

PUBLICATION REVIEW

# Two Recent Policy Statements About Safe Transportation By the American Academy of Pediatrics

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The policy statements by the American Academy of Pediatrics suggest that pediatricians make recommendations for safe transportation and provide advocacy. They apply, however, to all physicians and other health care professionals. The more we are knowledgeable about safe transportation and work to maximize passenger safety for individuals with disabilities, the more they will be protected while traveling. In addition to considering transportation by families and on school buses, safety needs to be improved on public buses, paratransit, vehicles that transport individuals to medical appointments, and accessible taxis.

The policy statements reviewed are:

O'Neil J, Hoffman BD; COUNCIL ON INJURY, VIOLENCE, AND POISON PREVENTION. School Bus Transportation of Children With Special Health Care Needs. *Pediatrics*. 2018; 141(5): e20180513

O'Neil J, Hoffman B; AAP COUNCIL ON INJURY, VIOLENCE, AND POISON PREVENTION. Transporting Children With Special Health Care Needs. *Pediatrics*. 2019; 143(5): e20190724

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## **School Bus Transportation of Children With Special Health Care Needs**

This policy statement by the American Academy of Pediatrics discusses school bus transportation safety for children with special needs, including students who use wheelchairs and those with a variety of health and behavioral problems. A special care plan that addresses transportation and medical emergencies while being transported is recommended. The roles of the school system, parents, and pediatricians are described. It is suggested that physicians be aware of appropriate use of restraint systems for children with special needs and that they provide orders and recommendations for transporting these students safely.

The authors propose that the plan for safe transportation be included in the IEP (Individualized Education Program for children ages 3 to 21) and, when needed, the IFSP (Individualized Family Service Plan for children ages 0 to 3). A collaborative process is suggested during which parents work with occupational and physical therapists, school nurses, a school psychologist if there are behavioral concerns, and a certified passenger safety specialist. Specific training in safe transportation for children with special

needs is necessary so that appropriate devices can be selected and used correctly. Adequate instruction must be provided for transportation staff so that the plan can be implemented.

Whenever a child can be safely transferred from a wheelchair, the best form of transportation is in child safety restraint systems (CSRSs) including car seats, safety vests and harnesses, and 5-point harnesses integrated into bus seating. Those children of school age who can sit properly on a standard bus seat with a lap and shoulder belt should do so. Children who cannot be reasonably transferred from a wheelchair should use a wheelchair that faces forward in the vehicle. It is important that the wheelchair, the seating, and wheelchair tie downs and occupant restraint systems (WTORSs) meet the standards of the American National Standards Institute and Rehabilitation Engineering Society of North America (WC 18, 19, and 20). Most wheelchair postural supports and harnesses have not been crash-tested. Unless there is a clear indication that they have been successfully crash-tested, the vehicle's occupant restraint system (lap/shoulder belt) should be used.

Among additional recommendations are the following:

- Safe use of car seats is discussed for children weighing up to 80 pounds.
- Three wheeled devices, carts, and strollers should not be used for transportation on a school bus unless they successfully pass impact tests (crash tests, WC 19 standards).
- Four tiedown devices that are attached to the floor of the bus are needed to secure occupied wheelchairs, with additional ones required if the weight of the child and wheelchair combined exceeds 250 pounds.
- Lap boards must be removed from the wheelchair and secured to the bus separately. A foam tray may be used as a substitute if necessary.
- Medical equipment needs to be secured on the bus.
- Children with certain medical conditions need to travel with a nurse or specially trained aide; some children need rescue medications available on the bus.
- Plans and practice for safe emergency evacuations are suggested.

- Bus drivers and substitute drivers should have information about a child's special needs and have emergency medical information available.
- For children who have behavior problems that interfere with riding safely on the bus, psychological intervention is recommended. If these interventions are not successful, use of CSRS for restraint may be suggested.

### **Transporting Children With Special Health Care Needs**

Proper resources are necessary so that children with special health care needs can be transported safely. This policy statement describes strategies to protect children with difficulties such as airway obstruction, gastrointestinal disorders, orthopedic conditions or procedures, developmental delays, abnormalities of muscle tone, and behavioral difficulties. It supplements the following other policy statements by the American Academy of Pediatrics: "Child Passenger Safety"<sup>1</sup> and "School Transportation Safety"<sup>2</sup>. The purpose is to assist parents and professionals to promote safe and comfortable transportation for these children. Recommendations that are reported in the above review of "School Bus Transportation of Children With Special

Health Care Needs" will not necessarily be specified again unless additional important information has been added.

A standard car safety seat (CSS) is said to provide the best protection for many children who have special needs. These seats are available and are regulated by federal standards for children who weigh up to 80 pounds. Other large car seats have been crash-tested and are appropriate for children and adults who weigh up to 115 pounds.

There is a discussion of a policy that hospitals should have a child passenger safety program which provides discharge recommendations for safe transportation. The policy also suggests that hospitals have an inventory of needed restraints and have access to custom medical transportation products. A recommendation is made that pediatricians advocate for transportation safety.

Specific additional guidance follows:

- Standard child restraint devices should be used whenever possible. Children with reduced head and trunk control can ride more safely in rear-facing car seats so long as they meet the weight and height limits. Some convertible rear-facing CSSs

accommodate children up to 50 pounds.

- A standard or special needs booster may work for some children, and conventional lap/shoulder belts for others. A reclined seat is not safe.
- Children up to the age of 13 need to be in the rear seat. An exception to this recommendation is children who require frequent observation when there is no additional adult available to sit in the back seat. A switch which can turn off the air bag is suggested if a small child must sit in the front seat.
- Information about transporting premature infants and others of low birth weight is specified in another policy statement by the American Academy of Pediatrics.<sup>3</sup>
- Regulations about air travel are available at the Federal Aviation Administration website.
- Specific evaluations are needed for children with possible airway obstruction, with modifications including a rolled towel to adjust the angle of a car seat, if authorized in manufacturer's instructions, or a car bed. Restraint systems for children

with a tracheotomy should not come in contact with the tube. A trained person is needed to monitor children with significant airway obstruction.

- CSSs should only be used for travel. There is a risk of airway obstruction if a car seat is used outside the car, even for typically developing children.
- For children with abnormalities of muscle tone, consider rear-facing car seats up to the height and weight limit; car seats whose manufacturers allow forward-facing seats to be semi-reclined; crotch rolls between the legs and the crotch strap; rolls under the knees to help control extensor spasticity and opisthotonus; and lateral support with rolled blankets, towels, or foam rolls. It is dangerous to use soft padding between the child and the CSS because the padding compresses and prevents the harness from being secure. Head bands and stiff cervical collars are unsafe.
- Gastrointestinal problems: For children with reflux, suggestions include waiting sufficient time after feeding and using a CSS that

permits changing the angle of the car seat. A child with a gastrostomy tube needs a harness that does not rub against the feeding tube.

- Children with a spica cast may require a specialized car seat. A hospital loaner program is suggested. Older children with a spica cast or a body cast may need a specialized travel vest or harness. Some can ride in a seated position. There is a vest that secures a child who lies on the seat of the car and also secures the cast.
- When challenging behaviors interfere with safe transportation, every effort should be made for parents to collaborate with professionals and find triggers for challenging behaviors and strategies to resolve the problem. When needed, specialized restraints that have been approved for safe transportation can be used during travel.
- Children with medical equipment that uses electricity need portable power that will last twice the amount of time of the trip and a charged back-up system.

## COMMENTS

Knowledge of the above information is vital for anyone concerned about the safety of individuals with disabilities and/or special healthcare needs. Follow up by reading the full articles which have been reviewed here and relevant references. Important additional information is available at the University of Michigan Wheelchair Transportation Safety website<sup>4</sup> and in a 2011 special issue of *Journal of Pediatric Rehabilitation Medicine*, "Transportation Safety for Children with Special Healthcare Needs".<sup>5</sup>

When a child has behavior problems while being transported, in addition to psychological consultation consider a shorter trip. School transportation can be modified so that the child rides in a smaller bus or is the last one picked up and the first one dropped off. Some children may do better if they travel alone to school or even on a different bus route. Advocacy from outside the school system by parents and professionals may be necessary to achieve these changes. If medical consultations require a long trip, consider telemedicine and/or collaboration with a local pediatrician whenever feasible.

Wheelchairs which are ordered should meet the standards of WC 19, and seating needs

to meet WC 20 standards. Beware of chairs that have transportation tie down brackets but are not crash-tested! A sales representative for a major wheelchair company recently informed me that a wheelchair was appropriate for transportation in a vehicle, and the order form indicated that this model has tie down brackets but has not been crash tested.

Based on personal experience, training of transportation staff to manage wheelchairs safely and to properly secure wheelchairs on school buses requires one-to-one practice on a bus with a child in a wheelchair **and** follow-up observation and guidance. Theoretical instruction and demonstration in a are insufficient! Placement of the pelvic belt properly at the pelvis and not over the abdomen requires guidance, as does locating the shoulder belt so it does not press on the neck or slip off the shoulder. Parents who transport their children in wheelchairs also need adequate instruction, demonstrations, and monitoring.

At times it might be discovered that the wheelchair seating system does not permit the crash-tested lap belt to be placed properly at the pelvis (no open area through which the belt can pass). If the person sits in a wheelchair while on a bus or in a van, seating **must** be revised for safety.

Special considerations are needed when there is a VP shunt. The person's seat should be in a position that allows the shoulder strap to be on side of neck that does not have a shunt.

Seizures may be triggered by flashing lights when traveling, as the vehicle passes through sunlight and shade. Tinted windows, on cars and school buses, have been recommended for individuals with this problem.

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