

Safe Pediatric Transport in Ambulances

Children aren't just small adults, and they require specialized equipment to be safely transported in an ambulance.

- Children should **never** be transported on the lap of a caregiver
 - Adult sized harnesses are **not** designed for children
- A car seat **cannot** be secured to a side facing seat (bench seat)

It is not possible for a caregiver to safely restrain a child in their arms. To calculate the force needed to restrain a child, take their weight and multiply by the speed. Example: 25 pounds x 35 mph= 875 pounds of force needed.

Commercial Devices

Commercial devices that attach to the cot are the ideal way to safely restrain a child in an ambulance.

Commercial devices offer better access to the child and improve ability to manage care. Some devices offer spinal immobilization.

Visit the National Association of State EMS Officials website to view a [list of available commercial devices](#).

Ensure the child's weight and height are both in the specified range for the device. At minimum, a weight range of 5-99 lbs should be covered.

- Follow manufacturers' instructions to ensure the cot and device brands are compatible.



Convertible Car Seat Secured to Cot

Convertible car seats can be secured to the ambulance cot to restrain children that are able to maintain their airway, do not have a suspected spinal cord injury and can be treated in the car seat.

- Convertible car seats are the only type of car seat that can be secured to the cot.
- To determine if a car seat is convertible, look for the two belt paths labeled 'Forward Facing' and 'Rear Facing.' If the car seat does not have two belt paths, it cannot be installed on the ambulance cot.
- Ensure the child's weight and height are both in the specified range for the convertible car seat.

Steps:

1. Face the car seat towards the ambulance back doors.
2. Raise the head of the cot to support the back of the car seat.
3. Insert cot straps through both car seat belt paths.
4. Tighten the cot straps to ensure the car seat moves less than one inch front to back and side to side



Integrated Child Restraint System

Integrated child restraint systems are typically used for children who are uninjured or not ill. Sometimes a sick child can be transported in an integrated child restraint system, but it is not possible for providers to safely perform assessment and intervention duties this way.

If possible, it is best to transport a child that is uninjured or not ill in a different vehicle. If that is not an option, follow the instructions below:

- Make sure the child's condition is appropriate for an integrated child restraint system.
- Refer to the label on the seat to ensure the child's weight and height are both in the specified range for the integrated child restraint system.



Alternative Transport Options

Transporting children who are uninjured or not ill in a vehicle other than an ambulance is the **best** option. If not available you may use the following alternate options:

Preferred: Secure a rear facing car seat, or forward facing car seat, or booster seat, to the front seat with the **airbags turned off and seat moved as far back from the dashboard as possible**.

Alternative: Secure a car seat or booster seat to the captain's chair according to manufacturer's instructions. However, rear facing car seats **cannot** be installed in a rear facing captain's chair.

Remember: Booster seats **must** be used with lap and shoulder belts. Rear facing car seats **cannot** be installed in front of an active airbag.

Resources

Wisconsin EMSC: <https://bit.ly/3ctXFH4>

National Association of State EMS Officials (NASEMSO) Commercial devices: <https://nasemso.org/wp-content/uploads/Pediatric-Transport-Products-for-Ground-Ambulances.pdf>

NHTSA Working Group Best-Practice Recommendations for the Safe Transportation of Children in Emergency Ground Ambulances: https://www.miemss.org/home/Portals/0/Docs/EMSC/CPS_Project/CPS_Training_Opportunities/Article-NHTSA-Best-Practices-Safe-Transport-Children-201209.pdf?ver=2020-03-05-135358-310#:~:text=Prevent%20forward%20motion%20Fejection%2C%20secure,transported%20in%20emergency%20ground%20ambulances

NASEMSO Safe Transport of Children by EMS Interim Guidance: <https://bit.ly/2zbvOxB>

Please contact Erica Kane, ekane@childrenswi.org, with any questions.



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This document was created with information obtained from the [National Association of State EMS Officials](#) and Marilyn J Bull's, M.D., presentation on *Improving Occupant Protection for Children in Ambulances*.

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