

**Florida EMSC and Pediatric Readiness Concept Proposal:  
Enhancing Pediatric EMS Safety and Preparedness by Implementing a  
Voluntary System for Medication Dosing, Equipment, and Local Level Protocols**

**Background**

- Pediatric patients (0-18 years) comprise only 6-10% of EMS transports.
- Florida EMS agencies must be prepared to take care of children ranging from a premature newborn to an adult sized adolescent - 24/7/365.
- EMS professionals perform infrequent pediatric critical procedures (<1% of all pediatric encounters) and medication dosing (~20% of pediatric encounters).
- Pediatric EMS calls present a high potential for patient safety events and risks. Pediatric and newborn patients in general present a high risk for liability.
- Children have unique differences in anatomical, physiological, developmental, and injury mechanisms that result in different responses to trauma and medical disorders including disaster settings such as chemical and radiation incidents.
- The majority of children receive initial emergency care in or transport to non-pediatric facilities.
- Pediatric interfacility transfers have increased across the country by approximately 30% in the last decade due to closure of pediatric and OB inpatient units, the rapid growth of free standing EDs, and other factors leading to rural agencies and EDs managing critical ill or injured children and newborns for hours if air services are not available.
- Dealing with pediatric EMS calls presents unique challenges including managing concerned or emotional parents, caregivers, and siblings.
- Pediatric resuscitations or death experiences produce a large emotional burden for prehospital professionals.
- 1 out of 5 children in the US have a special healthcare need (physical, developmental, behavioral, or technology dependent).

*All EMS agencies need a system to treat newborns, children, and adolescents based on age, weight, and developmental level.*

**Models of Age and Weight Based Pediatric Management**

- Florida statute requires a pediatric length-based measurement device for equipment selection and drug dosage. The purpose of the device is to give an approximate weight based on length when the actual weight is unknown.
- National pediatric emergency position and policy statements recommend a length and/or weight based system and volumetric dosing guides.

- The Broselow Tape, a color-coded length-based tape, was first developed in 1985 to relate a pediatric patient's height to their *approximate* weight to determine equipment size and dosages of medication during emergencies. This concept expanded into national pediatric resuscitation protocols and algorithms, electronic health systems, and other pediatric emergency management systems.
- The 2023 Florida EMS survey indicates that 51% of agencies employ the Handtevy Pediatric Emergency Standards system to determine pediatric medication dosing and equipment size selection; 43% use a Broselow Resuscitation Tape; 2% use local agency policy; and 1% use the Pedi-Sleeve Pediatric Dosing System
- The Handtevy System has some unique advantages:
  - Use in all ages- pediatric and adult
  - Includes protocols and checklists with the ability to utilize local or model protocols; offers a mobile platform and app
  - Provides medication concentrations, dose, and volume to administer
  - Peer reviewed publications and scientific abstracts demonstrate significant reduction in medication errors, time to drug administration, and cognitive errors along with significant increases in ROSC rates.

### **State Need**

- Florida EMS agencies are requesting funding assistance for the Handtevy system via state EMS matching grants, Florida EMSC, and requests to local healthcare coalitions; however, funds are limited. Recent hurricanes and mass disasters in Florida and nationally demonstrated gaps and needs in pediatric emergency care.
- Several states in the US have funded and deployed the Handtevy System at a state level (VA, Utah, HI, AK, LA).

### **Proposal Request**

That the Florida Bureau of Emergency Medical Oversight in collaboration with the Florida EMS Advisory Council explore funding options for implementation of a voluntary Handtevy or other equivalent pediatric system in state EMS agencies based on medical director preference with priority considerations for rural agencies, areas where transport to a pediatric capable facility is > 30 minutes, and counties with high pediatric populations. Neonates, children, adolescents, special healthcare needs, and disaster preparedness should be considered in system planning.

*Let's treat all children in Florida the way we want our own children and family managed in an emergency or disaster situation!*

**Florida PEDReady**