

## RSS SESSION SIGN-IN SHEET

Pediatric Care Echo Series  
Pediatric Trauma Readiness  
February 15, 2018  
Michael Kim, MD

**RSS Global Objective(s): Assess pediatric trauma given the new skills and guidelines determined to be safe for children.  
Identify proper tool and standardized measurement practices to improve diagnosis and treatment of pediatric patients.**

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# Pediatric Emergency Readiness

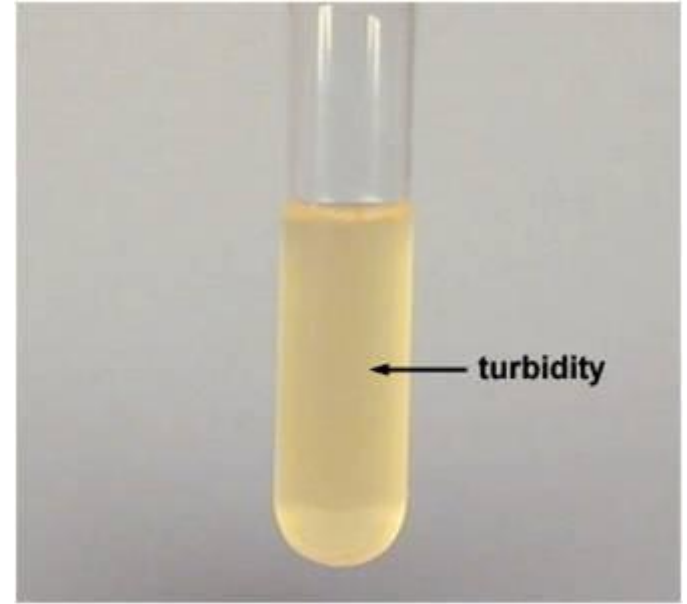


Pediatric Care ECHO Series  
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Michael K. Kim

# No financial conflict of interest

- Chair, WI EMSC



What can you do to take care of her?

“We do not have appropriate size of equipment or expertise ...”

“She will likely die or suffer severe brain damage...”



1984



# objectives

- Learn the history of pediatric emergency preparedness
- Understand current status
- Know the pediatric readiness recommendations
- Know the ways to improve your pediatric readiness



# EMSC 1984



- To ensure state-of-the-art emergency medical care for the ill or injured child and adolescent
- To ensure that pediatric services are well integrated into an emergency medical services (EMS) system and backed by optimal resources
- To ensure that the entire spectrum of emergency services -including primary prevention of illness and injury, acute care, and rehabilitation -is provided to infants, children, adolescents and young adults.



# Care of Children in Emergency Department: Guideline for Preparedness

ACEP and AAP 2001

- 31 million pediatric ED visits (1997)
- 5312 EDs
  - Only 105 (2%) with PED or PICU
  - Yet, 76% of these admit children
  - 90.7% without pediatric trauma service
  - Yet, 25% admit critically injured kid

# Care of Children in Emergency Department: Guideline for Preparedness

ACEP and AAP 2001

- Administration and coordination
- Personnel qualifications
- QI process
- Policy, procedures, protocols
- Support services
- Medications and equipment

# Pediatric Preparedness of US Emergency

Departments: A 2003 survey

Gausche-Hill, Pediatr 2007

- 1484 (29%) of 5144 survey returned
- 89% of visits occur in non-pediatric hospitals
- 6% of visits occur in pediatric EDs
- 75% of ED see <7,000 children per year
- Only 59% aware of 2001 recommendations
- Only 18% of with peds MD coordinator
- Only 12% with peds RN coordinator
- Only 6% had all the equipment recommended

# Availability of Pediatric Services and Equipment in ED:

US 2002-2003

Middleton 2006

NHAMCS 2004 ED summary

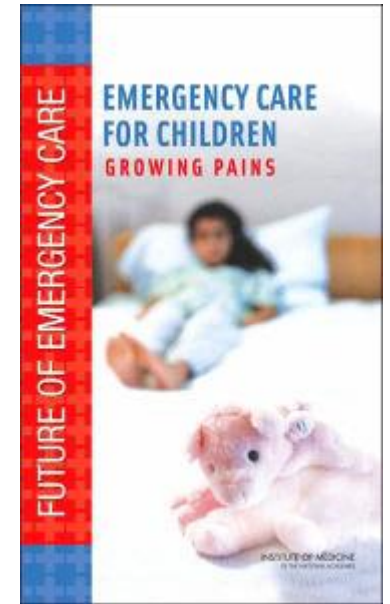
McCaig 2006

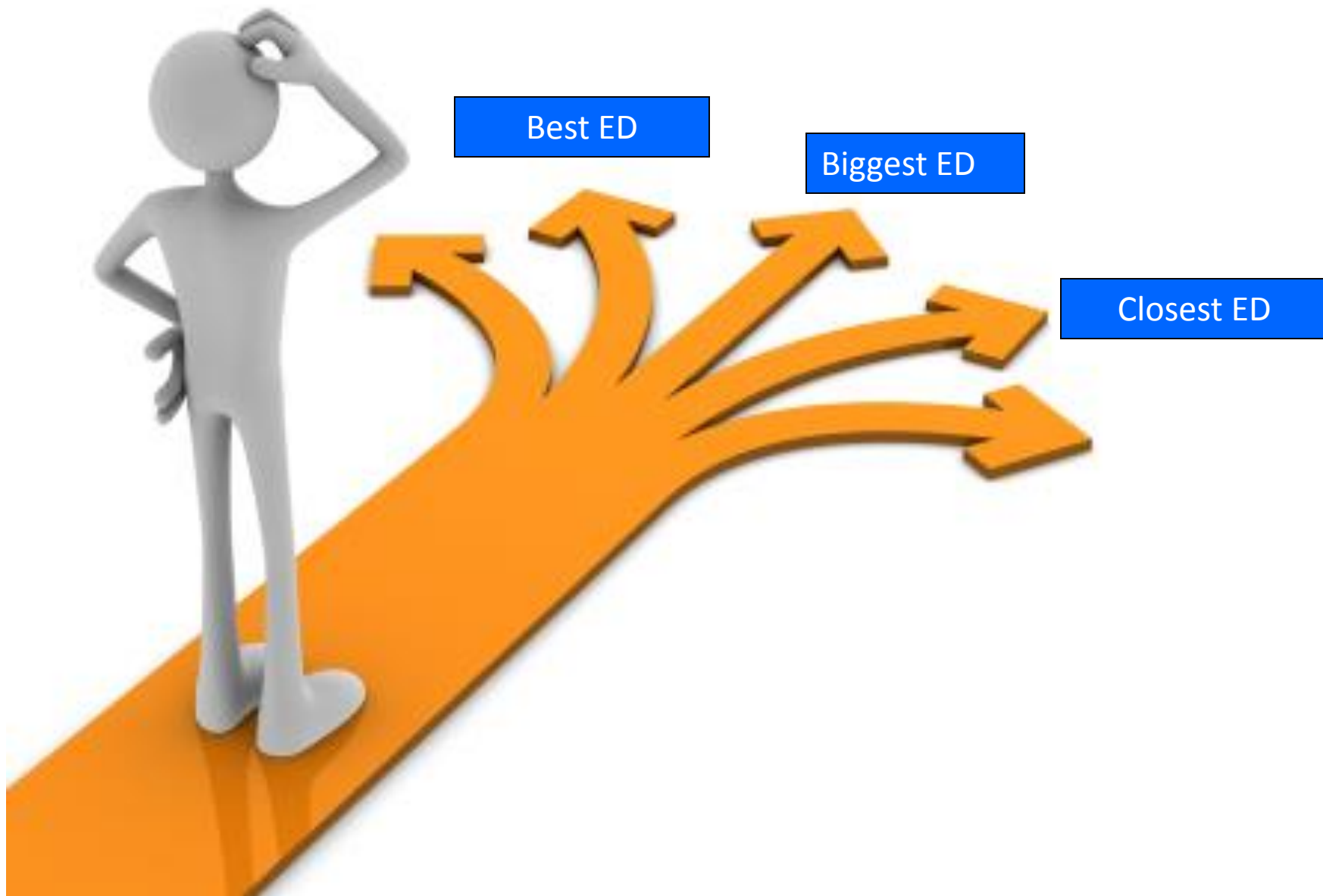
- 119 million visits to 3833 ED in 2004
  - 20% were children
  - 50% see less than 10 children/day

**Quality of pediatric emergency care ?**

# The Future of Emergency Care in the US Health System: IOM report June 2006

- Lack of pediatric emergency departments
- Lack specially trained staff & equipment
- Lack of transfer agreements
- CME for PEM in not required
- Disaster preparedness lack pediatric focus
- *Paying attention to Children in all aspects of emergency care including development of standards, care, research...*





Best ED

Biggest ED

Closest ED

# Specialized Pediatric ED

Bourgeois, Shannon 2007

- Advantages

- Level 1 trauma center
- PICU
- Subspecialists
- Less likely to be transferred


- Disadvantages

- Distance
- Longer wait
- Longer stay

# AMERICAN ACADEMY OF PEDIATRICS

American Academy of Pediatrics, Committee on Pediatric Emergency Medicine  
and American College of Emergency Physicians, Pediatric Committee

## Care of Children in the Emergency Department: Guidelines for Preparedness



### Guidelines for Care of Children in the Emergency Department

This checklist is based on the American Academy of Pediatrics (AAP), American College of Emergency Physicians (ACEP), and Emergency Nurses Association (ENA) 2009 joint policy statement "Guidelines for Care of Children in the Emergency Department," which can be found online at <http://aapolicy.aapublications.org/cgi/reprint/pediatrics;124/4/1233.pdf>. Use the checklist to determine if your emergency department (ED) is prepared to care for children.

Administration and Coordination of the ED for the Care of Children	Guidelines for Improving Pediatric Patient Safety
<ul style="list-style-type: none"><li>Physician Coordinator for Pediatric Emergency Care. The pediatric physician coordinator is a specialist in emergency medicine or pediatric emergency medicine; or if these specialties are not available then pediatrics or family medicine, appointed by the ED medical director, who through training, clinical experience, or focused continuing medical education demonstrates competence in the care of children in emergency settings, including resuscitation.</li><li>Nursing Coordinator for Pediatric Emergency Care. The pediatric nurse coordinator is a registered nurse (RN), appointed by the ED nursing director, who possesses special interest, knowledge, and skill in the emergency care of children.</li></ul>	<p>The delivery of pediatric care should reflect an awareness of unique pediatric patient safety concerns and are included in the following policies or practices:</p> <ul style="list-style-type: none"><li>Children are weighed in kilograms.</li><li>Weights are recorded in a prominent place on the medical record.</li><li>For children who are not weighed, a standard method for estimating weight in kilograms is used (e.g., a length-based system).</li><li>Infants and children have a full set of vital signs recorded (temperature, heart rate, respiratory rate) in medical record.</li><li>Blood pressure and pulse oximetry monitoring are available for children of all ages on the basis of illness and injury severity.</li><li>A process for identifying age-specific abnormal vital signs and notifying the physician of these is present.</li><li>Processes in place for safe medication storage, prescribing, and delivery that includes precalculated dosing guidelines for children of all ages.</li><li>Infection-control practices, including hand hygiene and use of personal protective equipment, are implemented and monitored.</li><li>Pediatric emergency services are culturally and linguistically appropriate.</li><li>ED environment is safe for children and supports patient- and family-centered care.</li><li>Patient identification policies meet Joint Commission standards.</li><li>Policies for the timely reporting and evaluation of patient safety events, medical errors, and unanticipated outcomes are implemented and monitored.</li></ul>
Physicians, Nurses and Other Healthcare Providers Who Staff the ED	Guidelines for ED Policies, Procedures, and Protocols
<ul style="list-style-type: none"><li>Physicians who staff the ED have the necessary skill, knowledge, and training in the emergency evaluation and treatment of children of all ages who may be brought to the ED, consistent with the services provided by the hospital.</li><li>Nurses and other ED health care providers have the necessary skill, knowledge, and training in providing emergency care to children of all ages who may be brought to the ED, consistent with the services offered by the hospital.</li><li>Baseline and periodic competency evaluations completed for all ED clinical staff, including physicians, are age specific and include evaluation of skills related to neonates, infants, children, adolescents, and children with special health care needs. (Competencies are determined by each institution's medical and nursing staff privileges policy.)</li></ul>	<p>Policies, procedures, and protocols for the emergency care of children should be developed and implemented in the areas listed below. These policies may be integrated into overall ED policies as long as pediatric specific issues are addressed.</p> <ul style="list-style-type: none"><li>Illness and injury triage.</li><li>Pediatric patient assessment and reassessment.</li></ul>
Guidelines for QI/PI in the ED	
<ul style="list-style-type: none"><li>The QI/PI plan shall include pediatric specific indicators.</li><li>The pediatric patient care-review process is integrated into the ED QI/PI plan. Components of the process interface with out-of-hospital, ED, trauma, inpatient pediatric, pediatric critical care, and hospital-wide QI or PI activities.</li></ul>	

Produced by the AAP, ACEP, ENA, the EMSC National Resource Center, and Children's National Medical Center

[https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/children-and-disasters/documents/checklist\\_ed\\_aug2010.pdf](https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/children-and-disasters/documents/checklist_ed_aug2010.pdf)



Wisconsin



*National*  
*Pediatric Readiness Project*  
Ensuring Emergency Care for All Children

**State Name:** Wisconsin

**Report Date:** 8/29/2013 4:46:14 PM

**Number of Hospital Respondents:** 111

**Number of Hospitals Assessed:** 128

**Response Rate:** 86.7%

### STATE SCORE AND COMPARATIVE SCORES:

67

STATE AVERAGE  
HOSPITAL SCORE  
OUT OF 100

68

STATE MEDIAN  
HOSPITAL SCORE  
OUT OF 100

69

n = 4,143  
NATIONAL MEDIAN OF  
PARTICIPATING HOSPITALS

# National and WI comparisons

<b>Average Section Scores</b>	<b>State Section Scores</b>	<b>National Section Scores</b>
Guidelines for Administration and Coordination (19 pts)	<b>8.7</b>	<b>10.1</b>
Physicians, Nurses, and Other Health Care Providers Who Staff the ED (10 pts)	<b>4.8</b>	<b>5.3</b>
Guidelines for QI/PI in the ED (7 pts)	<b>2.8</b>	<b>2.9</b>
Guidelines for Improving Pediatric Patient Safety in the ED (14 pts)	<b>11.0</b>	<b>10.8</b>
Guidelines for Policies, Procedures, and Protocols for the ED (17 pts)	<b>10.4</b>	<b>10.5</b>
Guidelines for Equipment, Supplies, and Medications for the Care of Pediatric Patients in the ED (33 pts)	<b>29.2</b>	<b>29.4</b>

# National and WI comparison

	WI	National	difference
Nurse coordinator	48.6%	59.4%	-10.7%
MD coordinator	43.2%	47.5%	-4.3%
RN competency evaluation	64%	66.7%	-2.7%
MD competency evaluation	32.4%	38.7%	-6.3%
ID of QI measures	30.6%	58.4%	-27.8%
Weigh in Kg	77.5%	67.8%	9.7%
Record in Kg	66.3%	75.3%	-9.1%
Disaster plan addressing issues specific to children	35.1%	46.9%	-11.7%
ID of QI measures	30.6%	58.4%	-27.8%

# Pediatric Readiness Quality Collaborative (PRQC)

- 2 year project to improve the pediatric readiness in 4 domains
  - Collection and documentation of weight in Kg
  - Development of abnormal VS notification
  - Ensuring inter-facility transfer guidelines are patient and family centered
  - Establishing disaster plan that include children
- Community EDs (affiliate sites) paired with trainer Sites
- Goal: to improve by 10% in selected domain

# Wisconsin Pediatric Readiness Program



# Wisconsin EMS data 2008

- Essential pediatric equipment
  - BLS units 42% (69%)
  - ALS units 25% (71%)
- Written inter-hospital pediatric transfer agreements
  - 48% (58%)
- Written inter-hospital pediatric transfer guidelines
  - 4% (14%)



# JOINT POLICY STATEMENT

## EQUIPMENT FOR GROUND AMBULANCES

American Academy of Pediatrics  
American College of Emergency Physicians  
American College of Surgeons Committee on Trauma  
Emergency Medical Services for Children  
Emergency Nurses Association  
National Association of EMS Physicians  
National Association of State EMS Officials

<http://www.naemsp.org/Documents/Position%20Papers/POSITION%20Equipment%20for%20Ground%20Ambulances.pdf>

# 2017 EMSC Survey



	WI	National	Difference
Designated Pediatric Emergency Care Coordinator	66/313 (21.1%)	1437/6060 (23.7%)	-2.6%
Process for EMS providers to demonstrate correct use of pediatric specific equipment	69/313 (22%)	1476/6060 (24.4%)	-2.4%



# Steps toward improving Pediatric Readiness

- Evaluate your readiness
- Know the guidelines
- Buy in from team and administration
- Seek and secure resource from academic pediatric emergency centers
- Be involved with WI EMSC

# Pediatric Readiness Resources

- <https://emscimprovement.center/>
- <https://www.pedsready.org/>
- <https://www.dhs.wisconsin.gov/emsc/index.htm>
- <https://www.chawisconsin.org/emsc/>
  
- <https://www.acep.org/Clinical---Practice-Management/Guidelines-for-Care-of-Children-in-the-Emergency-Department/>
- <http://www.naemsp.org/Documents/Position%20Papers/POSITION%20Equipment%20for%20Ground%20Ambulances.pdf>
- [https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/children-and-disasters/documents/checklist ed aug2010.pdf](https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/children-and-disasters/documents/checklist_ed_aug2010.pdf)

