

*Log H-368*

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: November 30, 1983

Forwarded to:  
Governors and Legislative leaders of  
American Samoa, Guam, Puerto Rico,  
and the Virgin Islands

SAFETY RECOMMENDATION(S)  
H-83-49 and -50

On December 7, 1982, based on the preliminary results of its initial investigations for its study of child motor vehicle passenger protection, the Safety Board issued Safety Recommendations H-82-59 and -60 to the Governors or Governors-elect of 31 States and the Mayor of the District of Columbia. Safety Recommendation H-82-59 urged the adoption of child passenger protection laws requiring the proper use of child safety seats, and Safety Recommendation H-82-60 urged the adoption of comprehensive, statewide child passenger safety programs. At the time the recommendations were issued, 19 States had previously passed child passenger protection laws requiring safety seat use. In the next 7 months, 22 more laws were enacted, bringing the nationwide total as of July 1, 1983, to 41 child passenger protection laws enacted by 40 States and the District of Columbia. 1/

Motor vehicle accidents are the number one killer andcrippler of children in the United States. Infants and small children riding as passengers in motor vehicles are especially vulnerable to death, disability, and disfigurement, even in minor accidents and noncrash incidents, such as sudden stops. In the last 5 years (1978 through 1982), nearly 3,400 child passengers under 5 years old were killed in traffic accidents, and more than 250,000 more were injured. The majority of these losses are preventable; up to 90 percent of the fatalities and 67 percent of the disabling injuries would have been prevented by the proper use of child safety seats.

Accident investigations conducted by the Safety Board show that it is extremely dangerous for an infant or small child to ride without proper protection in a motor vehicle at any time, under any circumstances. In 23 accidents investigated, 18 unrestrained infants and small children were killed and 9 were injured, including infants as young as 8 days, 5 weeks, and 7 weeks old. Most of the accidents were not severe, and other (older) occupants of the same vehicle, while injured, survived.

1/ The Governor of Pennsylvania signed a child passenger protection law on November 1, 1983, bringing the total to 42 laws.

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The accidents which killed or injured unrestrained infants and small children included minor accidents and cases of severe braking without a collision on city business or residential streets, as well as more serious crashes on highways. Some of the children were killed or seriously injured on routine trips as little as 50 yards from the family's home while going to or returning from shopping, taking a child to a babysitter's, traveling to a local restaurant, going to visit grandparents or other relatives, driving a friend or relative to work, or taking the children out for ice cream.

On September 7, 1983, the National Transportation Safety Board completed a safety study of child motor vehicle passenger protection. <sup>2/</sup> For the purpose of the study, the Safety Board conducted 3 regional public hearings and investigated 53 accidents involving infants and small children, restrained and unrestrained, in 19 States. The study highlighted the dangers to unrestrained children in accidents and noncrash incidents, such as sudden stops, and underscored the lifesaving and injury-prevention potential of child safety seats. As a result of the study, the Safety Board concluded that misuse of child safety seats is a significant problem which requires considerably increased emphasis. The study identified several provisions in child passenger protection laws which operate to exclude many infants and small children from the protection of the laws and found that virtually none of the laws is designed to foster the transition of children from safety seat use to safety belt use when child safety seats are outgrown.

Based on the analysis reported in the study, the Safety Board believes that a child passenger protection law should incorporate as completely as possible the following major elements: a provision stating the age, height, and weight of children required to use child safety seats, a provision requiring children to use safety belts in the event they outgrow the child seat before they exceed the weight limitation specified by law; a requirement that the driver is responsible for ensuring the proper restraint of the children riding in his/her motor vehicle except when the child's parent or legal guardian is present; a requirement extending the law to all vehicles equipped with safety belts; and finally, a provision for a continuing evaluation of the effectiveness of the law. The report also points out that penalty and enforcement activity should be supplemented by educational and public awareness programs to encourage the use of child seats and safety belts. A fuller description of the specific elements cited in the study is attached to this letter.

The 53 accidents investigated as part of the Safety Board's study were not selected to provide a statistically representative sample. However, the misuse of safety seats documented in these accidents is generally consistent with the extensive incidence of misuse identified by the Physicians for Automotive Safety in observational surveys of child safety seats in normal everyday use. The widespread incidence of safety seat misuse warrants urgent attention because, as more child passenger protection laws go into effect and safety seat use increases, the number of safety seats misused can also be expected to increase. Fortunately, safety seats are "forgiving" in the sense that, in many accidents, a safety seat will still provide protection against death or injury under some misuse conditions and, in some cases, will provide partial protection although some injury may occur. However, unless effective ways are found to combat the misuse problem, accidents involving needless fatalities and injuries to children riding in safety seats that are misused can be expected to increase.

To combat and reduce the misuse problem, improvements are needed in several areas, including the public education and the safety seat loan components of child passenger safety programs. These programs typically include information on how to use

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<sup>2/</sup> For more detailed information, see Safety Study--"Child Passenger Protection Against Death, Disability, and Disfigurement in Motor Vehicle Accidents" (NTSB/SS-83/01).

safety seats properly. Nonetheless, in some accidents involving misuse, the user failed to follow the manufacturer's instructions even after exposure to public education on the subject. The Safety Board believes that there is a need to substantially increase emphasis on the misuse problem in public education programs and to include more detailed and specific information about how various kinds of usage errors can degrade safety seat performance in crashes.

Furthermore, emphasis on the need for special protection for infants and small children may have led to an incorrect perception that safety belts do more harm than good to children in crashes. The medical evidence that is available and limited data on crash injuries to safety-belted children indicate that safety belts prevent ejection and prevent or reduce impact injuries to children from contact with interior vehicle structures. Although some safety belt-induced injuries can occur (and the risk of these appears to be significantly greater for infants), the risk is less than the risk of transporting children unrestrained. Parents and others transporting infants and small children need to be encouraged to at least use safety belts to protect child passengers who otherwise would be transported unrestrained.

Therefore, as a result of its Safety Study of Child Passenger Protection Against Death, Disability, and Disfigurement in Motor Vehicle Accidents, the National Transportation Safety Board recommends that the Governors and legislative leaders of American Samoa, Guam, Puerto Rico, and the Virgin Islands:

Enact legislation requiring the proper protection of children traveling in motor vehicles, following as closely as possible the elements set forth by the National Transportation Safety Board in its Safety Study, "Child Passenger Protection Against Death, Disability, and Disfigurement in Motor Vehicle Accidents." (Class II, Priority Action) (H-83-49)

Include, as part of a statewide child passenger safety program, public information and education activities specifically aimed at combating misuse of child safety seats. (Class II, Priority Action) (H-83-50)

The National Transportation Safety Board, which has requested that all States and territories work to overcome misuse of child seats, is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (P.L. 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations. Therefore, we would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS, BURSLEY, and ENGEN, Members, concurred in these recommendations.

  
By: Jim Burnett  
Chairman

Attachment

## **Recommended Elements of a Child Passenger Protection Law**

### **A. Age and Type of Protection**

- 1) For infants and children through 4 years old whose height does not exceed 40 inches and whose weight does not exceed 40 pounds, require use of a child safety seat or other child restraint system; for a child 1 year old or older transported by a person other than his or her parent or legal guardian, or in a vehicle which is not owned by the parent or legal guardian, permit use of a safety belt, preferably in the rear seat, in lieu of a child safety seat.
- 2) For infants and children through 4 years old whose height exceeds 40 inches or whose weight exceeds 40 pounds, require use of a safety belt, preferably in the rear seat, or a child restraint system, such as booster seat, which is appropriate for the child's height and weight.
- 3) For all children age 5 and older, require use of a vehicle safety belt or a child restraint system, such as a booster seat.
- 4) Exceptions: a) when restraint use would be inappropriate for medical reasons or during an emergency; or b) when the number of passengers exceeds the number of seating positions equipped with safety belts, if all safety belts are in use and if preference in use of restraints is given to children.

### **B. Person Responsible for Child's Protection**

The driver is responsible, except when the child's parent or legal guardian is present in the vehicle.

### **C. Vehicles Subject to Child Passenger Protection Requirements**

All vehicles equipped with safety belts at the time of manufacture or currently equipped with safety belts.

### **D. Specific Prohibitions**

- 1) Temporarily unrestraining a child for nursing, feeding, or diapering.
- 2) Using household infant carriers or home booster chairs not designed for motor vehicle crash protection.
- 3) Leaving a child under age 5 secured in a child safety seat or child restraint device in a vehicle that is unattended by an adult.

### **E. Acceptable Child Safety Seats and Child Restraint Systems**

Those which meet applicable Federal Motor Vehicle Safety Standards in effect at the time of manufacture.

### **F. Proper Use Required**

- 1) A child safety seat or other child restraint system must be used exactly in accordance with the manufacturer's instructions.

- 2) A safety belt must be used properly, according to the instructions of the vehicle manufacturer.

G. Penalty for Noncompliance

- 1) An appropriate fine, which may be waived for the first violation upon provision of proof that a child safety seat or other appropriate child restraint system has been acquired within a period of time established by the law.

H. Enforcement

Evidence of violation is sufficient cause for enforcement without the occurrence of a separate violation of law or other prerequisite.

I. Evaluation

Ongoing or periodic evaluations of effectiveness of State law, including measurements of the degree of compliance, the degree of misuse of child safety seats, the degree of enforcement, and accident consequences to restrained and unrestrained child passengers.