Effective School Bus Occupant Restraints for Students with Special Needs

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Following are some specific concerns/problems often encountered when choosing occupant restraint systems for students with special needs. Equipment options that may provide assistance are given. Whenever possible, suggested equipment options are ranked from least restrictive (appropriate for children needing mild intervention) to most restrictive (for children needing more support or intervention). Important procedural considerations are noted for some problems. It is vital that these are given special attention by the team designing the student's individual transportation plan.

Problem/ CHALLENGE	EQUIPMENT OPTIONS	PROCEDURAL CONSIDERATIONS
1.Poor Head Control	Child safety seat that is certified to be used rear facing (many are available for larger children)	No straps or other positioning aids which secure the head or neck to the child safety seat separate from the torso should be used during transportation
	Child safety seat which allows recline in a forward facing position	
	Neck collar –made of soft and light material and must be free floating	
	Child safety seat designed for a child with special needs which incorporates a wedge/tilt	Most require use of a tether.
	Wheelchair or stroller which can be reclined with or without use of a collar	Recline exceeding 30 degrees should be avoided. Shoulder belt anchor of WTOR may need to be moved rearward

2. Poor Trunk Control	Child safety seat with towel rolls placed along the child's torso to facilitate proper alignment	Positioning aids should be made of firm materials and cannot interfere with the working parts of the occupant restraint/child safety seat. No padding should be placed beneath or behind the child.
	Integrated child safety seat	
	Bus seat with shoulder/lap belt or four point harness system	Child must be older than 4 and be able to be properly fitted using only inherent adjustment features
	Bus Specific Add-On Child Safety Restraint System	Entire seat behind must be unoccupied or seat a student also in CSRS
	Safety vest with crotch strap	Entire seat behind must be unoccupied or seat a student also in CSRS
	Modified E-Z-On Vest	Child must be able to fit lengthwise on the vehicle seat. Vehicle floor space should be filled in with padding. Child's head must face towards aisle.
	Child safety seat designed for a child with special needs which incorporates positioning pads	Most require use of a tether.
3.Increased Leg Length/Lower Extremity Bulk/ Bulky LE Bracing Or Casting	Forward-facing only or combination child seat/booster used with internal harness	Caution must be exercised to assure that the seating area has adequate room for feet and legs. Feet should not be crammed against the seat back. Seat size must allow for the child to be placed easily

	in the seat (not forced). Children who wear bulky LE bracing or casting often experience sensory deficits, which make them prone to skin breakdown. In addition, their bones may be more brittle and prone to injury. The weight of the cast/ braces must be accounted for when considering seat weight limits
Integrated child safety seat	
Bus seat with shoulder/lap belt or four point harness system	Child must be older than 4 and be able to be properly fitted using only inherent adjustment features
Bus Specific Add-On Child Safety Restraint System	
Safety vest with crotch strap	Entire seat behind must be unoccupied or seat a student also in CSRS
Child safety seat designed for a child with special needs with shorten sides and reduced seat bulk	Must have some hip flexion. Most require a tether
Modified E-Z-On Vest	Entire seat behind must be unoccupied or seat a student also in CSRS Child must be able to fit lengthwise on the vehicle seat. Vehicle floor space should be filled in with

		padding. Child's head should face towards aisle.
	Wheelchair or stroller which can be reclined with or without use of wheelchair mounted safety vest	Recline exceeding 30 degrees should be avoided. Shoulder belt anchor of WTOR may need to be moved rearward. Vest may need additional crotch straps
4. Need for Additional Lower Extremity Support	Positioning over the wheel well	
	Child safety seat designed for a child with special needs, which incorporates a footplate	Most require use of a tether.
5. Child with Behavioral Problems Who has Difficulty Staying in CSRS	Window seating with peer in aisle to cue proper behavior	IEP team to assure proper supervision and/or assistance must carefully analyze boarding procedures.
	Harness properly fitted with jacket zipped over the Child Safety Restraint System buckle	Pictures of proper bus behavior mounted with Velcro or social stories may prompt compliance Allowing child to use headphones, books, or soft lightweight toys may help them stay seated and in CSRS.
	Safety vest with crotch strap	If the vest is necessary primarily because of problem behavior, a behavior intervention plan designed by the IEP Team should be in place that addresses the transportation environment. Entire seat behind must be unoccupied or seat a student

		also in CSRS
6. Child with a Shunt	Integrated child safety seat	All equipment must provide support to the head and neck area.
	Bus seat with shoulder/lap belt or four point harness system which lacks buckles/hardware near shunt site	Child must be older than 4 and be able to be properly fitted using only inherent adjustment features
	Bus Specific Add-On Child Safety Restraint System	Entire seat behind must be unoccupied or seat a student also in CSRS
7. Child with Tracheotomy	Child safety restraint system to provide upper torso restraint with well fitted harness	Seat placement in the front for maximum amount of adult supervision. Student should be positioned away from the lift door or open windows at the rear of the bus to avoid increased exposure to dust and fumes and/or frequent changes of temperature. Evaluate need for air conditioning. Oxygen if carried must be secured and mounted appropriately in the bus with guidance from the oxygen supplier/WTOR Manufacturer Emergency procedures to be followed in the event of respiratory distress should be clearly stated in the IEP with proper training and inservice given.
8. Child with Feeding Tube or ostomy bag	Child safety restraint systems which allow for adjustment in waist/pelvic area	All harness belts on equipment must avoid contact with the tube/ostomy site If child has difficulty

		swallowing and may “pocket” food, a mouth check before boarding bus and seating in the front of the bus are recommended. Transport staff trained in airway check, Heimlich Maneuver, and moving student to firm surface.
9. Child with Brittle Bones, Spinal Rods or Other Orthopedic Concerns for a Rough Ride	Seat placement in the front of the bus to allow for smoother ride. Avoid wheel well positions Transport on bus with air-ride	Additional padding may be necessary. The IEP team should meet to decide how to proceed. It is vital that all harness straps are properly positioned.
10. Child of Small Stature Who has Difficulty Getting Into and Out of the Bus	Step stool with non-slip step surface available at home and school if allowable Bus with additional steps	Children should not be carried onto or off of the bus.

All equipment recommended should be installed and used in accordance with manufacturer instructions.
Some of the CSRS above can be installed on traditionally designed school buses and therefore may allow for an overall less restrictive transportation plan.
All procedures followed for preschool transportation should be consistent with the National Highway Traffic Safety Administration “Guideline for the Safe Transportation of Pre-school Age Children in School Buses”.
Any additional medical equipment or items accompanying the child should be secured appropriately in the vehicle