

AMERICAN ACADEMY OF PEDIATRICS

Committee on Injury and Poison Prevention

School Bus Transportation of Children With Special Health Care Needs

ABSTRACT. School systems are responsible for ensuring that children with special needs are safely transported on all forms of federally approved transportation provided by the school system, and a plan should be developed to provide the most current and proper support to children with special transportation requirements. This statement provides current guidelines for the protection of child passengers with specific health care needs, including those with a tracheostomy, those requiring use of car seats, or those transported in wheelchairs. Guidelines that apply to general school transportation should be followed, including the training of staff, provision of nurses or aides if needed, establishment of a written emergency evacuation plan, and a comprehensive infection control program.

Research provides the basis for recommendations concerning occupant securement for children in wheelchairs and children with other special needs who are transported on a school bus. Pediatricians can help their patients by being aware of guidelines for restraint systems for children with special needs and by remaining informed of new resources. Pediatricians can also play an important role at the state and local level in the development of school bus specifications.

ABBREVIATIONS. FMVSS, Federal Motor Vehicle Safety Standards; IEP, Individual Education Plan; IFSP, Individual Family Service Plan; OSHA, Occupational Safety and Health Administration.

INTRODUCTION

Many preschool-aged and school-aged children with special needs are transported in school buses. The Individuals With Disabilities Education Act 1997 (Public Law 105-17) has established requirements for preschool children ages 3 to 5 to have access to related services (ie, audiology and occupational therapy). It also requires that infants and toddlers (birth to 3 years of age) have access to these same services; however, it does not specify how these children are to be transported to these services if they are to be conducted outside of the child's natural home or school environment. Although the provider could vary from state to state, it is often the responsibility of the school systems to provide these related services to infants and toddlers.

The Federal Motor Vehicle Safety Standards and Regulations (FMVSS) 222 (School Bus Passenger Seating and Crash Protection) established safety re-

quirements for school bus interiors, but it applied only to able-bodied children. However, a 1994 amendment to FMVSS 222 applied to the securement of wheelchairs and their occupants in school buses.¹ National recommended standards for special education school buses were revised in May 1995 by the Twelfth National Standards Conference on School Transportation.²

Wheelchairs are the primary mode of transport on the school bus for many children with special needs. Most wheelchairs have not been developed as certified transit devices and are not currently subjected to any crash-testing requirements. A certified transit wheelchair is one that meets voluntary design and performance requirements for use as a seat by their occupant when traveling in a motor vehicle. Rehabilitation therapists can help identify products that are certified by the manufacturer to meet this standard. Whenever possible a certified transit wheelchair should be used for school bus transportation.³ Research has provided a basis for recommendations concerning occupant securement for children who must ride in a wheelchair or children with other special needs who are transported on a school bus.^{1,4-6}

RECOMMENDATIONS

1. Any child who can assist with transfer or be reasonably moved from a wheelchair, stroller, or special seating device to a seat belt or child restraint system complying with FMVSS 213 (Child Restraint Systems) should be so transferred for transportation. The vehicle seat should be forward facing, equipped with dynamically tested occupant restraints, and provided for the vehicle at the point of manufacture. The unoccupied wheelchair also should be secured adequately in the vehicle to prevent it from becoming a dangerous projectile in the event of a sudden stop or crash.⁷
2. Passenger seats that have a seat belt or child restraint system attached should have a reinforced frame and meet the requirements of FMVSS 208 (Occupant Crash Protection), FMVSS 209 (Seat Belt Assemblies), and FMVSS 210 (Seatbelt Anchorages). The manufacturer of the school bus should be consulted regarding the noted requirements when ordering or retrofitting an existing school bus.⁸
3. All children weighing less than 50 lb should be secured in an appropriate child restraint or safety vest meeting the requirements of FMVSS 213.⁸

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

PEDIATRICS (ISSN 0031 4005). Copyright © 2001 by the American Academy of Pediatrics.

4. Child safety seats or safety vests must be secured to the bus seat in a manner prescribed and approved by the manufacturer of the safety device. The child restraint should not be secured on a school bus seat adjacent to an emergency exit.
5. Child safety seats used to transport children who weigh less than 20 lb or are younger than 1 year should be attached to the school bus seat in a rear-facing position. A child restraint that is approved for rear facing for greater weights should be considered for a child who weighs 20 lb before 1 year of age.
6. Occupied wheelchairs should be secured in a forward-facing position.
7. Three-wheeled, cart-type units and other wheelchair or stroller-type devices should not be permitted for occupied transport in a school bus unless results of impact tests demonstrate that the device can be secured under impact loading conditions. Any wheelchair or stroller-type unit designed and approved by a manufacturer for transportation must be used according to manufacturer's instructions.
8. Wheelchairs should be secured with fastening devices that are attached to the floor. Any occupied wheelchairs should be secured with 4-point tie-down devices. These tie-down systems should be dynamically tested with a dummy the size of a 50th percentile adult male or with a dummy at the appropriate size for the type of wheelchair used. They must have demonstrated capabilities for restraining the wheelchair during a frontal impact with force conditions of 30 mph and 20g. The wheelchair securement system must not apply restraint to the occupant and should attach to the frame of the wheelchair rather than to the wheels. The occupant should be restrained to the wheelchair with a separate device.
9. Lap boards and metal or plastic trays attached to the wheelchair or to adaptive equipment should be removed before loading and should be secured separately for transport.
10. An occupant restraint system that has been tested at force conditions of 30 mph and 20g for upper torso restraint (ie, shoulder harness) and lower torso restraint (ie, lap belt over pelvis) should be provided for each wheelchair-seated occupant.
11. Any liquid oxygen transported in a school bus should be securely mounted and fastened to prevent damage and exposure to intense heat. An appropriate sign indicating that oxygen is in use should be placed in the school bus.

ADDITIONAL CONSIDERATIONS FOR PASSENGER TRANSPORTATION

The following considerations should be incorporated into the school system plan for the transportation requirements of children with special needs:

1. In accordance with state laws and regulations, a nurse or an aide with appropriate medical training can provide necessary on-board assistance

- and support to most children with tracheostomies who may require suctioning or emergency care during school bus transport. School systems should consider providing nurses or aides when medically necessary to help reduce the potential for respiratory and other related problems occurring while the children are on the school bus. This assistance should be included where appropriate in the child's Individual Education Plan (IEP) or the family's Individual Family Service Plan (IFSP).
2. School transportation staff should participate in the development of the transportation portion of the IEP or IFSP for children who may need special transportation requirements and medical procedures.
 3. School bus transportation staff should have annual access to training programs and resource material in special needs transportation to ensure that they can provide the most current and proper support to children with special transportation requirements. Transportation staff who work with children with special needs can carry out their daily responsibilities when provided with documented training from a team of professionals, including therapists, nurses, and certified child passenger safety technicians that ensures consistent and proper restraint for children with special needs on school buses.^{9,10}
 4. The caregiver (family, guardian, foster parent) of a child with special needs should be informed of the importance of incorporating appropriate and safe transportation specifications in the child's IEP or IFSP.
 5. The caregiver of a child with special needs and the designated bus driver for the child's bus route should share information addressing the specific needs of the child transported before and during the school year. An emergency medical information card should be kept on the bus for each student transported. Transportation personnel should adhere to the school district's policy regarding confidentiality of student information.
 6. School systems can help ensure optimum protection for children with special needs during school bus transport by establishing a written plan that outlines procedures for emergency evacuation for each child and by requiring, at the minimum, an evacuation drill for each school year that enables the transportation staff to practice evacuating children under their care. Local emergency response personnel should be invited to participate in evacuation drills.
 7. Children who are supported by technology may be at increased risk of acquiring infectious diseases. All caregivers should wash their hands before and after providing direct care for students including toileting, tracheostomy, or gastrostomy care. Standard (universal) precautions should be used when caring for all children when exposed to blood or blood-containing body fluids. Schools should follow the legal requirements of their states or the Occupational Safety and Health Administration (OSHA) with respect to all immunizations, including hepatitis B immunization. Chil-

dren and adults who are in the recommended categories should receive yearly influenza immunization.^{11,12} Transportation staff should be provided with training and supplies that prepare them to carry out universal precaution practices and procedures.¹⁰

The American Academy of Pediatrics encourages states to address and support the transportation requirements of children with special needs. Pediatricians can help their patients by being aware of general guidelines for evaluating restraint systems for children with special needs and remaining informed of new resources as they become available. Periodically updated information on specific restraint systems for children with special needs can be obtained through the Academy.¹³ In addition, pediatricians can play important roles at local and state levels to assist in the evaluation and development of school bus specifications responsive to the safe transportation requirements of children with special needs.

COMMITTEE ON INJURY AND POISON PREVENTION,
2000–2001

Marilyn J. Bull, MD, Chairperson
Phyllis Agran, MD, MPH
H. Garry Gardner, MD
Danielle Laraque, MD
Susan H. Pollack, MD
Gary A. Smith, MD, DrPH
Howard R. Spivak, MD
Milton Tenenbein, MD

LIAISONS

Ruth A. Brenner, MD, MPH
National Institute of Child Health and Human
Development
Stephanie Bryn, MPH
Health Resources and Services
Administration/Maternal and Child Health Bureau
Cheryl Neverman, MS
National Highway Traffic Safety Administration
Richard A. Schieber, MD, MPH
Centers for Disease Control and Prevention
Richard Stanwick, MD
Canadian Paediatric Society

Deborah Tinsworth
US Consumer Product Safety Commission

SECTION LIAISONS

Victor Garcia, MD
Section on Surgery
Robert R. Tanz, MD
Section on Injury and Poison Prevention

CONSULTANTS

Murray L. Katcher, MD, PhD
Larry K. Pickering, MD, FAAP

STAFF

Heather Newland

REFERENCES

1. National Highway Traffic Safety Administration Web site. Available at: <http://www.nhtsa.dot.gov/cars/rules/standards/safstanz.htm>
2. *National Standards for School Buses and National Standards for School Bus Operations*. Warrensburg, MO: Missouri Safety Center; 1995
3. WC-19 Voluntary Standard. Washington, DC: American National Standards Institute/Rehabilitation Engineering and Assistive Technology Society of North America; 1999
4. Schneider LW. *Protection for the Severely Disabled: A New Challenge in Occupant Restraint*. Proceedings of the International Symposium on Occupant Restraint. Morton Grove, IL: American Association for Automotive Medicine; 1981:217–231
5. Schneider LW. *Impact Sled Test Evaluation of Restraint Systems Used in Transportation of Handicapped Children*. Warrendale, PA: Society of Automotive Engineers; 1979. Technical Paper 790074
6. Wheelchair occupant restraint assemblies for use in motor vehicles. Standards Australia Amendment No. 1 to AS 2942–1994 (July 5, 1998)
7. Vehicles for transporting the handicapped. Indiana Code IAC No. 1–5.5 (February 1990)
8. *Guideline for the Safe Transportation of Pre-school Age Children in School Buses*. Washington, DC: National Highway Traffic Safety Administration; 1999
9. Stephens LL, Beekman LE, Munk LG, Stefans VA. *Study of Transportation of Medically Fragile Children: Core Curriculum for Special Education Transportation Health Care*. Lansing, MI: Michigan Department of Education; 1989:4
10. *Standardized Child Passenger Safety Training Program Participant Manual*. Washington, DC: National Highway Traffic Safety Administration; 2001. In press
11. American Academy of Pediatrics. In: Pickering LK, ed. *2000 Red Book: Report of the Committee on Infectious Diseases*. 25th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2000:119–131
12. American Academy of Pediatrics, Committee on Infectious Diseases and Committee on Practice and Ambulatory Medicine. Infection control in physicians' offices. *Pediatrics*. 2000;105:1361–1369
13. American Academy of Pediatrics. *Car Seat Shopping Guide For Children With Special Needs: Guidelines for Parents*. Elk Grove Village, IL: American Academy of Pediatrics; 1998