt safety in school buses has not been tested because the few standard school buses with seat belts installed have not been involved in accidents.

SCHOOL BUS FATALITY STATISTICS

California

California Highway Patrol (CHP) statistics show that no pupil passengers were killed in a school bus related accident in fiscal years 1980-81 and 1981-82, and one pupil passenger was killed in fiscal year 1982-83.*

The single pupil fatality occurred in a school bus/truck collision in Humboldt County. A pupil and the driver of the truck were both killed in the head-on collision in which the truck driver was determined at fault. The absence of a seat belt for the pupil passenger was not believed to have been a factor in this fatality. (The bus involved was manufactured prior to the 1977 standards.)

Additional California statistics provided by the CHP show that, for the past ten years, the pupil fatality rate is 0.25 per 100 million miles and the fatality rate for the motoring public is 3.5 per 100 million miles. In this ten-year period, five pupil passengers and 47,701 California motorists and passengers were killed.

*There were no pupil pedestrians killed in the three-year period 1980-81 through 1982-83 in California. Because this type of fatality would not be related to the use of seat belts, this statistic will not be discussed further. It should be noted, however, that nationwide, more pupils are killed outside the school bus than inside the bus.

Nationwide

The National Safety Council statistics show that ten pupil passengers were killed on school buses for the 1981 calendar year in the United States. The National Highway Traffic Safety Administration Center for Statistics and Analysis show the fatality rate for school bus occupants for 1981 to be 0.4 per 100 million miles contrasted to passenger car occupants at 2.4 per million miles.

AD HOC COMMITTEE CONCERNS

The Los Angeles County Superintendent of Schools ad hoc committee members had many concerns on the installation of seat belts in school bus vehicles which could not be answered at this time. These concerns are based on either actual experience or conjecture based on past experience.

- Would seat belts be used as weapons or cause injury accidentally? An incident was reported in a Los Angeles County school district where a special education student was accidentally hit by a seat belt.

- Would monitors be required to ensure that students wore belts and to ensure that small children are belted properly? Additional injury could result from belts which are worn too loosely.

- Where should seat belts be anchored--to the seat or to the floor? (An American Safety Belt Council representative stated that the industry believes belts should be secured to the floor.)

- Would a floor anchor be a tripping hazard to students in view of the current bus seat spacing?

- Buses may not be structurally strong enough to withstand seat belt loads. Would these buses require retrofit?

- In view of current standards for compartmentalization, will seat belts cause more injury since the child will be restrained at the hips and any force will cause the child to "jack-knife." This could result in the child's head striking the seat in front.

- Would children panic or become dazed from striking the forward seat in emergency situations and not be able to remove their belts?

- If the bus was overturned, children could be suspended as much as eight feet in the air. Could this cause additional injury?

- Would space be lost by installing belts (e.g., elementary school children sit three to a seat, would belts reduce seating space to two; would seat belt load requirements reduce seating from three to two passengers per seat)?

- Would the seat belts be vandalized? Concern for vandalism of seat belts stems from experiences related to vandalism of the school bus. Members of the committee reported that seat covers had been ripped/slashed, graffiti was written on the bus, seat backs had been broken, etc. There had also been reports of pencil leads and chewing gum inserted into the buckles of seat belts.

PROS AND CONS OF SEAT BELTS IN SCHOOL BUSES (continued)

Organizations

PRO

- Physicians for Automotive Safety
- Parents
- Los Angeles Area Child Passenger Safety Association

CON

While it is not possible to determine any group specifically opposed to seat belts in school buses, the following organizations have reservations on installing seat belts without design modifications to the buses, or specific determinations made about seating and anchorages:

- American Safety Belt Council
- California Association of School Transportation Officials
- National Safety Council
- National Highway Traffic Safety Administration
- Bus manufacturers

FUTURE CONSIDERATIONS

We believe that the post-1977 manufactured buses are considerably more safe since they comply with the federal standards dealing with compartmentalization, structural strength, etc.

The National Transportation Safety Board plans to do a study on these buses and evaluate to what degree these standards have raised the safety level of school buses. When this study is released, it may be appropriate to re-evaluate the number of pre-1977 manufactured buses owned by school districts and seek replacement funds for these.

- What additional maintenance would be required to clean belts and ensure they are working properly?

- How would the district's liability be changed if seat belts were installed? Currently, bus insurance premiums are very low. This is due to the history of bus safety. However, if seat belts are installed on school buses, several issues of district liability will be raised. Would the district be liable when:

    - child is not wearing seat belt and is injured in a school bus accident

    - child is not wearing seat belt properly and suffers injury (injury can be caused when the belt is worn either too loosely or too high--over abdomen rather than hips)

    - child is injured by tripping over belt, hit by belt, etc.

    - child is not wearing seat belt because it does not operate properly (vandalized earlier in the day) and is injured in a school bus accident

- How would transportation contractors be affected if seat belts on school buses are required--would higher costs be passed on to school districts?

PROS AND CONS OF SEAT BELTS IN SCHOOL BUSES

PRO	CON
• may provide protection in accidents (particularly "roll over")	• may cause injury due to current design of buses
• greater control of children in bus	• many buses cannot have belts installed--would these buses be required to be retrofit to withstand seat belt loads?
• excellent training at a young age to use belts	• belts may be used as weapons
• eliminate confusion of children who use belts in family car but have none on school bus	• additional costs to retrofit, purchase, and maintain belts

NEA TODAY
APRIL 1985

Debate

Should school buses have seat belts?

YES

Association activist Diane Formosa has driven school buses in Clover Park—a Tacoma, Wash., suburb—for 16 years. She currently transports both handicapped and regular students. Formosa is president of the Clover Park Bus Drivers Association.

My 16 years of school bus driving have convinced me that it's time to equip our buses with seat belts. They're needed to ensure that our children will have the best possible protection in emergencies.

Driving a bus is an enormous responsibility. When you're stopped with a busload of children at a railroad crossing and a full gravel truck is coming upon you at 40 miles an hour, you realize how great your responsibility is.

At times like those, I think how much more secure I'd feel if those children whose lives are in my hands were wearing seat belts.

We bus drivers can't control every situation we encounter when we're traveling to and from schools. Looking out for the other driver certainly helps, but even the safest driver has no guarantee that he or she won't become involved in an accident.

Imagine what can happen if a bus makes an emergency stop or is involved in a collision. Children may be thrown from their seats to unsafe parts of the bus or into the windows. Smaller children are at special risk because their feet don't touch the floor and because they lack coordination. They need seat belts just to prevent them from falling out of their seats when there's any quick movement of the bus.

As far as I'm concerned, no handicapped student should be without a seat belt—for obvious reasons.

Some would argue that students on school buses are rarely hurt in collisions. They point to the size and weight of the buses as compared to other vehicles. But school bus accidents occur every year, and children *do* get hurt! According to the latest statistics from the National Safety Council, there were 3,300 student injuries—and 55 student deaths—in school bus accidents in 1983.

There are other practical arguments for equipping buses with seat belts:

- Students who run, jump, or hit other children on the bus would be easier to control if they wore seat belts.
- If *every* child were required to be belted in, school districts would finally have to provide enough buses to eliminate the problem of overcrowding.
- Seat belts could be used to control band instruments—which can become dangerous flying objects.
- Having seat belts on school buses would reinforce in children the importance of the seat belt habit. As things stand now, parents who have tried to make "buckling up" an automatic response in their children find their efforts undermined every time the kids get on a school bus.

I agree that there are problems to be worked out before seat belts on school buses become a reality. For example, just installing the belts won't necessarily mean they're *used*. We need legislation requiring that all students who ride school buses *must* wear seat belts.

That leads to another crucial question: Who would supervise the use of belts? School bus drivers already have more than enough to do, trying to drive safely amidst everyday discipline problems, kids who get sick on the bus, and all the rest. It would be more than unreasonable to expect them also to monitor whether each child is buckled up.

What districts should have, under *any* circumstances, are aides on buses to help with the supervision. Just as an airline steward or stewardess checks passengers' seat belts, so would the school bus aide. And he or she would help with evacuation of children in case of fire or other emergencies.

Then there's the problem of money. There's no way to get around it. Hiring school bus aides takes money—as does installing and maintaining seat belts.

But compare all the costs to the value of just one child's life. Our children are more important than any dollar figure a district can present.

Seat belts on school buses are a must.

NO

Becky Howell Lee is an 11-year veteran school bus driver in Alabama's Walker County. President of the Alabama Education Association's Educational Support Personnel Organization, she also serves on NEA's Committee on Educational Support Personnel.

My main concern as a bus driver is getting students to and from school safely. I love the children who ride my bus, and if I thought seat belts would make the bus safer for them, I'd consider helping install them myself.

I don't think lap belts would make buses safer, though. There are several reasons why I think they might even do more harm than good.

One of the most important arguments against seat belts on buses is the compartmentalized safety design of buses since 1977. The National Highway Traffic Safety Administration's regulations beginning in that year called for higher-backed, impact-absorbing seats and padded reinforcement of those seats.

Compartmentalization works when, upon impact, an unbelted child slides forward on the seat and into the back of the seat ahead. In contrast, a child with a lap belt will be thrown forward at great force, possibly causing severe injury to his or her abdominal region.

Experts contend, and have testified before Congress, that young children aged five to seven may not have strong enough internal organs to withstand the pressure of a lap belt in a collision. Seat belts have caused crushed kidneys, ruptured bladders, and other internal injuries in young children.

I know that those who want seat belts in buses say that in an accident where the bus rolls over, belted students would be less likely to be thrown out of the bus. Think about this, though.

If the bus came to rest on its side or roof, pupils could suffer serious head injuries when releasing the belts. In some cases their heads could be as much as three or four feet from the ceiling.

A fire in such a situation could be an even greater catastrophe. An injured child unable to unfasten the seat belt might be trapped in a burning bus.

I agree that young children should be taught to use seat belts in cars, but I think they can understand why that doesn't necessarily apply to buses. Children have the ability to reason.

Parents should explain that buses are the safest vehicles on the road—at least 14 times safer than the family car. An average auto weighs only one-seventh as much as a bus does, and children transported in buses are above the normal impact and penetration zone of an automobile collision.

In Alabama, there hasn't been a death inside a school bus since 1969, and nationally, the number of school bus fatalities is decreasing yearly. The decline in fatalities has many causes. Among them: drivers who maintain discipline on buses.

Keeping order among 60 children on a bus is hard enough without the added responsibility of a seat belt law. A driver would have to make sure that students could get the belts on and off—and prevent certain kids from using them as weapons or cutting them out of the seats altogether.

Statistics show that children who ride buses are in the greatest danger as they get on and off the bus, not while they're inside. In the last 53 years, most school bus fatalities have occurred in loading and unloading zones, not in moving accidents. Some have happened because a passing motorist didn't stop, or a bus driver didn't see a small head in front of a bus.

Better and more diverse training for drivers, new mirror designs for buses, new crossing gates, and stricter and more frequent inspections could make buses safer. Public awareness is also an important safety factor.

Parents must teach their children the importance of obeying the bus driver and maintaining good conduct on the bus.

It's not seat belts that are needed in school buses. What is needed is an adult on each bus to control the children so the bus driver can concentrate on the road and safe driving.

SCHOOL BUSES

This category includes both vehicles **designed** as buses and used in school transportation as well as vehicles of any body type **functioning** as school buses. (Figure VI-21 includes accidents, involvements and occupant fatalities for only those school buses **designed** as buses).

In FARS, a "school bus-related accident" is any fatal accident in which a vehicle functioning as a school bus is either directly or indirectly involved. Thus the category includes, for example, any accident in which a child disembarking from a school bus is struck by another vehicle. The fact that the child was struck after exiting the bus classes the accident as school bus-related even though the bus was neither a struck nor striking vehicle. Occupants of those vehicles which did not have the typical school bus body type but which were functioning as school buses were included with school bus occupants.

School bus-related accidents have steadily decreased since 1978 (Figure VI-21). Each year since 1978, between 9 and 23 occupants died in school bus accidents. Since 1980, fatal accidents involving school buses dropped 23.8 percent. The number of school buses involved in nonoccupant fatal accidents was at its lowest point since 1978. A smaller proportion (5 percent) of the occupants of school buses that were involved in fatal accidents in 1983 were themselves killed in those accidents than was the case for accident-involved occupants of any of the other vehicle types considered in this chapter. Table VI-12 displays data for school-type buses, whether or not they were used as school buses.

FIGURE VI-21
SCHOOL BUS RELATED FATAL ACCIDENTS
AND RELATED FATALITIES FOR 1978 TO 1983

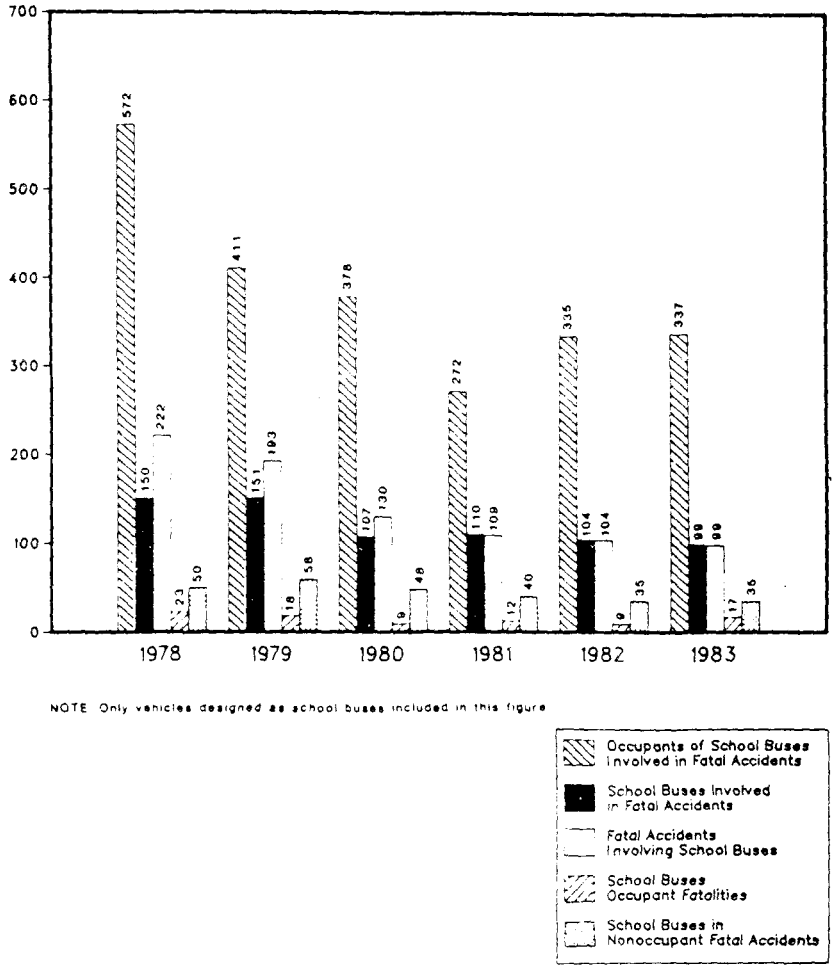


TABLE VI-12
INVOLVED VEHICLES, OCCUPANTS AND FATALITIES BY BUS TYPE

	Vehicles		Occupants		Occupant Fatalities	
	Number	%	Number	%	Number	%
Buses						
School Bus	99	32.4	337	30.7	17	32.1
Cross Country/Intercity Bus	41	13.4	176	16.0	9	17.0
Transit Bus	105	34.3	211	19.2	4	7.5
Other & Unknown Bus	61	19.9	375	34.1	23	43.4
Total	**306**	**100.0**	**1,099**	**100.0**	**53**	**100.0**

Source: U.S. Department of Transportation, Fatal Accident Reporting System, 1983

The 99 school bus accidents in 1983 resulted in 139 deaths, 50 people who were killed were non-occupants and 89 were vehicle occupants, but only 13 of these were school bus occupants. In Figure VI-22, which presents a further distribution of these fatalities, "other driver" and "other passenger" were occupants of involved vehicles that were neither school buses nor vehicles being used as school buses.

The age distribution of the 44 pedestrians killed in the school bus accidents is depicted in Figure VI-23. Children under nine accounted for almost two-thirds of the pedestrian fatalities.

FIGURE VI-22
DISTRIBUTION OF FATALITIES IN FATAL ACCIDENTS INVOLVING SCHOOL BUSES
(139)

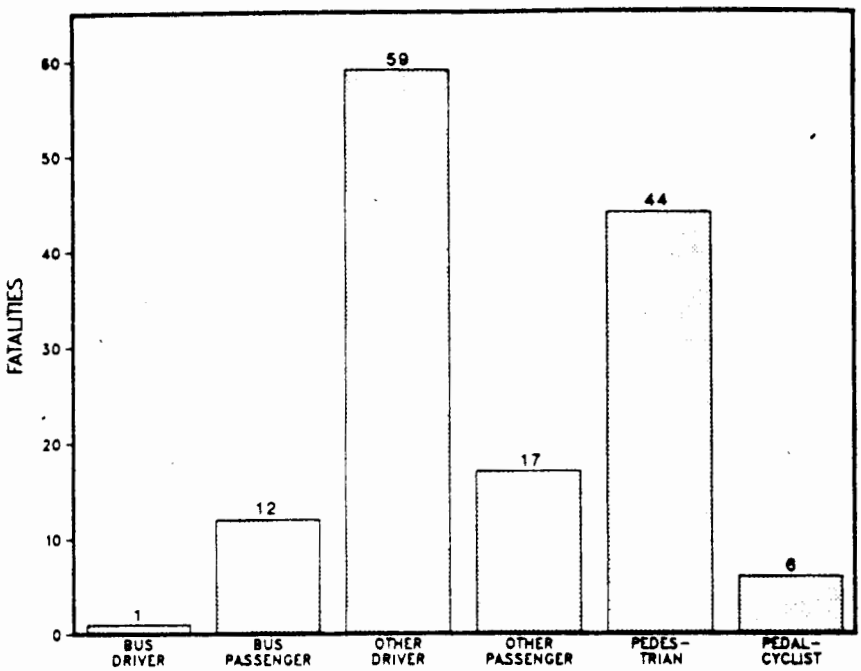
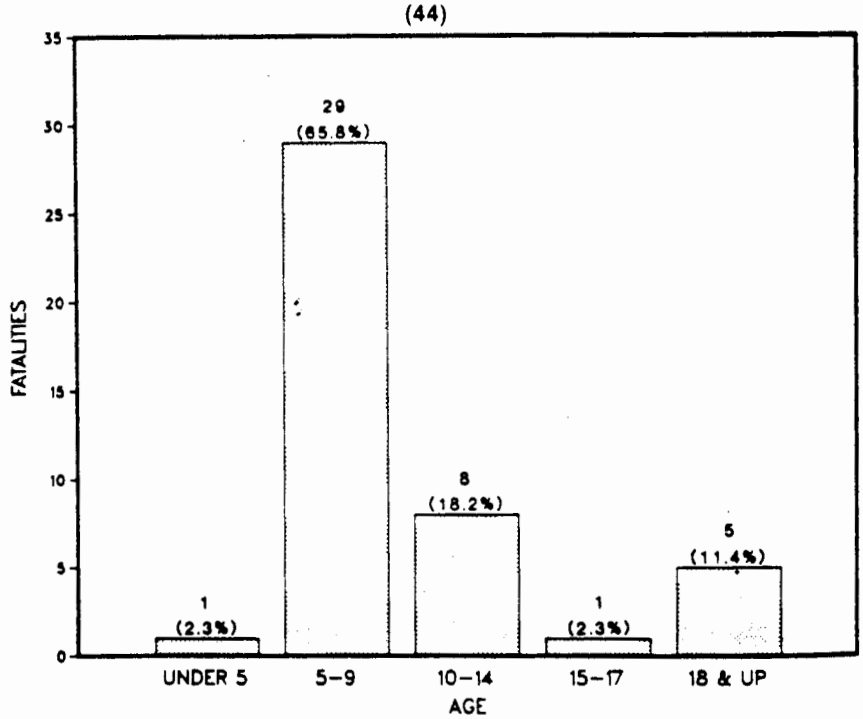


FIGURE VI-23
PEDESTRIAN FATALITIES IN FATAL SCHOOL BUS ACCIDENTS
(44)



SCHOOL BUS RELATED FATALITIES

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Occupants of School Bus											
Drivers			1	6	5	2	3	1	2		
Passengers			20	17	13	7	11	20	17		
TOTAL			21	23	18	9	14	21	19		
Pedestrian											
Struck by School Bus			44	48	50	35	35	34	37		
Struck by Other Vehicle			19	35	25	11	9	11	13		
Other			2	3	3	3	2	3			
TOTAL			65	86	78	49	46	48	50		
Occupants of Other Vehicle											
Drivers			66	95	77	56	58	54			
Passengers			34	40	26	32	23	12			
TOTAL			100	135	103	88	81	66	80		
Bicyclists			8	3	6	4	3	2	6		
GRAND TOTAL			194	247	205	150	144	137	155		

FATALITY RATE
(per 100 million vehicle miles)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
TOTAL	3.4	3.2	3.3	3.3	3.3	3.4	3.2	2.8	2.6		
PASSENGER CAR OCCUPANTS	2.5	2.4	2.4	2.4	2.4	2.5	2.4	2.0	1.9		
MOTORCYCLE OCCUPANTS	14.3	14.8	18.2	19.7	22.2	28.6	32.7	37.1	35.5		
BUS OCCUPANTS	1.0	1.3	0.7	0.7	0.6	0.7	1.2	.5	0.8		
SCHOOL BUS OCCUPANTS	0.6	0.7	0.5	0.6	0.6	0.5	0.4	.3	0.5		
TRUCK OCCUPANTS	2.1	2.1	2.2	2.3	2.4	2.1	1.7	1.7	1.6		
SINGLE UNIT TRUCK OCCUPANTS	2.3	2.3	2.3	2.5	2.6	2.1	1.8	1.8	1.7		
COMBINATION TRUCK OCCUPANTS	1.2	1.4	1.4	1.4	1.5	1.5	1.4	1.2	1.1		

Source: National Center for Statistics and Analysis, National Highway Traffic Safety Administration

Note: the term "school bus related accident" refers to those fatal accidents in which a vehicle functioning as a school bus is directly or indirectly involved. A child struck by another motor vehicle after exiting the school bus is classified as a school bus related accident even though the school bus is not a struck or striking vehicle.

American Academy of Pediatrics

Policy Statement: School Bus Safety

In 1970, the American Academy of Pediatrics, in a supplement to *Pediatrics*, reviewed the laws, regulations, and practices in school busing in the United States.[1] This survey was carried out by Physicians for Automotive Safety. The information available at that time (from 46 states) indicated that 14,709,000 students were being transported in a total of 203,994 vehicles.[1] Recent data now indicate that approximately 22 million pupils are transported daily to and from schools in the United States in nearly 400,000 school buses.[2]

Based in part on the recommendations resulting from the 1970 survey, the National Highway Traffic Safety Administration in February 1973 issued the Federal Motor Vehicle Safety Standard (FMVSS-222), which became effective in April 1977. That standard prescribed passive protection for school bus passengers and looked specifically at: 1) the seat and seat anchorage strength; 2) the seat and restraining barrier height and surface area; and 3) padding on surfaces within occupants' head space.

The National Highway Traffic Safety Administration subsequently has denied a petition from Physicians for Automotive Safety that the FMVSS-222 include requirements for anchorages for seat belts. Seat belts presently are required in vehicles weighing 10,000 pounds or less with a maximum passenger capacity of 16. Seat belts are not required for larger school buses.

The primary reason given for not requiring seat belts in buses weighing more than 10,000 pounds is that the number of "inside bus fatalities" nationally does not justify the expense and maintenance of seat belts. However, in 1982 there were 140 deaths resulting from school bus accidents. Included in this total were 60 pupils, 5 bus drivers and 75 "others." In addition, there were 7,000 reported injuries; 4,200 of those injured were students.[3] Therefore, should the number of deaths alone not justify changes, the potential for a reduction in the number of injuries, and/or in the seriousness of those injuries, would seem to make further changes in FMVSS-222 highly desirable.

Unsupported arguments have been presented in an effort to prevent seat belt installation on school buses. Among these are:

1. Children can't handle the buckle adequately. (The American Academy of Pediatrics notes that all children, given their familiarity with seat belts and buckles, should be able to satisfactorily buckle and unbuckle seat belts.)
2. The buckles would entrap children and could leave them dangling from the ceiling in accidents in which the bus is overturned. (This is true, but it is still preferable for children to be strapped in rather than thrown out of the seat or the vehicle at the time of an accident.)
3. Wearing seat belts would produce internal injuries. (With the restraints presently available, any school aged child can safely wear a seat belt.)
4. Children could use the belts as weapons. (Children have much better weapons available, including lunch boxes and books. In addition, the newer, lightweight, smaller, retractable seat belts now available are unlikely to be effective as weapons.)

Based on a review of the available and extensive data, the American Academy of Pediatrics supports the following changes in School Bus Safety Standards:

1. Seat backs should be elevated to 28 inches. This is four inches above the height now mandated by federal regulations and will support and cushion a child's head and neck.
2. All seat backs and tops should be padded with firm materials that adequately absorbs impact. The padding should completely cover the entire rear of the seat in addition to the top rail. The padding also should be placed on all stanchions and "modesty panels." Seat construction should be designed to eliminate sharp or unyielding objects that could cause or worsen injury.
3. Seat belts should be required on all *newly-manufactured* school buses—regardless of their size and the number of pupils transported.
4. Adequate and appropriate bus driver training should be mandatory in all school districts and should include provision for health screening on a periodic basis, including vision and hearing evaluations.

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[2] Protection for School Bus Occupants, Issue Paper, U.S. Department of Transportation, September 1981; 83:39-46
[3] National Safety Council: School Bus Accidents, 1982. *Accident Facts*, 1983 ed., Chicago, IL, p. 92.

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The NSTA Position

National School Transportation Association
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The National School Transportation Association's prime concern is the safety of the children its members transport daily. In fact, the Association was founded — and continues — because they are able to get students to and from school in the safest possible manner. Traveling in today's well-equipped, shiny yellow bus is seven times safer than taking the same trip in the family automobile.

This is why NSTA supports the National Highway Traffic Safety Administration's position on occupant protection in school buses.

Our association is not so much opposed to the use of safety belts in school buses as it is supportive of the concept of *compartmentalization.* We came to this position after years of tests, experiments and studies resulted in the NHTSA concluding that compartmentalization provides an adequate level of safety protection. In contrast, there are no standards established for seat belts on large school buses.

NSTA believes that compartmentalization — containing children within a structurally reinforced passenger compartment of fully padded, high-back seats and crash barriers — is preferable to any form of containment that relies upon the use of safety belts or other similar restraining devices.

Furthermore, we believe that the studies and excellent safety record of school buses support compartmentalization. The *real* safety problems in school transportation — and those that need to be thoroughly addressed by the industry, schools, parents and the public — are the fatalities and injuries that occur where children get on and off the buses — the loading zones.

Those of us who work with the children and school buses every day feel that every new item that is added or changed on school buses should be well tested and engineered prior to being mandated as a regulation. This is why NSTA will continue to support the compartmentalization concept until documented research establishes that seat belts on school buses will raise the level of protection for the occupants.

NSTA is concerned that many interested and well-meaning individuals are not informed of the safety record of school buses, the safety features incorporated into school bus construction, and why seat belts are not mandated or needed on school buses. This is why the board of directors has approved a special edition of the *National School Bus Report* to address these topics.

NSTA Board of Directors

The National School Transportation Association was founded in 1964 by private school bus contractors to "promote and foster the highest degree of safety in the transportation of school children." The Association represents approximately 40 percent of the nation's yellow school bus fleet. The bulk of these private contractors, many of them from second- and third- generation firms, are members of the NSTA as well as state contractor as-