



NATIONAL TRAINING



School Bus Child Safety Restraint System Options for Children with Disabilities

The following are relevant challenges to consider when developing an individual transportation plan for students with disabilities.

Equipment options that may provide needed accommodations are given. **Whenever possible, the suggested equipment options are ranked from the least restrictive to the most restrictive.** Important considerations are noted as appropriate.

Any additional medical equipment or heavy items accompanying a child should be secured appropriately in the vehicle during transportation so they are not potential projectiles.

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CHALLENGE: POOR HEAD CONTROL

Equipment Options	Considerations
Conventional CSRS with rear-facing mode	Consider models that have higher upper height and weight limits for rear-facing use.
Conventional CSRS with forward-facing mode	Consider models that allow use in a semi-reclined position(s) forward-facing.
Soft Neck Collar	<p>Soft neck collars must be made of soft and light material and be free-floating. If medically possible, avoid use of rigid neck collars.</p> <p>During transportation, avoid use of straps or other positioning aids that secure the child's head or neck to the CSRS, wheelchair or bus seat separate from the body.</p>
Adaptive CSRS	<p>Consider use of an adaptive CSRS that incorporates use of positioning aids, head support and/or wedge, and/or can be reclined or tilted.</p> <p>Most adaptive CSRS require use of a tether.</p>
Wheelchair or Medical Stroller	<p>Consider use of a wheelchair or medical stroller that can be reclined or tilted. If medically possible, avoid reclining/tilting past 30 degrees. The shoulder belt anchor may need to be adjusted rearward to maintain contact with the reclined occupant.</p> <p>If necessary, use a wheelchair-mounted safety vest with crotch straps for additional occupant restraint in the reclined position.</p>

CHALLENGE: POOR TRUNK CONTROL

Equipment Options	Considerations
Conventional CSRS	Consider use of positioning aids, towel or fabric rolls, placed along the child's body to facilitate proper alignment. Avoid placing positioning aids under or behind child unless provided by the CSRS manufacturer for this use. Positioning aids should be made of firm materials and must not interfere with the working parts of the CSRS.
Integrated CSRS	
Lap-and-shoulder Belt	<p>Children should ride in a forward-facing CSRS with a 5-point harness until meeting the maximum height or weight for that CSRS.</p> <p>Adjust shoulder-height adjuster to sit at or slightly above the occupant's shoulder.</p>
School Bus Only CSRS	Bus seat behind the child may not be used by an unrestrained occupant.
Belt Converter	<p>Bus seat behind the child may not be used by an unrestrained occupant.</p> <p>Belt converters must be used on school bus seating that is reinforced to meet FMVSS 210 since the CSRS must be used with a lap belt.</p>
Safety Vest - Upright	<p>Bus seat behind the child may not be used by an unrestrained occupant.</p> <p>Crotch strap use by children of any weight is highly recommended.</p>
Safety Vest - Laying down	<p>Bus seat behind the child may not be used by an unrestrained occupant.</p> <p>Crotch strap use by children of any weight is highly recommended.</p> <p>Child must be able to fit lengthwise on the school bus seat.</p> <p>Child's head must be placed on the side toward the aisle.</p>
Adaptive CSRS	<p>Consider use of an adaptive CSRS that incorporates use of positioning pads and/or can be reclined or tilted.</p> <p>Most adaptive CSRS require use of a tether.</p>

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Equipment Options	Considerations
Wheelchair or Medical Stroller	<p>Consider use of a wheelchair or medical stroller that can be reclined or tilted. If medically possible, avoid reclining/tilting past 30 degrees. The shoulder belt anchor may need to be adjusted rearward to maintain contact with the reclined occupant.</p> <p>If necessary, use a wheelchair-mounted safety vest with crotch straps for additional occupant restraint in the reclined position.</p>

CHALLENGE: LOWER EXTREMITY BULK

Increased Leg Length, Bulky Bracing or Casting

General Considerations:

- The weight of the brace or cast must be accounted for when considering CSRS weight limits.
- Exercise caution to assure that the seating area has adequate room for feet and legs. Feet should not be crammed against the seatback in front of the occupant.
- Children who wear bulky bracing and casting also may experience sensory deficits, which make them prone to skin breakdown. In addition, their bones may be more brittle and prone to injury.

Equipment Options	Considerations
Conventional CSRS with forward-facing mode	CSRS size must allow for the child to be placed easily, not forced, in the CSRS.
Integrated CSRS	
Lap-and-shoulder Belt	Children should ride in a forward-facing CSRS with a 5-point harness until meeting the maximum height or weight for that CSRS. Adjust shoulder-height adjuster to sit at or slightly above the occupant's shoulder.
School Bus Only CSRS	Bus seat behind the child may not be used by an unrestrained occupant.
Belt Converter	Bus seat behind the child may not be used by an unrestrained occupant. Belt converters must be used on school bus seating that is reinforced to meet FMVSS 210 since the CSRS must be used with a lap belt.
Safety Vest - Upright	Bus seat behind the child may not be used by an unrestrained occupant. Crotch strap use by all children of any weight is highly recommended.

School Bus Child Safety Restraint System Options for Children with Disabilities

Equipment Options	Considerations
Adaptive CSRS	<p>Consider use of adaptive CSRS that have shortened sides and a reduced seat depth.</p> <p>CSRS size must allow for the child to be placed easily, not forced, in the CSRS.</p> <p>Most adaptive CSRS require use of a tether.</p>
Safety Vest - Laying Down	<p>Bus seat behind the child may not be used by an unrestrained occupant.</p> <p>Crotch strap use by children of any weight is highly recommended.</p> <p>Child must be able to fit lengthwise on the school bus seat.</p> <p>Child's head must be placed on the side toward the aisle.</p>
Wheelchair or Medical Stroller	<p>Consider use of a wheelchair or medical stroller that can be reclined or tilted. If medically possible, avoid reclining/tilting past 30 degrees. The shoulder belt anchor may need to be adjusted rearward to maintain contact with the reclined occupant.</p> <p>If necessary, use a wheelchair-mounted safety vest with crotch straps for additional occupant restraint in the reclined position.</p>

CHALLENGE: NEED FOR ADDITIONAL LOWER EXTREMITY SUPPORT

Equipment Options	Considerations
	Use a seating position over the wheel well provided the child is not sensitive to a bumpy ride.

CHALLENGE: BEHAVIORAL ISSUES - DIFFICULTY STAYING SEATED

General Considerations:

- Use a seating plan that assigns seating next to the window with a peer, who can cue proper behavior, next to the aisle.
- Work with the IEP Team for the child to assure proper supervision and/or assistance. If a safety vest or adaptive CSRS is used primarily to solve unsafe behavior, a behavior intervention plan (BIT) designed by the IEP team that is specific to transportation should be in place. The BIT should include the process to teach the child safe bus behavior with the goal of allowing the student to ride in a less restrictive way in the future.
- Analyze boarding procedures.
- Provide pictures of proper bus behavior and/or social stories to prompt compliance.
- Allow the child to use headphones, books or soft, lightweight toys to help them stay seated.

Equipment Options	Considerations
Conventional CSRS with forward-facing mode	Consider models that have higher upper height and weight limits for forward-facing use.
Safety Vest - Upright	<p>Bus seat behind the child may not be used by an unrestrained occupant.</p> <p>Consider use of safety vest that zips up in the back rather than buckling in the front as well as other anti-escape features.</p> <p>Crotch strap use by all children of any weight is highly recommended.</p> <p>Crotch strap use by any student demonstrating a tendency to get out of the safety vest is strongly recommended.</p>
Adaptive CSRS	<p>Consider use of adaptive CSRS that have anti-escape features/accessories.</p> <p>Most adaptive CSRS require use of a tether.</p>

CHALLENGE: SHUNT

General Considerations:

- CSRS must provide support to the head and neck.
- CSRS placement must not allow the child's head to bump the wall of the bus.
- CSRS hardware should not be located near the shunt site.

Equipment Options	Considerations
Conventional CSRS with rear-facing mode	Consider models that have higher upper height and weight limits for rear-facing use.
Conventional CSRS with forward-facing mode	Consider models that allow use in a semi-reclined position(s) forward-facing.
Integrated CSRS	
Lap-and-shoulder Belt	<p>Children should ride in a forward-facing CSRS with a 5-point harness until meeting the maximum height or weight for that CSRS.</p> <p>Adjust shoulder-height adjuster to sit at or slightly above the occupant's shoulder.</p>
School Bus Only CSRS	Bus seat behind the child may not be used by an unrestrained occupant.

CHALLENGE: TRACHEOSTOMY

General Considerations:

- Use a seating position in the front of the bus for maximum adult supervision. Ensure an adult is able to continually monitor the child’s face during the ride. Consider the need for a nurse or staff with medical training.
- Position child away from the wheelchair lift door or open windows at the rear of the bus to avoid increased exposure to dust and fumes and/or frequent changes in temperature.
- Evaluate need for air conditioning.
- Oxygen, if carried, must be secured and mounted appropriately in the bus with guidance from the oxygen supplier.
- Emergency procedures to be followed in the event of respiratory distress should be clearly stated in the child's ITP/IEP with proper training given to the pupil transportation providers as their role in an emergency. Transportation providers should be trained in proper lifting/moving techniques to place a child on a firm surface in case an intervention is needed to be performed.

Equipment Options	Considerations
Conventional CSRS with rear-facing mode	Consider models that have higher upper height and weight limits for rear-facing use.
Conventional CSRS with forward-facing mode	Consider models that allow use in a semi-reclined position(s) forward-facing.
Integrated CSRS	
School Bus Only CSRS	Bus seat behind the child may not be used by an unrestrained occupant.
Adaptive CSRS	Consider use of an adaptive CSRS that incorporates use of positioning pads and/or can be reclined or tilted. Most adaptive CSRS require use of a tether.

CHALLENGE: FEEDING TUBE / OSTOMY BAG

General Considerations:

- Consider CSRS that allows for adjustment in the waist/pelvic area.
- All harness webbing must avoid contact with the tube/ostomy site.
- A child who has difficulty swallowing may ""pocket"" food. Conduct a mouth check before boarding the bus and use a seating position at the front of the bus.
- Pupil transportation providers must be trained in airway check, Heimlich maneuver and proper lifting/moving techniques to place child on a firm surface in case an intervention is needed.

Equipment Options	Considerations
Conventional CSRS with rear-facing mode	Consider models that have higher upper height and weight limits for rear-facing use.
Conventional CSRS with forward-facing mode	Consider models that allow use in a semi-reclined position(s) forward-facing.
Integrated CSRS	
Belt Converter	Bus seat behind the child may not be used by an unrestrained occupant. Belt converters must be used on school bus seating that is reinforced to meet FMVSS 210 since the CSRS must be used with a lap belt.
School Bus Only CSRS	Bus seat behind the child may not be used by an unrestrained occupant.
Adaptive CSRS	Consider use of an adaptive CSRS that incorporates use of positioning pads and/or can be reclined or tilted. Most adaptive CSRS require use of a tether.

CHALLENGE: CONCERN ABOUT ROUGH RIDE

Brittle Bones, Spinal Rods or Other Orthopedic Reasons for Concern about a Rough Ride

General Considerations:

- Use a seating position in the front of the bus to allow for a smoother ride. Avoid seating positions over wheel wells.
- Transport on a bus with air-ride.
- Additional padding along the sides of the child's body may be necessary.

Equipment Options	Considerations
Conventional CSRS with rear-facing mode	Consider models that have higher upper height and weight limits for rear-facing use. The CSRS model should be as cushiony as possible.
Conventional CSRS with forward-facing mode	Consider models that allow use in a semi-reclined position(s) forward-facing. The CSRS model should be as cushiony as possible.
Adaptive CSRS	Consider use of an adaptive CSRS that has additional padding along the side of the CSRS. Most adaptive CSRS require use of a tether.

CHALLENGE: SMALL STATURE

General Consideration:

- Children should never be carried onto or off the bus. If possible, use a bus with additional steps or provide a step stool with non-slip step surface.

Equipment Options	Considerations
Wheelchair or Medical Stroller	Use the wheelchair or medical stroller for loading and unloading. Transfer the child to the bus seat during transportation.