

Log H-370

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: November 30, 1983

Forwarded to:

Governors and Legislative leaders of  
Arizona, Arkansas, Colorado, Georgia,  
Hawaii, Indiana, Maine, Maryland,  
Mississippi, Missouri, Montana,  
Nebraska, Nevada, New Hampshire,  
New Jersey, New Mexico, North Dakota  
Oklahoma, Oregon, Pennsylvania, South Carolina,  
Washington and the Mayor and Chairman of  
the Council of the District of Columbia

SAFETY RECOMMENDATION(S)

H-83-52

On September 7, 1983, the National Transportation Safety Board completed a safety study of child motor vehicle passenger protection. <sup>1/</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.

The Safety Board investigated the use and crash performance of 34 child safety seats in 32 accidents, including seats of 16 different designs made by 7 different manufacturers. The investigations showed clearly, and in some cases, dramatically, that child safety seats can save lives and prevent or minimize injury to infants and small children in motor vehicle accidents. In 24 accidents investigated, 25 child safety seats provided sufficient protection to prevent or minimize injuries to infants and small children. Six of the safety seats were being used correctly at the time of the accident, including four which demonstrated excellent performance in moderate to severe crashes and two which were involved in noncrash incidents. In 18 accidents, 19 safety seats which were misused still provided sufficient protection to prevent or minimize injury to 19 children—including 9 accidents in which one or more other passengers in the same vehicle were killed or seriously injured. However, the remaining nine safety seats that were misused did not provide sufficient protection.

<sup>1/</sup> For more detailed information, see Safety Study--"Child Passenger Protection Against Death, Disability, and Disfigurement in Motor Vehicle Accidents" (NTSB/SS-83/01).

Although the accidents investigated were not selected to provide a statistically representative sample, the misuse involved in the 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 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.

On December 7, 1982, based on the preliminary results of its initial investigations, 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. When the recommendations were issued, 19 States had 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. <sup>2/</sup> Twenty-seven laws were in effect as of July 1, 1983, and the other 14 laws were scheduled to take effect on various dates between then and July 1, 1984. The Safety Board is pleased by the prompt, responsive action taken by the Legislatures and Governors of 22 of the 32 jurisdictions to which the recommendations were addressed. Based on your action, the first recommendation to you is considered closed. While all, or virtually all, of the States are conducting child passenger safety programs, Safety Recommendation H-82-60 will remain open pending receipt of further information from each jurisdiction as to the extent of these programs.

Based on the final results of the child passenger protection study, the Safety Board has identified a need for further improvements to reduce child passenger deaths and injuries. Currently, the 41 child passenger protection laws that have been enacted vary considerably in their provisions. However, all of the laws contain provisions which exclude many children from the protection of the laws. For example, in most States the responsibility for compliance with the law is limited to a child's parent or legal guardian, or to State residents, or the law is applicable only to motor vehicles registered in the State. In Georgia, Michigan, North Carolina, South Carolina, and Tennessee, a child is not required to be protected when being nursed in a moving vehicle, and some of these

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<sup>2/</sup> The Governor of Pennsylvania signed a child passenger protection law on November 1, 1983, bringing the total to 42 laws.

exemptions extend to when an adult is attending to a child's "personal needs." Furthermore, the laws of Arizona and New Mexico do not permit a law enforcement officer to stop a vehicle solely for the purpose of enforcing the child passenger protection requirements.

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. Safety belt options in laws provide a means of extending child passenger protection requirements to children who are not covered by existing laws as well as to children who cannot use conventional safety seats because of their size or weight.

The intent of child passenger protection laws is positive, rather than punitive. As one witness testified in the public hearings, child passenger protection laws are "education with teeth." Their purpose is to encourage the safe transportation of children, and especially to encourage families to obtain and use child safety seats to protect infants and small children properly. Consequently, most of the laws provide that the fine specified for violations either must or may be waived upon a showing that a child safety seat has been obtained. While the existence of a child passenger protection law in itself serves an educational function, the law must be enforced to be fully effective.

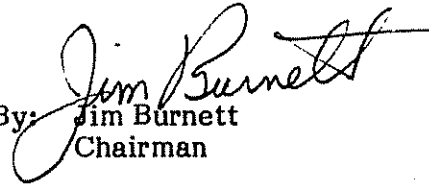
Proper child passenger protection for older children also remains a problem. Motor vehicle accidents are the leading cause of death for children at all ages after the early weeks of life. In 1982 alone, nearly 3,500 children from 5 years old through 17 years old were killed in traffic accidents in the United States. In passenger cars and trucks only, during the last 5 years, nearly 18,500 child passengers from 5 years old through 17 years old were killed in traffic accidents.

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 Governor and legislative leaders of Arizona, Arkansas, Colorado, Georgia, Hawaii, Indiana, Maine, Maryland, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, Washington and the Mayor and Chairman of the Council of the District of Columbia:

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-83-52)

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 our safety recommendations. Therefore, we would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, McADAMS, BURSLEY, and ENGEN, Members, concurred in this recommendation.

By:   
Jim Burnett  
Chairman