



# Pediatric Readiness for EMS Agencies: Staying Prepared for Scary Kids

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# Why We Are Here

- EMS providers don't see large numbers of seriously ill or injured children, and it is difficult to be really ready when the time comes...
- What can your EMS agency do to assure that you are prepared and confident when and if the time comes that you are responsible for the care of a really scary kid? (let's talk about it...)

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- 7) EMS "Pediatric Preparedness" Checklist

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- 6) Don't Forget Kids In Disasters
- 7) EMS "Pediatric Preparedness" Checklist
- 8) Handling "Scary Kids" (Dr. Guins)

# 1) Understanding “Why”...

- Institute Of Medicine (IOM) 2006  
Recommendations “Emergency Care for Children: Growing Pains”
- Findings of the National Commission on Children and Disasters (2011 report)
- “Joint Policy Statement—Guidelines for Care of Children in the Emergency Department”  
(2009 position paper by AAP, ACEP, ENA, et al.)

# Special Challenges

- Children represent a special challenge for emergency and trauma care providers, in large part because they have unique medical needs in comparison with adults.

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- Normal for adults may signal distress in a child
- Airway anatomy differs
- Needed interventions require special care and appropriate equipment sizes  
(Example: shorter trachea, higher larynx)

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- For some providers, having children of their own might make it more difficult, while others may be more comfortable

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- Children represent 27 percent of all ED visits, yet many hospitals are not well prepared to handle pediatric patients

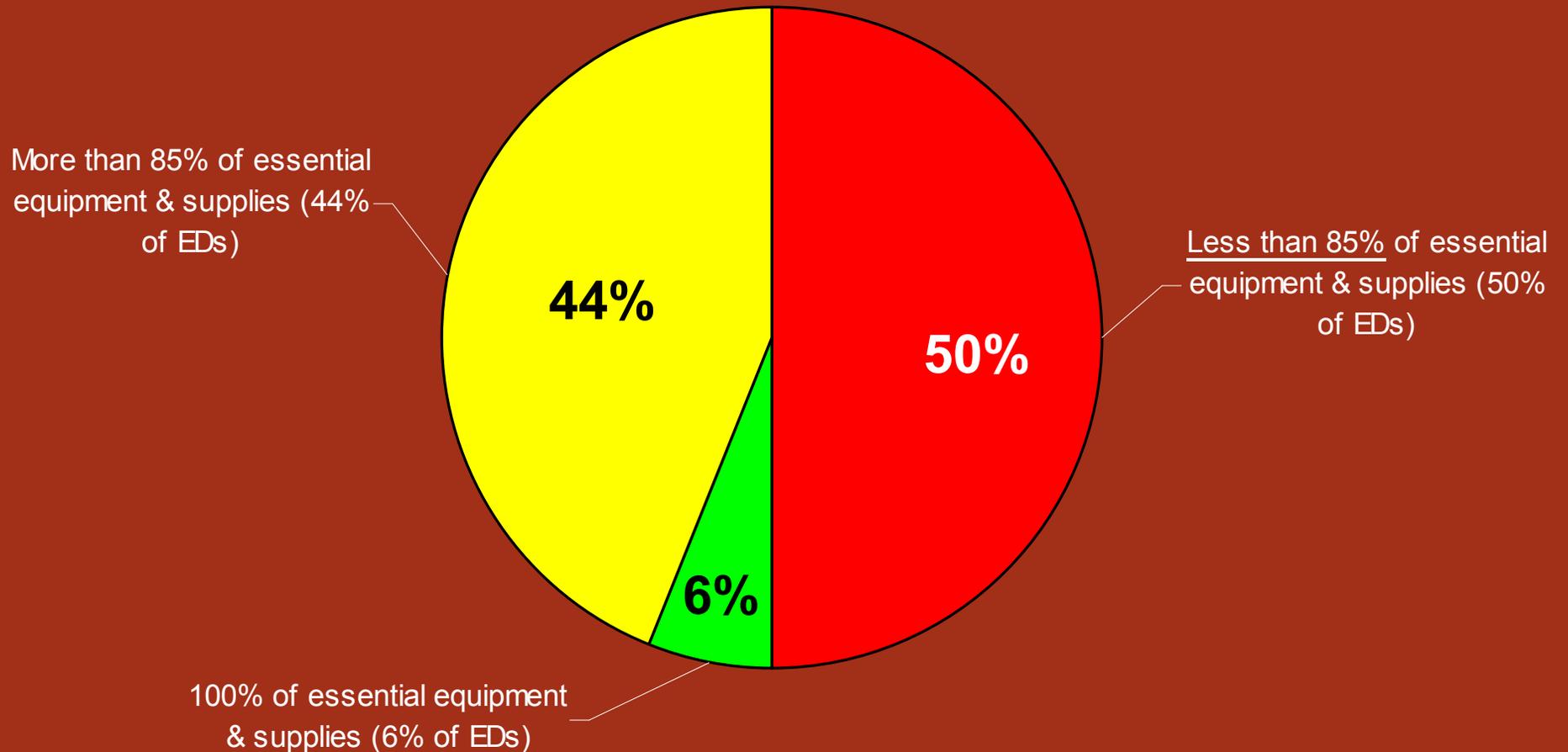
## Example: ED Readiness

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- Only 6% of ED's in the U.S. have on hand all of the supplies deemed essential for managing pediatric emergencies
- Only half of hospitals have at least 85% of those supplies

# Essential Pediatric Equipment & Supplies in Hospital Emergency Departments



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  - Not required, or
  - Extremely limitedfor many prehospital emergency medical technicians (EMT's)

# Example: Medications

- Many medications prescribed for children are "off label\*"

\*not adequately tested or approved by the U.S. Food and Drug Administration (FDA) for use in pediatric populations

## 2) Having Pediatric Protocols



### 3) Pediatric Education & Training

- Pediatric Education for Prehospital Professionals (PEPP)
- Pediatric Advanced Life Support (PALS)
- Advance Pediatric Life Support (APLS)
- Emergency Nurse Pediatric Certification (ENPC)
- Others...

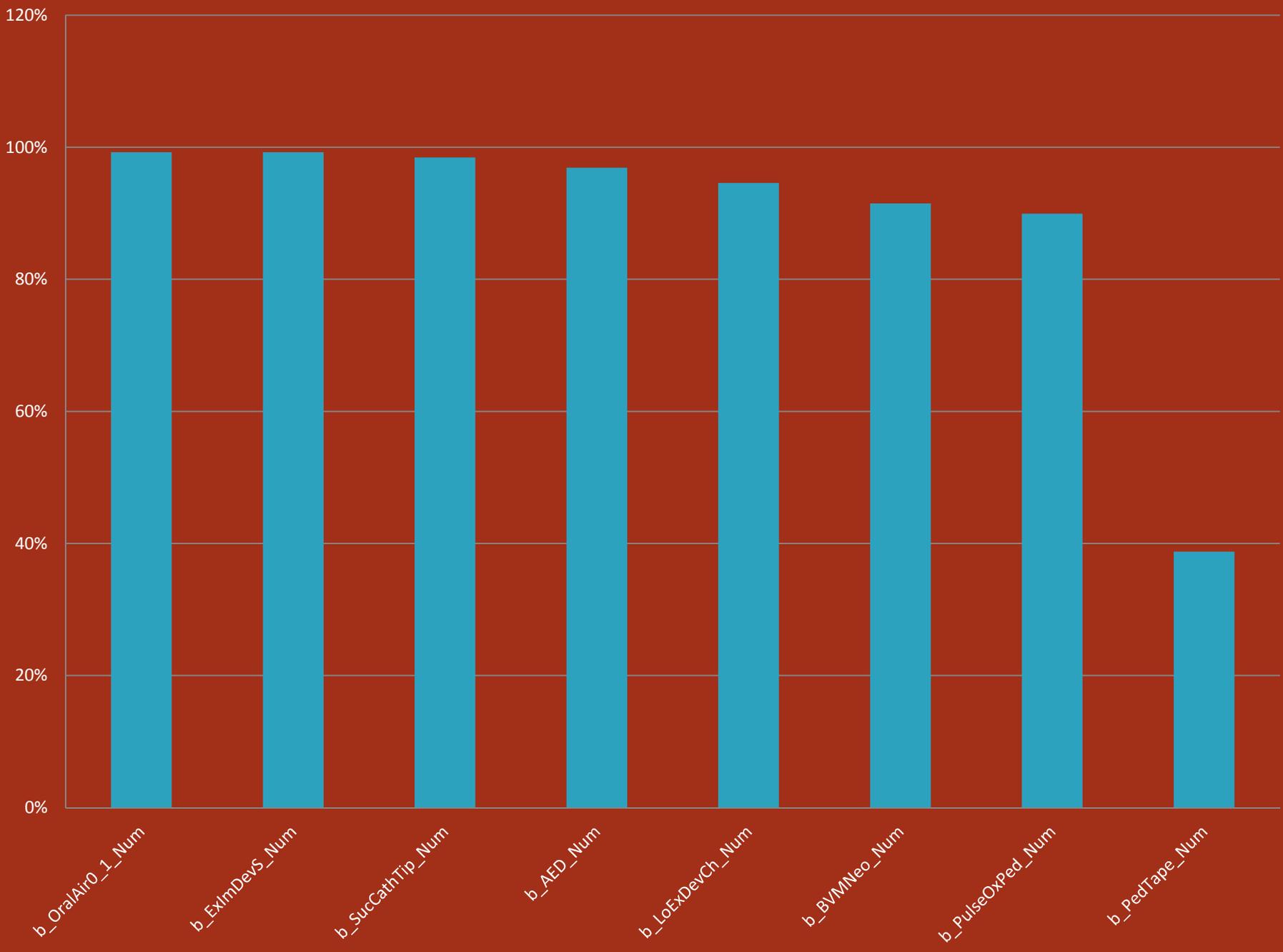
## 4) Pediatric-Sized Equipment

# VA Required List

# National Recommended List

- AAP

## Pediatric Equipment Items Less Than 100%



## 5) Organizing pediatric resources

# Immobilizing Children in Ambulances

- DRAFT recommendations of National Highway Traffic Safety Administration and EMS for Children
- Available at
- Provides layers of recommended choices dependent upon situation

## 5) Don't Forget Kids In Disasters

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- Disaster preparedness plans often overlook the needs of children, even though their needs during a disaster differ from those of adults
- The needs of your EMS providers who have children are also important to plan for—you need them to be available to fulfill their EMS roles

# Disaster Preparedness Challenges

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- Disaster drills seldom involve pediatric mass casualty events

## 7) EMS "Pediatric Preparedness" Checklist

- Customize your own, very much a detailed action plan...
- A very global example might look like this (though yours will probably be several pages long once you work through the details...)

# EMS Agency "Pediatric Preparedness" Checklist

- Pediatric Coordinator
- Pediatric protocols
- VA required equipment
- Nationally recommended additional equipment
  - Pulse oximeter
  - Traction splint
  - Length-based resuscitation tape (example Broselow™ )
- Pediatric immobilization strategy (and practice)
- Education & Training
  - PEPP
  - PALS (if ALS)
  - Additional pediatric CE and "hands on" practice
  - Pediatric immobilization strategy and practice
- Pediatric specifics in agency disaster plan
- Strategy for agency providers who have children
- Active participation with ESF 7 and 8 in NIMS

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- Measures Virginia's progress in relation to specific national EMSC performance measures
- Works with local and regional entities to facilitate collaboration toward improvement of pediatric emergency care

# VA EMSC (also works to...)

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- Ensure that pediatric services are well-integrated into an emergency medical services (EMS) system backed by optimal resources.
- Ensure that the entire spectrum of pediatric emergency services—including primary prevention of illness and injury, acute care, and rehabilitation—is provided to children and adolescents in Virginia.

# The EMSC Performance Measures

- These national performance measures have accompanying measurable goals, which are being pursued at the same time the measures are being assessed

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- Data was gathered by all fifty states and some protectorates in early 2011 to aid in establishing a baseline with which to create goals and evaluate program effectiveness

# Performance Measure 71

- The percent of prehospital provider agencies in the state/territory that have on-line pediatric medical direction available from dispatch through patient transport to a definitive care facility

# Performance Measure 72

- The percent of prehospital provider agencies in the state/territory that have off-line pediatric medical direction available from dispatch through patient transport to a definitive care facility

# Performance Measure 73

- The percent of patient care units in the state/territory that have essential pediatric equipment and supplies as outlined in national guidelines

# Performance Measure 74

- The percent of hospitals recognized through a statewide, territorial, or regional standardized system that are able to stabilize and/or manage pediatric medical emergencies

# Performance Measure 75

- The percent of hospitals recognized through a statewide, territorial, or regional standardized system that are able to stabilize and/or manage pediatric traumatic emergencies

# Performance Measure 76

- The percentage of hospitals in the state/territory that have written interfacility transfer guidelines that cover pediatric patients and that include pre-defined components of transfer

# Performance Measure 77

- The percent of hospitals in the state/territory that have written interfacility transfer agreements that cover pediatric patients

# Performance Measure 78

- The adoption of requirements by the state/territory for pediatric emergency education for license/certification renewal of BLS/ALS providers

# Performance Measure 79

- The degree to which state/territories have established permanence of EMSC in the state/territory EMS system by establishing an EMSC Advisory Committee, incorporating pediatric representation on the EMS Board, and hiring a full-time EMSC manager

# Performance Measure 80

- The degree to which state/territories have established permanence of EMSC in the state/territory EMS system by integrating EMSC priorities into statutes/regulations

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# Scary Kids!

- The 911 dispatcher receives a frantic call at 3am from a mother who claims that her 12 mo old child is “shaking” and won’t wake up.
- You get the call and as you head to the scene, begin to mentally prepare as to how you will handle this situation, all the while thinking to yourself, “ I really hate peds calls!”

# Pediatric Seizures

- What can your agency have done to prepare you for this call?
- Training in Pediatric Emergencies
  - Practice common scenarios such as this one
- Appropriately Sized Equipment
  - Broselow tape, Airway management, IV catheters
- Pediatric Protocols
  - Do you have a Pediatric Seizure protocol?

# Pediatric Seizures

- Ten minutes later, you and your partner arrive to find the child lying on the floor in the living room, having a generalized tonic-clonic seizure, covered in emesis, gurgling in his secretions.
- If you are not prepared to handle this scenario, which occurs EVERY SINGLE DAY, the outcome would be very poor for this child!

# Preparation

- But, you have been well trained, have prepared your plan of action en-route and know exactly what to do because you have had some pediatric education, are carrying the proper sized equipment, and have a pediatric seizure protocol that your partner pulled out on the way to this call, RIGHT?

# Preparation

- Well, maybe not everywhere in Virginia, but my dream is to get to that point.



# Seizure

- Things you need for this call:
  - Broselow tape to estimate the child's weight and be able to properly dose your medications
  - 22 or 24 gauge catheter **IF** you want to place an IV
  - Pediatric size BVM, with infant or small child sized mask if he needs assisted ventilations.
  - Small suction catheters
  - Seizure protocol with pediatric considerations

# Outcome

- You quickly assess, position and suction the child's airway, providing O<sub>2</sub> via face mask.
- He is now maintaining his airway.
- You prepare to give him a medication to stop the seizure: options include:
  - PR Valium – quick and easy, works well!
  - IV Valium, Ativan, Versed, not so easy to get an IV!
  - IM Ativan or Versed – takes a while to work!

# Intranasal Midazolam

- IN Midazolam (Versed) is a fairly new modality for treating pediatric seizures.
- Uses an atomization device to deliver the drug to the nasal mucosa.
- Effective: fewer complications than PR Valium.
- Quick, easy, painless and

**IT WORKS!!**



# Agency Preparedness

- Just one example of how an agency can be better prepared for “Scary Kids”.
  - Keep up to date with the latest research and recommendations regarding prehospital care for pediatric patients.
  - Work with a Pediatric Emergency Medicine MD
    - Help develop your pediatric protocols
    - Pediatric education, on and off-line med control
  - EMSC Program and website resources

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???? QUESTIONS ???? ?



# Thanks for your attention and participation!

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