Challenges Associated with the Safe Transport of Children in Ambulances
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Background:
The Challenge: Vehicle, stretcher, and restraint devices are designed for adults while infants, children, and youth come in many sizes.
The History: Over the past two decades, pilot work has focused on transporting children in ambulances:
- 1999: EMSC “The Do’s & Don’ts of Transporting Children in an Ambulance”
- 2012: NHTSA Best Practice Recommendations for the Safe Transport of Children in Emergency Ground Ambulances
- 2009 & 2014: Joint Policy Statement on Equipment for Ground Ambulances published by the AAP, ACRP, ACS COT, EMSC, ENA, NAEEMSP, NASEMSO. The equipment list states that there must be available the “necessary age-size-appropriate restraint systems for all passengers and patients transported in ground ambulances.”

EMSC Performance Measure 73: Evaluates the percentage of patient care units in the state or territory that have essential pediatric equipment and supplies. The list of equipment is based on the Joint Policy Statement on Equipment for Ground Ambulances.

What we DO know:
- Children should NOT ride in parents’ laps
- Parent must be secured in a separate seat belt
- CRS should NOT be placed on the bench seat or side-facing
- Infant CRS can NOT be secured – they only have one belt path
- CRS do NOT all secure the same way
- EMS restraint systems are NOT all compatible with CRS
- NOT all “Pediatric EMS Seats” have been sled tested

Methods:
In 2009 NHTSA convened a workgroup to develop Best Practice Recommendations for the Safe Transport of Children in Emergency Ground Ambulances.

After extensive review and revisions, the document was published in September 2012 (www.ems.gov).

In 2013 each state measured its EMS agencies’ ambulance equipment through a national online survey that included seven questions about child restraints in ambulances.

Currently, there are no Federal Motor Vehicle Safety Standards to define performance criteria for child restraint use in the ambulance patient compartment.

Research to date has been PILOTED and not replicated.

Analysis:
The analysis of this data has been done at the state level by the EMSC programs and at the national level by the National EMSC Data Analysis and Resource Center (NEDARC).

Results indicate a variety of devices are used inconsistently among agencies and states. This has led to great variability in both the equipment used and training received by EMS providers.

Interventions:
In an effort to increase EMS provider knowledge, many state EMSC programs have developed online and printed educational and practice resources. Below is a sample of program types and products:

Iowa: Kids In Rigs – educational program in various formats with hands-on practice that assists EMS personnel in understanding the Culture of Safety for Pediatric Safe Transport.

Maryland: Safe Transport of Children in Ambulances – educational program available in various formats (webinar, LMS, and conference sessions with hands-on practice). Reference card also developed and disseminated.

New Jersey: Improving Occupant Protection for Non-Critical Pediatric Patients in Ambulances – educational program designed to help EMS providers recognize different types of child restraint systems, properly select and install a restraint system in the ambulance environment, and protocol for pediatric transportation in ambulances.

Recommendations:
A Culture of Safety in EMS calls for moving this challenge forward in all four areas of EMS, Engineering, Education, and Enforcement.

EMS providers commit to the Right Child, Right Seat/Device, Right Installation, and Right Use.

Engineering standards are developed specific to securing patients of all sizes on stretchers and all manufacturers of restraint devices perform crash tests utilizing current technology.

Education on both the details and limitations of the 2012 NHTSA Guidelines is shared with all levels in the EMS community.

Enforcement of ambulance inspections to ensure that all components of the restraint devices are used correctly.

Pediatric Emergency Care Council members share a commitment to safely transporting children and their parents.

The future must include Evidence-Based Guidelines and a commitment to funding crash standards and crash testing.