State of Emergency Department Preparedness for Children:

Release of Joint Policy Statement - A Consensus on the Essentials

TUESDAY, FEBRUARY 23, 2010

12:00 – 1:30 PM (EST)

EMSC Emergency Medical Services for Children

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

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Agenda

Overview of New AAP/ACEP/ENA Guidelines for Care of Children in the Emergency Department

Marianne Gausche-Hill, MD, FAAP, FACEP

Role of the Physician Coordinator

Marianne Gausche-Hill, MD, FAAP, FACEP

Role of the Nursing Coordinator

Sally K. Snow, RN, BSN, CPEN, FAEN

Role of the Pediatrician

Robert A. Wiebe, MD, FAAP, FACEP

Interface with National Initiatives: Institute of Medicine, EMSC Performance Measures & More

Joseph L. Wright, MD, MPH, FAAP

Implementation Barriers, Benefits, Cost

Marianne Gausche-Hill, MD, FAAP, FACEP

Emergency Department Pediatric Preparedness Promo

Video Featuring Noah Wyle from the TV Show “ER”

Question & Answers

All Speakers

- **Overview of New AAP/ACEP/ENA Guidelines for Care of Children in the Emergency Department**

Marianne Gausche-Hill, MD, FAAP, FACEP

Pediatric Emergency Department Visits

- Of the 119 million emergency department visits, approximately 23 million are children
- There are 3,833 emergency departments in the United States
  - Most of these hospitals are general emergency departments with limited pediatric inpatient resources
  - 188 free standing children's hospitals and university hospitals which care for children with critical illness or injury, in 49 states in the United States

Critical Questions

- *Are you aware that there are national guidelines for pediatric readiness in emergency departments?*
- *Does your emergency department have staffing, policies and procedure, a quality improvement plan, equipment and medications to care for children of all ages?*
  - *Do you have a mask small enough to ventilate a neonate?*
  - *Do you have pediatric Magill forceps?*
- *Does your ED have a nursing and physician coordinator for pediatric emergency care?*

Care of Children: Guidelines for Preparedness Policy

- Joint policy from American College of Emergency Physicians and American Academy of Pediatrics originally published in 2001 issue of *Annals of Emergency Medicine* and *Pediatrics*
  - Reviewed and supported in concept by 17 organizations

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

ABSTRACT: Children requiring emergency care have unique and special needs. This is especially so for those with serious and life-threatening emergencies. There are a variety of components of the emergency care system that provide emergency care to children that are rare, harmful to children. With regard to hospitals, most children are brought to community hospital emergency departments (EDs) by means of their available rather than to facilities designed and organized solely for children.

Emergency medical services (EMS) agencies, similarly, provide the bulk of out-of-hospital emergency care to children. It is important that all hospital EDs and EMS agencies have the appropriate equipment, staff, and policies to provide high-quality care for children. This statement provides guidelines for necessary resources to ensure that children receive quality emergency care and to facilitate, when indicated, timely referral to a facility with specialized pediatric services when appropriate. It is important to realize that some hospitals will lack EMS systems will have difficulty in receiving these guidelines, and others will develop more comprehensive guidelines based on local resources. It is hoped, however, that hospital ED staff and administrators and local EMS systems/administrators will work to move those guidelines to those systems that their facilities or systems provide the resources necessary for the care of children. This statement has been reviewed by and is supported in concept by the Ambulatory Pediatric Association, Ambulatory Association of Poison Control Centers, American College of Surgeons, American Hospital Association, American Medical Association, American Pediatric Surgical Association, American Trauma Society, Brain Injury Association Inc, Emergency Nurses Association, Joint Commission on Accreditation of Healthcare Organizations, National Association of Children's Hospitals and Related Institutions, National Association of EMS Physicians, National Association of EMTs, National Association of School Nurses, National Association of State EMS Directors, National Committee for Quality Assurance, and Society for Academic Emergency Medicine.

ABBREVIATIONS: ED, emergency department; EMS-C, Emergency Medical Services for Children (program); EMS, emergency medical services; QI, quality improvement; PI, performance improvement.

ACKNOWLEDGMENTS

Development of this statement would not have been possible without the generous support for the initial November 15–16, 1998 minimum standards consensus meeting funded by Project No. 98-0156(P) from the Department of Health and Human Services, Health Resources and Services Administration and Maternal and Child Health Bureau. This statement has been reviewed by and is supported in concept by the Ambulatory Pediatric Association, American Association of Poison Control Centers, American College of Surgeons, American Hospital Association, American Medical Association, American Pediatric Surgical Association, American Trauma Society, Brain Injury Association Inc, Emergency Nurses Association, Joint Commission on Accreditation of Healthcare Organizations, National Association of Children's Hospitals and Related Institutions, National Association of EMS Physicians, National Association of EMTs, National Association of School Nurses, National Association of State EMS Directors, National Committee for Quality Assurance, and Society for Academic Emergency Medicine.

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

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BACKGROUND

According to the *Child and Adolescent Emergency Department Visit Data Book*,[1] there are 21 447 000 child and adolescent visits to emergency departments (EDs) every year, corresponding to an annual rate of 412 visits/100 persons. Of these, 13 562 000 child and adolescent visits per year (17.8 visits/100 persons) were injury related. Children younger than 3 years represent the largest proportion of medically and injury related visits in this sample.

The Consumer Product Safety Commission surveyed a sample of 101 hospitals with EDs that were enrolled in the National Electronic Injury Surveillance System to identify the state of preparation of hospital EDs for managing pediatric emergencies.[2] The survey results were distributed to the estimated 5312 hospitals in the United States that have EDs. Although less than 18% have pediatric EDs or intensive care services, 76% admit children to their own facilities, and 25% of hospitals without trauma services admit critically injured children to their own facilities.

When the US Congress approved and funded the Emergency Medical Services for Children (EMS-C) program in 1984 to stimulate the organization of emergency medical services (EMS) systems to respond to the needs of children, a number of demonstration programs began to address issues related to emergency care for children. In 1993, after nearly a decade of efforts to integrate the needs of children into EMS systems, the Institute of Medicine was asked to provide an independent review of EMS-C and report to the nation on the state of the continuum of care for children within the EMS system.[3]

Data on Compliance with National Guidelines for Pediatric Preparedness

CDC Data (Middleton K, et al: Advance Data 2006)

- The Emergency Pediatric Services and Equipment Supplement (EPSES) was a self-administered questionnaire added to the 2002-03 National Hospital Ambulatory Medical Care Survey (NHAMCS)
- NHAMCS samples non-federal, short-stay and general hospitals in the United States

CDC Data

- The EPSES content was based on the 2001 AAP and ACEP ED Guidelines
- 6% of emergency departments have all the equipment as listed in the 2001 guidelines
- 53% admitted pediatric patients but did not have a specialized inpatient pediatric ward

Pediatrics, 2007

Pediatric Preparedness of Emergency Departments: A 2003 Survey of the United States

- Survey of ED Medical and Nursing directors
- Evaluate the compliance with 2001 guidelines

Location of Hospitals

Location	Number	Percent
Remote	34	2%
Rural	721	49%
Suburban	361	24%
Urban	361	24%

Institution Type

Type	Number	Percent
Standby	184	12%
Basic	368	25%
General	748	50%
Comprehensive	185	12%

Pediatrics, 2007: Conclusions

- >89% of children are seen in non-children's hospitals EDs and about 50% of US EDs see <10 pediatric patients per day
  - 26% of children are seen in rural or remote areas
- Equipment often missing are neonatal or infant sized equipment, pediatric Magill forceps, and LMAs of all sizes
- Only 59% of respondents were aware of national guidelines

Pediatrics, 2007: Conclusions

- Overall preparedness of EDs based on 2001 guidelines is low
- Hospitals that tend to be more prepared are urban, higher volume, provide separate care for pediatrics, and have a physician and nursing coordinator for pediatric emergency care
- First study to support IOM recommendation for physician and nursing coordinator for pediatric emergency care

Latest Guidelines Released in 2009

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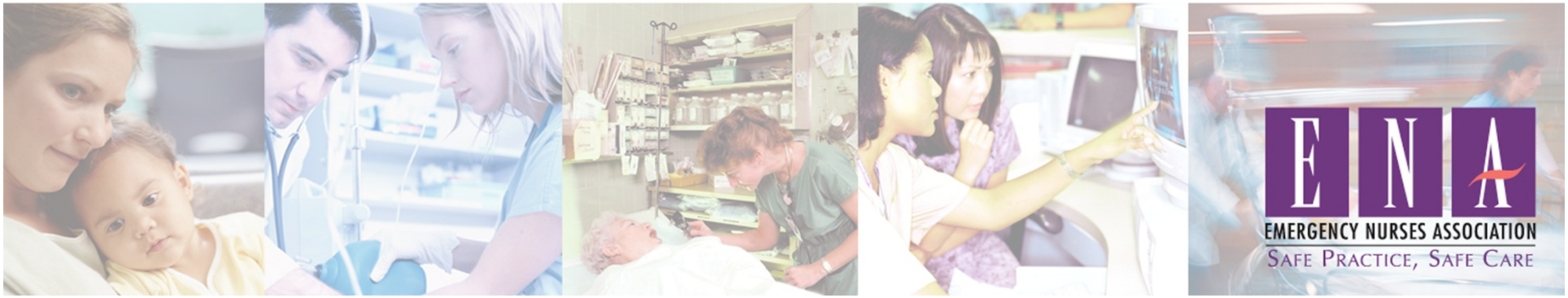


Latest Guidelines Released in 2009

- Guidelines co-authored by AAP, ACEP, and ENA
  - Supported by 22 organizations including American Medical Association, American Heart Association and the Joint Commission

PEDIATRICS Vol. 124 No. 4 October 2009, pp. 1233-1243

Joint Policy Statement—Guidelines for Care of Children in the Emergency Department

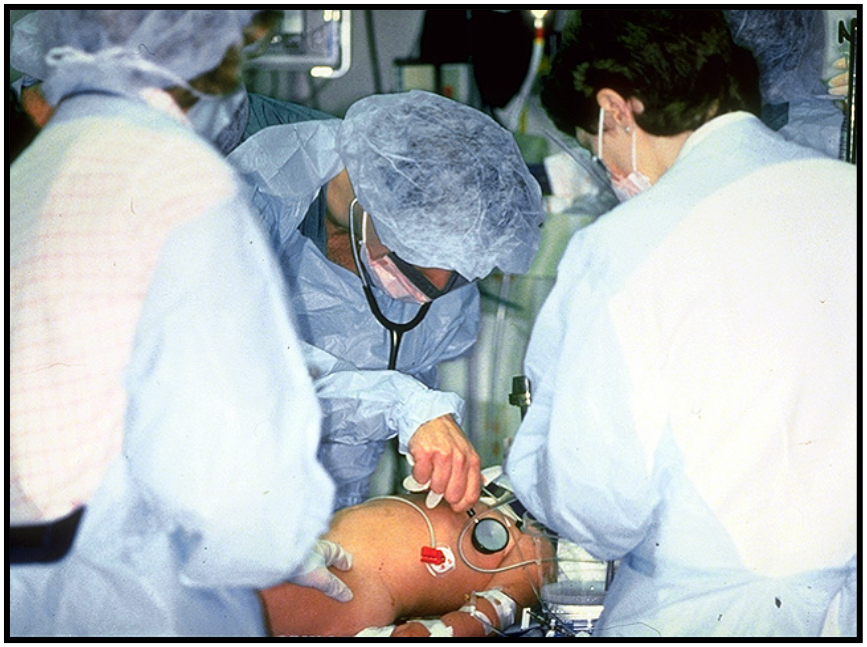
American Academy of Pediatrics, Committee on Pediatric Emergency Medicine, American College of Emergency Physicians, Pediatric Committee and Emergency Nurses Association Pediatric Committee

What's New?

- The latest guidelines have updated content including sections on…
  - Patient safety recommendations
  - Expansion of family centered care recommendations
  - Care of children in disasters

Guidelines for Care of Children in the Emergency Department

- Guidelines delineates guidelines and resources necessary to prepare hospital emergency departments to serve pediatric patients
- Philosophy is that all emergency departments can be prepared to care for children



Guidelines for Care of Children in the Emergency Department

- Seven Major Sections
  - Guidelines for Administration and Coordination of the ED
  - Physicians, Nurses, and Other Health Care Providers
  - Guidelines for QI/PI in the ED
  - Guidelines for Improving Pediatric Patient Safety
  - Guidelines for Policies, Procedures, and Protocols
  - Guidelines for ED Support Services
  - Guidelines for Equipment, Supplies, and Medications for The Care of Pediatric Patients in the ED

Guidelines for administration and coordination at the ED for the care of children

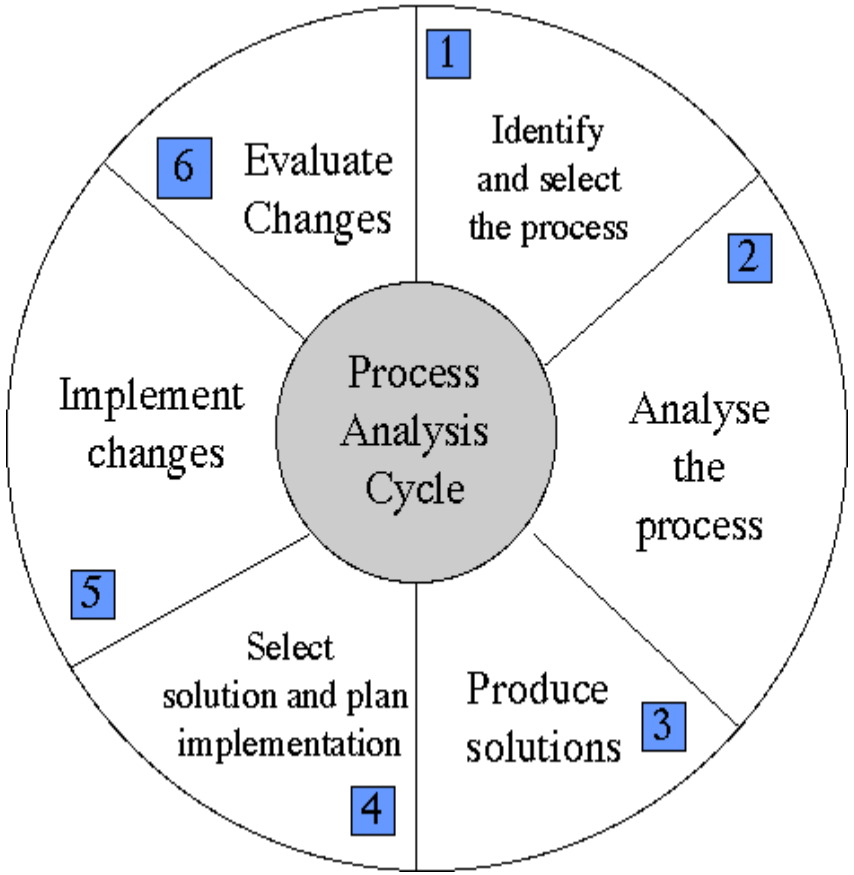
- Establishes the role of physician and nursing coordinator for pediatric emergency medicine
  - Vital in the implementation of guidelines nationally and in improving pediatric readiness of emergency departments

Physicians, Nurses, and Other Health Care Providers Who Staff the ED

- Physicians, nurses, and other health care providers staffing the ED have the necessary skill, knowledge, and training in the emergency evaluation and treatment of children of all ages.
- Baseline and periodic competency evaluations completed for all ED clinical staff, are age specific and include neonates, infants, children, adolescents, and children with special health care needs.

Guidelines for Quality Improvement/ Performance Improvement

- That a pediatric review process is integrated into the Emergency Department QI Plan
- The minimum components of the QI/PI process should include data on variances, a plan for improvement, and measures that are outcome based.



Guidelines for Quality Improvement/ Performance Improvement

- A pediatric patient care review process is integrated into the QI/PI plan of the ED according to the following guidelines:
  - Components of the process interface with out-of hospital, ED, trauma, inpatient pediatrics, pediatric critical care, and hospital-wide QI or PI activities.
  - The plan includes pediatric specific indicators.

Guidelines for Quality Improvement/ Performance Improvement

- Pediatric clinical competency evaluations should be developed as a part of the local credentialing process for all licensed ED staff.
- Mechanisms should be in place to monitor professional performance, credentialing, continuing education, and clinical competencies including integration of findings from QI audits and case reviews.

Guidelines for Quality Improvement/ Performance Improvement

- Competencies should be age specific and include neonates, infants, children, adolescents, and children with special health care needs.
  - Local educational programs
  - Professional organization conferences
  - National life-support programs
  - Scheduled mock codes or patient simulation
  - Team training exercises
  - Experiences in other clinical settings, such as the operating room

Guidelines for Improving Pediatric Patient Safety

- Care in the ED should reflect an awareness of unique pediatric patient safety concerns
  - Children should be weighed in kilograms primarily without need for calculation, unless there is a situation requiring emergent stabilization.
  - Length-based system or some standard way of estimating weight in kilograms for children who require resuscitation or stabilization
  - Environment is safe for children and supports patient and family centered care

Guidelines for Improving Pediatric Patient Safety

- Blood pressure and pulse oximetry monitoring available
- Process for identifying abnormal vital signs and notifying the physician
- Processes in place for safe medication storage, safe prescribing, and safe delivery
- Infection-control practices in place and monitored
- Services are culturally and linguistically appropriate
- Patient-identification policies meet Joint Commission standards
- Policies and monitoring for the timely reporting of patient safety events including reporting of medical errors or unanticipated outcomes

Guidelines for Policies, Procedures, and Protocols

- Illness and injury triage
- Pediatric patient assessment and reassessment
- Documentation of all pediatric vital signs and actions for abnormal vital signs
- Immunization assessment and management of the under-immunized patient
- Sedation and analgesia for procedures

Guidelines for Policies, Procedures, and Protocols

- Consent including when parent or legal guardian is not immediately available
- Social and mental health issues
- Physical or chemical restraint of patients
- Child maltreatment and domestic violence reporting criteria, requirements, and processes.
- Death of the child in the ED
- DNR orders

Guidelines for Policies, Procedures, and Protocols

- Family-centered care in the areas listed below:
  - Families are involved in patient decision-making and medication safety processes
  - Family presence during all aspects of emergency care
  - Patient, family, and caregiver education
  - Discharge planning and instruction
  - Bereavement counseling
- Communication with the patient's medical home or primary health care provider
- Medical imaging policies that address dosing for children in studies that impart radiation

Guidelines for Policies, Procedures, and Protocols

- All-hazard disaster-preparedness plan that addresses the following pediatric issues:
  - Available medications, vaccines, equipment, and trained providers
  - Pediatric surge capacity for injured and non injured children
  - Decontamination, isolation, and quarantine of families and children
  - Minimizes parent-child separation, includes system tracking, and a timely reunification of separated children
  - Access to medical, mental health therapies, and social services
  - Disaster drills which includes a pediatric mass causality incident at least every 2 years
  - Care of children with special health care needs
  - Evacuation of pediatric units and interfacility transfer

Interfacility Transfer Procedures

- Defined process for initiation of transfer, including the roles and responsibilities of the referring facility and referral center
- Process for timely transfer and appropriate facility
- Process for selecting the appropriately staffed transport service to match the patient's acuity level
- Process for patient transfer (including obtaining informed consent)
- Plan for transfer of patient information, belongings, and instructions for families
- Process for return transfer of the pediatric patient to the referring facility as appropriate

Guidelines for ED Support Services

- The radiology capability of a hospital must meet the needs of the children in the community it serves
- A process should be established for the referral of children to appropriate facilities for radiological procedures that exceed the capability of the hospital
- Guidelines to reduce radiation exposure that are age and size specific
- A process should be in place for the timely review, interpretation, and reporting by a qualified radiologist for medical imaging studies

Guidelines for ED Support Services

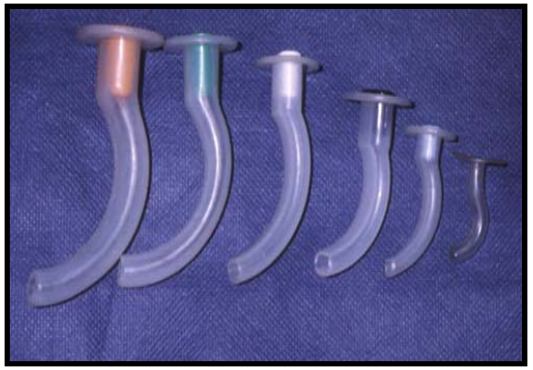
- The laboratory should have the skills and capability to perform laboratory tests for children of all ages
  - Availability of micro technique for small or limited sample size.
- The clinical laboratory capability must meet the needs of the children in the community it serves
  - Plan for referring children to the appropriate facility for laboratory studies should be in place

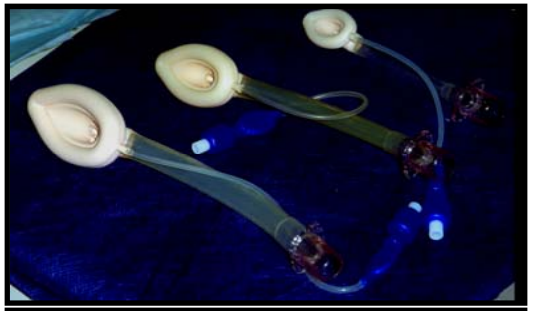
Guidelines for Equipment, Supplies and Medications

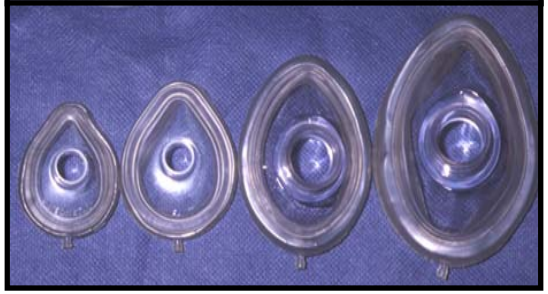
- Pediatric equipment, supplies, and medications should be appropriate for children, accessible, clearly labeled, and organized
- ED staff is educated on the location of all items
- ED has resuscitation equipment and supplies
- Method in place to verify equipment and supplies
- Medication chart, length-based tape, medical software, or other systems is readily available to ensure proper sizing of equipment and proper dosing of medications

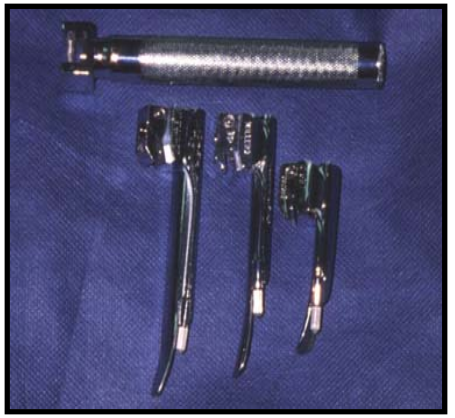
Guidelines for Equipment, Supplies and Medications

- Several tables in guidelines of list of equipment, supplies, and medications









- **Role of the Physician Coordinator**
  Marianne Gausche-Hill, MD, FAAP, FACEP

Physician Coordinator for Pediatric Emergency Medicine

- Appointed by the medical director for the ED
- A physician who has the role of overseeing pediatric emergency care activities in the department
- Pediatric emergency care “thought leader”

Qualifications: Physician Coordinator for Pediatric Emergency Care

- Meets the qualifications for credentialing by the Hospital as a specialist in emergency medicine or pediatric emergency medicine.
- Meet the qualifications for credentialing by the Hospital as a specialist in pediatrics or family medicine and demonstrate, through experience or continuing education, competence in the care of children in emergency settings, including resuscitation.
- Has special interest, knowledge, and skill in emergency medical care of children as demonstrated by training, clinical experience, or focused continuing medical education.

Qualifications: Physician Coordinator for Pediatric Emergency Care

- The Physician Coordinator may be a staff physician who is currently assigned other roles in the ED
- Shared through formal consultation agreements with professional resources from a hospital capable of providing definitive pediatric care.

Responsibilities: Physician Coordinator for Pediatric Emergency Care

- Oversee pediatric QI process, including development of policies and procedures, review of medication, supplies and serve as liaison for in-hospital and community committees addressing pediatric emergency care issues
- Facilitate pediatric emergency education of staff.

Responsibilities: Physician Coordinator for Pediatric Emergency Care

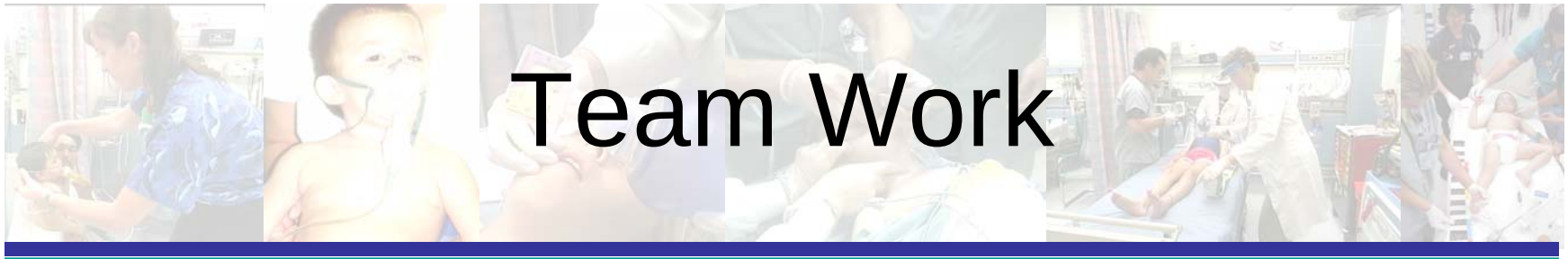
- Promote and verify adequate skill and knowledge of ED staff physicians and other ED health care providers in the emergency care and resuscitation of infants and children.
- Oversee ED pediatric QI, PI, patient safety, injury and illness prevention, and clinical care activities.
- Assist with development and periodic review of ED policies and procedures and standards for medications, equipment, and supplies to ensure adequate resources for children of all ages.
- Serve as liaison/coordinator to appropriate in-hospital and out-of-hospital pediatric care committees in the community.

Responsibilities: Physician Coordinator for Pediatric Emergency Care

- Serve as liaison/coordinator to a definitive care hospital (such as a regional pediatric referral hospital and trauma center), EMS agencies, primary care.
- Facilitate pediatric emergency education for ED health care providers and out-of-hospital providers affiliated with the ED.
- Ensure that competency evaluations completed by the staff are pertinent to children of all ages.
- Ensure pediatric needs are addressed in hospital disaster/emergency preparedness plans.
- Collaborate with the nursing coordinator to ensure adequate staffing, medications, equipment, supplies and other resources for children in the ED.

Physician Coordinator for Pediatric Emergency Medicine

- *Why is a physician coordinator important?*
  - Data suggests that hospitals who assign a physician and/or nursing coordinator:
    - Are significantly more likely to be compliant with national guidelines for preparedness.
    - Staff is more likely to be satisfied and confident of their care of children.
    - The Institute of Medicine Committee on the Future of Emergency Care in the United States Health Care System recommends that emergency departments assign two coordinators for pediatric emergency care; one of whom is a physician



Team Work

- The Physician Coordinator for Emergency Care will work as a team…with nurses and other health care providers.
- We recognize that emergency nurses are a vital resource and promote a safe and efficient emergency department.

- **Role of the Nursing Coordinator**

  Sally K. Snow, RN, BSN, CPEN, FAEN

Nurse Coordinator Qualifications

- A registered nurse who possesses special interest, knowledge, and skill in the emergency medical care of children, as demonstrated by training, clinical experience, or focused continuing nursing education.
- Maintains competency in pediatric emergency care.

Special Interest, Knowledge and Skill

- **Standards of Care**

ENA

Scope and Standards of Emergency Nursing Practice

ANA/Society of Pediatric Nurses

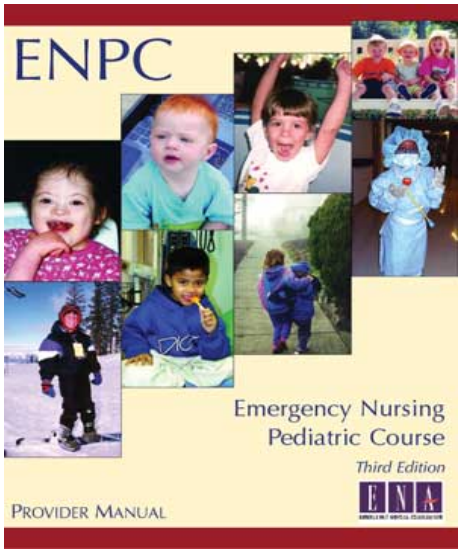
Scope and Standards of Pediatric Nursing Practice

Demonstrate Competency

- Education

  -Emergency Nursing Pediatric Course (ENPC)

  http://www.ena.org/coursesandeducation/CATNII-ENPC-TNCC/enpc/Pages/Default.aspx



Nurse Coordinator Role

- Serve as liaison:
  - Inpatient nursing
  - Regional pediatric referral hospital and trauma center
  - EMS agencies
  - Primary care providers
  - Health insurers
- Helps to integrate services for the continuum of care of the pediatric patient

Serve as a Liaison

- Position Statements/ White Papers

  Care of the Pediatric Patient in the Emergency Setting (2007)

  Pediatric Burns (2007)

  www.ena.org/about/position/Pages/Default.aspx

Nurse Coordinator Role

- Facilitate, along with hospital-based educational activities, ED nursing continuing education in pediatrics and ensuring that pediatric-specific elements are included in orientation for new staff members.

Assure Staff Competency

- Resources
  - Online Emergency Nursing Orientation Program
  - Online Emergency Nursing Triage Program

Nurse Coordinator Role

- Pediatric All Hazards Preparedness
  - Overall hospital and regional disaster plan
  - Decontamination
  - Separation issues

Nurse Coordinator Role

- **Collaborate with the physician coordinator**
  - Pediatric equipment (all sizes) is available
  - Pre-printed resuscitation sheets with calculated drug dosages are available in kilogram weight increments.
  - Pediatric Quality indicators are defined and monitored

Resources Available

2010 Committee Charges

- Pediatrics Committee
  - Develop a Position Statement on Pediatric Procedural Pain Management in the E.D.
- Certification
  - Certified Pediatric Emergency Nurse - CPEN

http://www.ena.org/bcen/certified/About/CPEN/Pages/default.aspx

Resources

- Conferences

  ENA Annual Conference (fall)

  ENA Leadership Conference (winter)

Resources

- Texts
  - Core Curriculum for Pediatric Emergency Nursing (2nd Edition)

Resources

Evidence Based Practice

Presenting the Option for Family Presence (3rd Edition),ENA, 2007

Emergency Nursing Resource: Family Presence During Invasive Procedures and Resuscitation in the Emergency Department (2009)

http://www.ena.org/Research/ENR/Documents/FamilyPresence.pdf

Resources

- Safety/Injury Prevention

  -Child Passenger Safety

  -Injury Prevention Resource List

- Pediatrics Special Interest Group and list serve are a valuable resource

"Children are our most
valuable national resource"

Herbert Hoover

Role of the Pediatrician

Robert A. Wiebe, MD, FAAP, FACEP

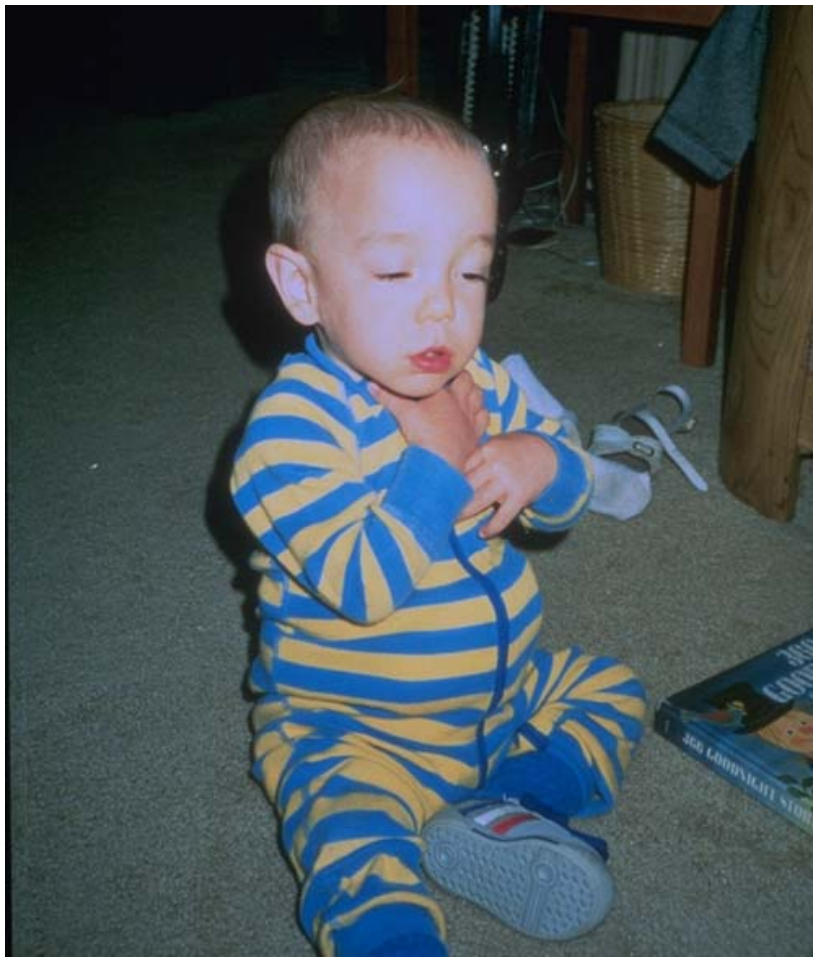
Role of the Pediatrician

- Demonstrate the “Medical Home” as a part of the EMSC continuum
- Prepare families on how and when to use EMS
- Describe the pediatrician as an advocate for children in crisis
- Review critical issues for preparation of the office for crisis


PREVENTION
FAMILY PREPARATION
EMS ACCESS
PRE HOSPITAL CARE
EMERGENCY DEPARTMENT STABILIZATION
REGIONALIZATION AND TRANSPORT
DEFINATIVE CARE (HOSPITAL)
REHABILITATION
MEDICAL HOME PRIMARY CARE
PUBLIC ADVOCACY

How and When to use EMS

- Emergencies Happen!
- They are not planned
- Prepared families make the system work
- Good “care” choices can help de-bulk an over burdened EMS system
- Delays create disaster
- Information access



Access to Information

Emergency Information Form for Children With Special Needs

American College of Emergency Physicians* | American Academy of Pediatrics

Date form completed	Revised	Initials
By Whom	Revised	Initials

Last name:

Name:	Birth date:	Nickname:
Home Address:	Home/Work Phone:	
Parent/Guardian:	Emergency Contact Names & Relationship:	
Signature/Consent*:		
Primary Language:	Phone Number(s):	
Physicians:		
Primary care physician:	Emergency Phone:	
	Fax:	
Current Specialty physician: Specialty:	Emergency Phone:	
	Fax:	
Current Specialty physician: Specialty:	Emergency Phone:	
	Fax:	
Anticipated Primary ED:	Pharmacy:	
Anticipated Tertiary Care Center:		

Diagnoses/Past Procedures/Physical Exam:

1. Baseline physical findings:
2.
3. Baseline vital signs:
4.

Synopsis:

Baseline neurological status:

*Consent for release of this form to health care providers

Last name:

Diagnoses/Past Procedures/Physical Exam continued:

Medications:	Significant baseline ancillary findings (lab, x-ray, ECG):
1.	
2.	
3.	
4.	Prostheses/Appliances/Advanced Technology Devices:
5.	
6.	

Management Data:

Allergies: Medications/Foods to be avoided	**and why:**
1.	
2.	
3.	
Procedures to be avoided	**and why:**
1.	
2.	
3.	

Immunizations

Dates						Dates					
DPT						Hep B					
OPV						Varicella					
MMR						TB status					
HIB						Other					

Antibiotic prophylaxis: Indication: Medication and dose:

Common Presenting Problems/Findings With Specific Suggested Managements

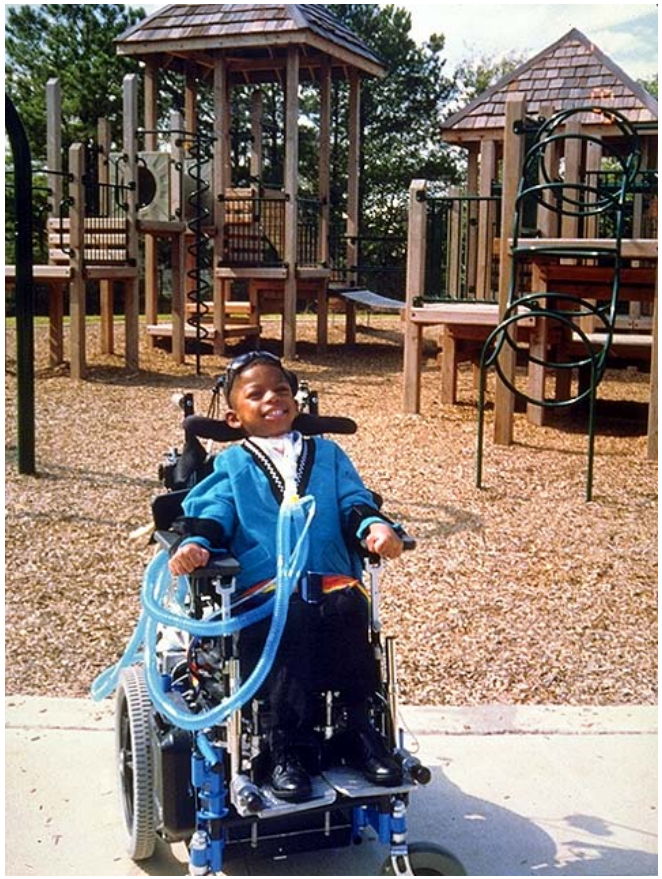
Problem	Suggested Diagnostic Studies	Treatment Considerations

Comments on child, family, or other specific medical issues:

Physician/Provider Signature: **Print Name:**

Special Needs Children

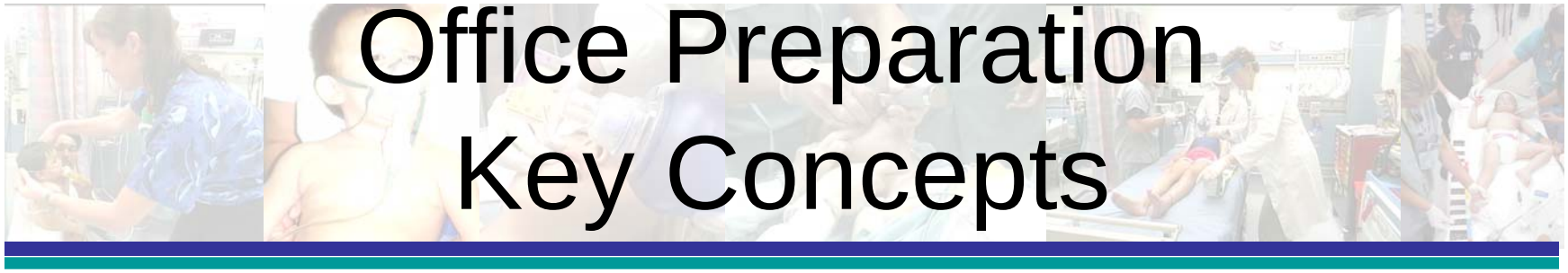
- High-tech gear
- Rare disorders
- Plan for the “expected”
- Help EMS and receiving emergency departments to assist with special needs
- Save healthcare dollars



Office Preparedness

- Nearly 75% of offices see one patient or more per week needing emergent care
  - Asthma, RDS, dehydration, seizures, apnea
- >50% of offices access EMS at least once per year, and 20% > 3 times per year
- 60% of offices can access EMS in <10 minutes
  - 15% take greater than 30 minutes
- Know your EMS system capabilities

Available EMS Resources Define Office Preparedness Needs



Office Preparation Key Concepts

- Know your EMS system and capabilities
  - Time to access ambulance service
  - Personnel skills
  - Receiving hospital resources
  - Time to definitive care

- Volunteer , be an advocate for children in the EMS system

Staff Preparation

- Recognition of emergencies by staff
- BLS/ALS training
- Protocols to access help
- Role definition
- Essential emergency drugs and equipment
- Mock codes

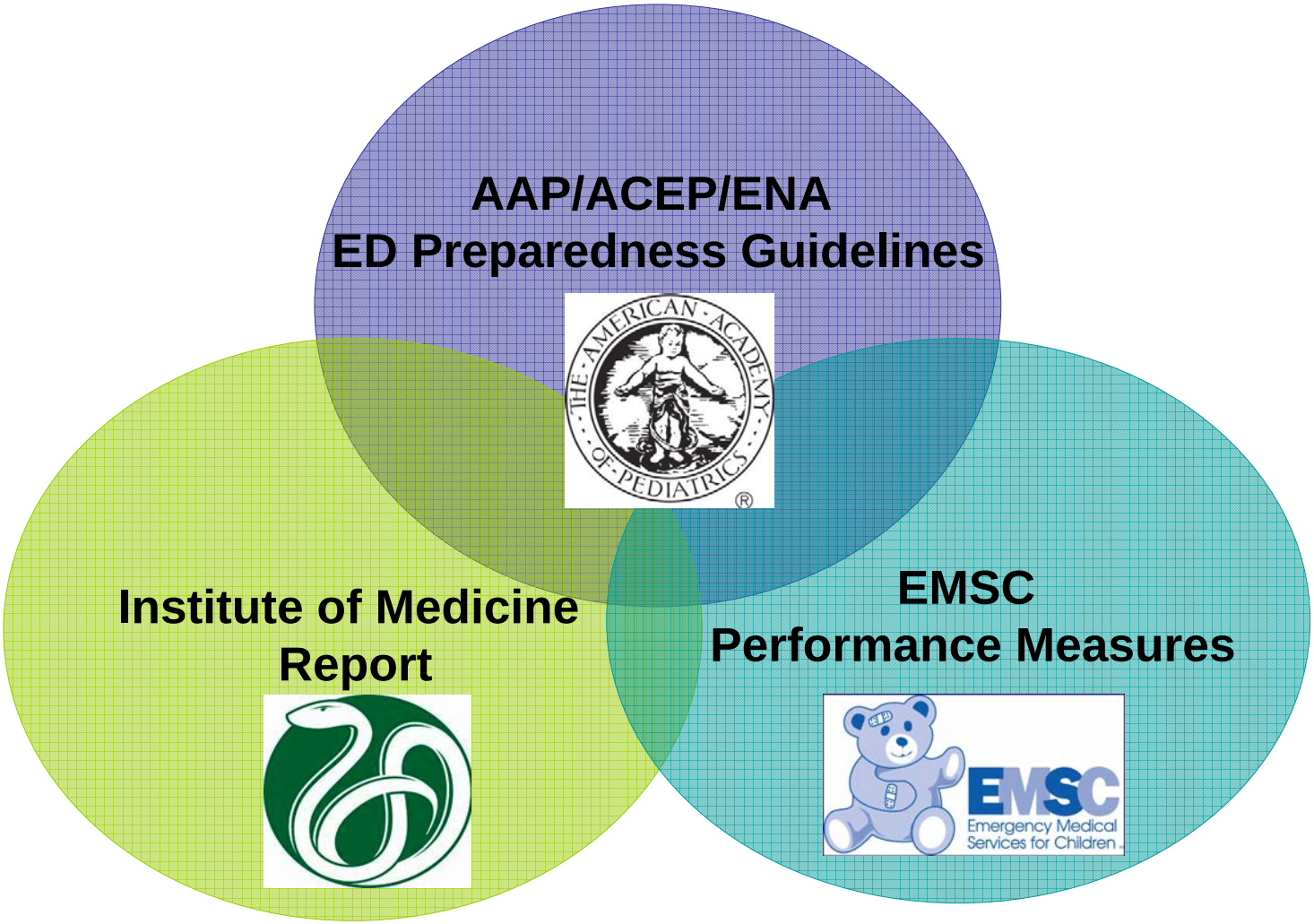
Conclusion

- The Medical Home is an integral part of the EMS system
- Emergencies can and do present to the office in spite of the wishes of office staff
- Preparation of the office and families for emergencies is worthwhile
- Children need passionate advocates in the EMS system

- **Interface with National Initiatives: Institute of Medicine, EMSC Performance Measures & More**

  Joseph L. Wright, MD, MPH, FAAP

ED Preparedness for Children: Interface with National Initiatives

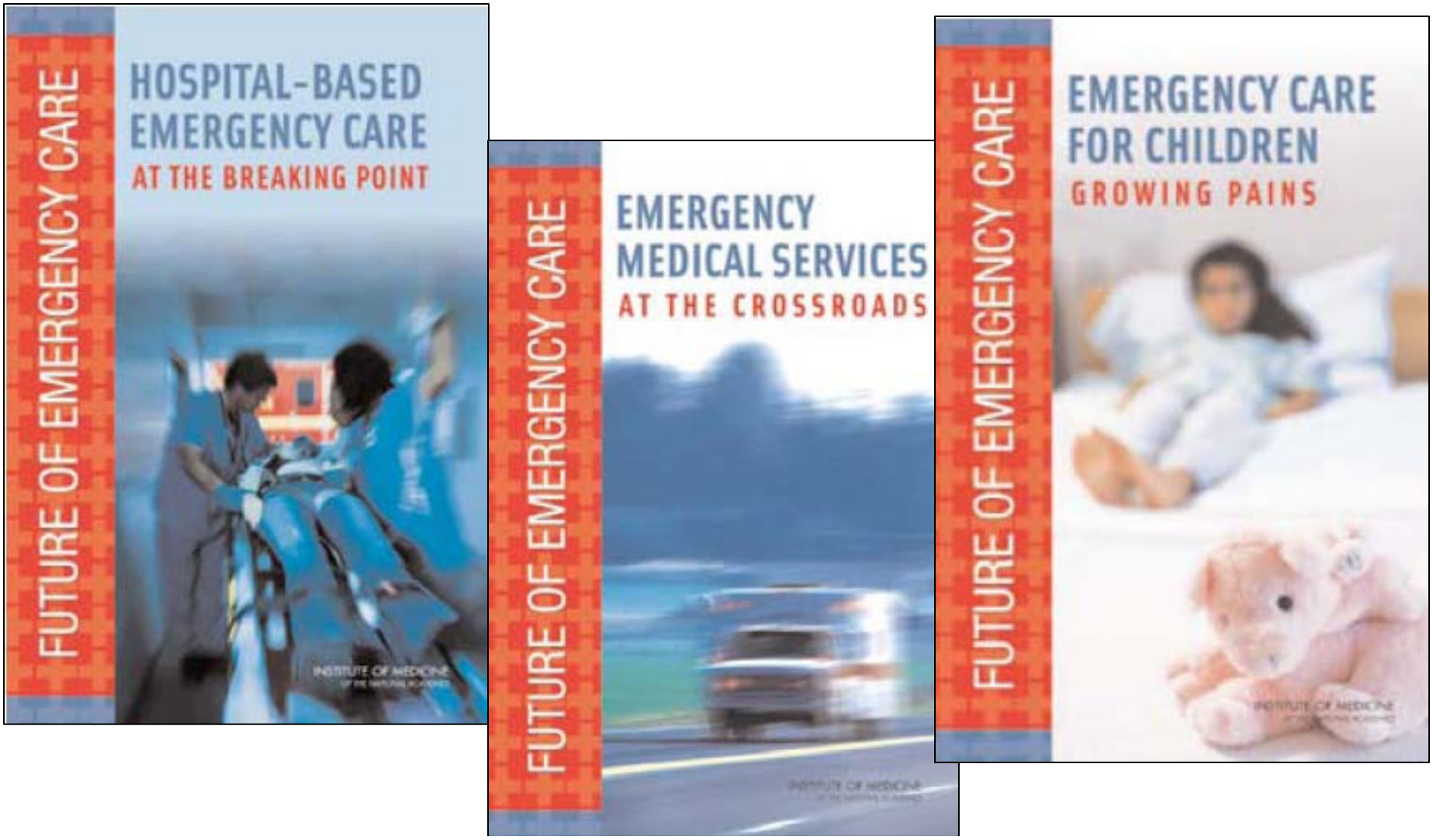


ED Preparedness for Children and National Initiatives

- Institute of Medicine (IOM):
  - Future of Emergency Care in the US Health System recommendations

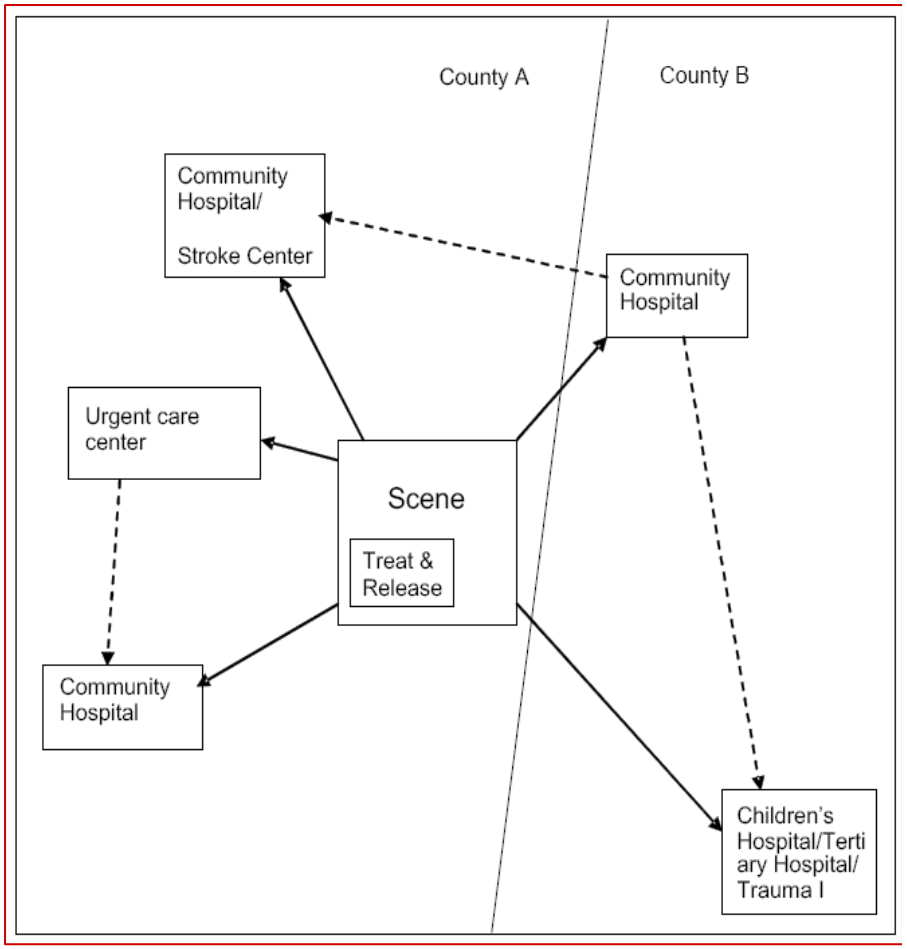
- Emergency Medical Services for Children (EMSC):
  - State Partnership Performance Measures

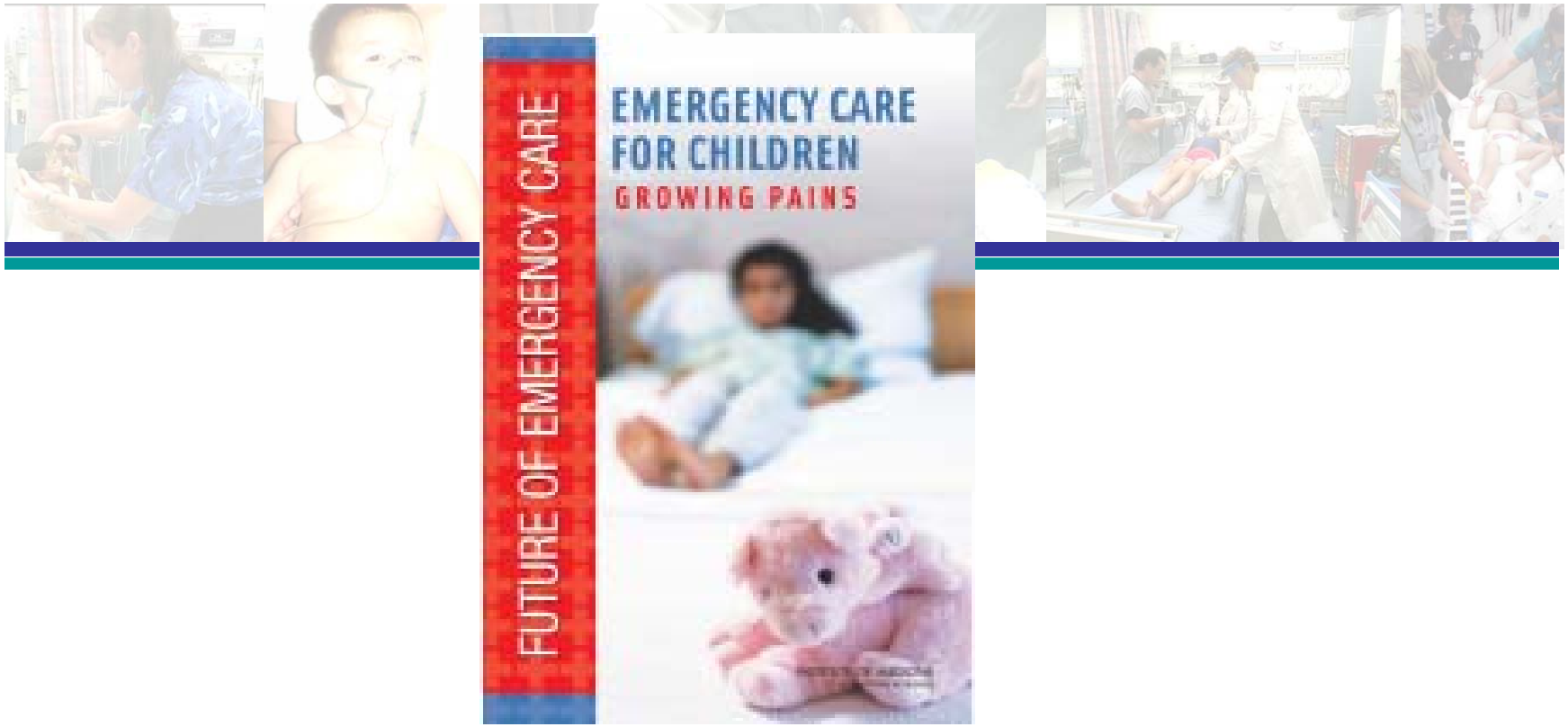
Institute of Medicine: Future of Emergency Care Series (2006)



Coordinated, Accountable, Regionalized System of Care: Global Recommendation

- "The federal government should support the development of national standards for emergency care performance measurement, the categorization of all emergency care facilities, and protocols for the treatment, triage and transport of prehospital patients".





If there is one word to describe the current state of pediatric emergency care in 2006 it is **uneven**

- *Growing Pains*, pg 33

Personnel: pediatric-specific recommendation

- "Emergency departments and EMS agencies should have pediatric coordinators to ensure appropriate, equipment, training and services for children."

I. GUIDELINES FOR ADMINISTRATION AND COORDINATION OF THE ED FOR THE CARE OF CHILDREN

A. A physician coordinator for pediatric emergency medicine is appointed by the ED medical director.

1. The physician coordinator has the following qualifications:

a. Meets the qualifications for...

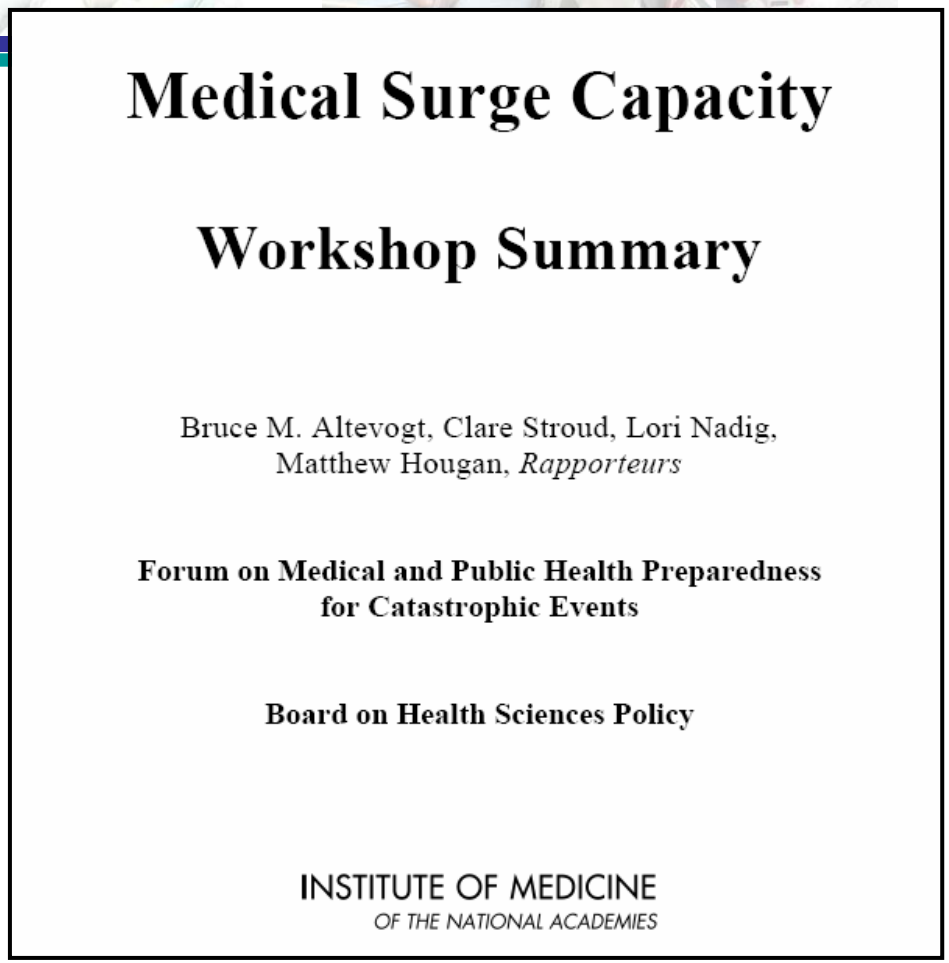
PEDIATRICS Volume 124, Number 4, October 2009

Disaster Preparedness: pediatric-specific recommendation

- "Pediatric concerns should be explicit in disaster planning"
  - Minimize parent-child separation
  - Family-centered decontamination
  - Address pediatric surge capacity

All-Hazard Readiness

15. All-hazard disaster-preparedness plan that addresses the following pediatric issues[12,39–41]:
    a. Availability of medications, vaccines, equipment, and appropriately trained providers for children in disasters.
    b. Pediatric surge capacity for both injured and noninjured children.



Medical Surge Capacity

Workshop Summary

Bruce M. Altevogt, Clare Stroud, Lori Nadig, Matthew Hougan, *Rapporteurs*

Forum on Medical and Public Health Preparedness for Catastrophic Events

Board on Health Sciences Policy

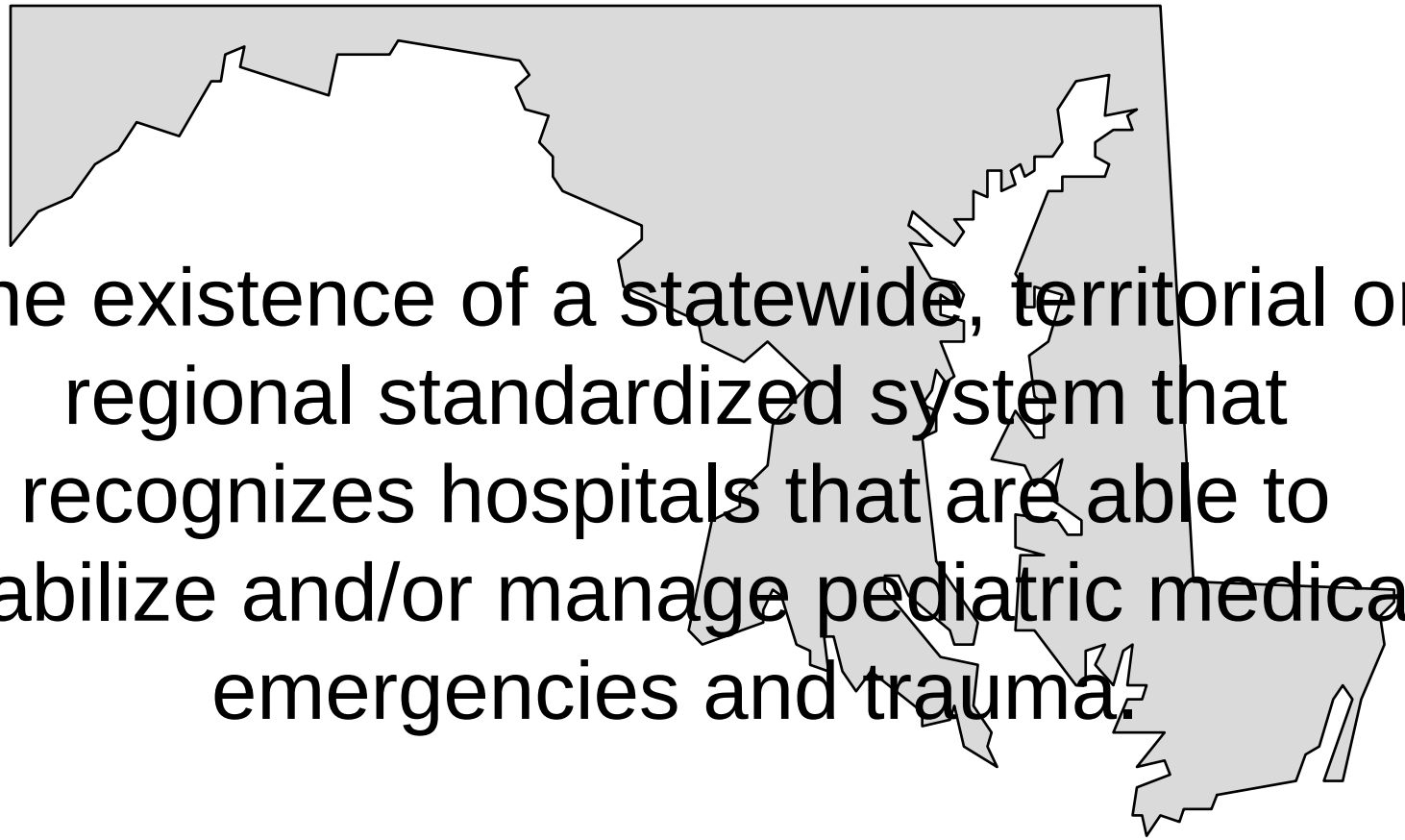
INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Institute of Medicine. 2010 *Medical Surge Capacity: Workshop Summary.* Washington, DC:The National Academies Press

EMSC Performance Measures

- Designed to measure effectiveness of federally-supported programmatic and research grants in accordance with the **Government Performance Results Act (GPRA)**

EMSC State Partnership Performance Measures #74/#75: Categorization System



- The existence of a statewide, territorial or regional standardized system that recognizes hospitals that are able to stabilize and/or manage pediatric medical emergencies and trauma.

Annals of Emergency Medicine, August 2009

PEDIATRICS/CONCEPTS

A Statewide Model Program to Improve Emergency Department Readiness for Pediatric Care

Mark E. Cichon, DO
Susan Fuchs, MD
Evelyn Lyons, MPH
Daniel Leonard, MS, MCP

From the Department of Surgery–EMS, Loyola University Chicago Stritch School of Medicine, Division of Emergency Medical Services, Loyola University Medical Center, Maywood, IL (Cichon); Department of Pediatrics Feinberg School of Medicine, Northwestern University, Division of Pediatric Emergency Medicine, Children's Memorial Hospital, Chicago, IL (Fuchs); Emergency Medical Services, Illinois Department of Public Health, Maywood, IL (Lyons); and Emergency Medical Services, Loyola University Medical Center, Maywood, IL (Leonard).

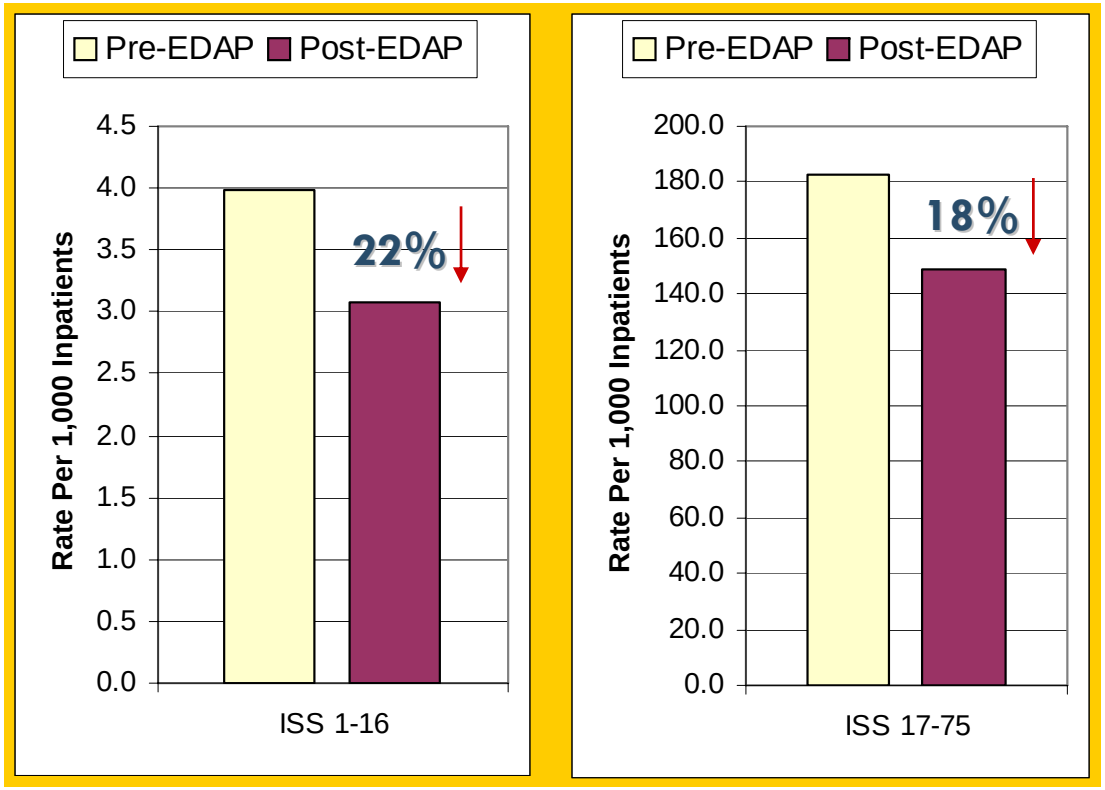
Pediatric emergency patients have unique needs, requiring specialized personnel, training, equipment, supplies, and medications. Deficiencies in these areas have resulted in historically poorer outcomes for pediatric patients versus adults. Since 1985, federally funded Emergency Medical Services for Children (EMSC) programs in each state have been working to improve the quality of pediatric emergency care. The Health Resources and Services Administration now requires that all EMSC grantees report on specific performance measures. This includes implementation of a standardized system recognizing hospitals that are able to stabilize or manage pediatric medical emergencies and trauma cases. We describe the steps involved in implementing Illinois' 3-level facility recognition process to illustrate a model that other states might use to provide appropriate pediatric care and comply with new Health Resources and Services Administration performance measures. [Ann Emerg Med. 2009;54: 198-204.]

Mortality Rates per 1,000 Injury-Related Inpatient Admissions From the ED

Pre- and Post-EDAP, 1994-2005

- Age group: 0-15 yrs.
- Data from hospitals participating in IL EDAP program
- Outcomes exceed national injury-related mortality trends

Sources: Illinois EMSC & Illinois Hospital Assoc.



Severity Group	Pre-EDAP			Post-EDAP		
	Patients	Deaths	Rate	Patients	Deaths	Rate
ISS 1-16	18,571	74	4.0	17,546	54	3.1
ISS 17-75	1,124	205	182.4	1,142	170	148.9

Emergency Medical Services for Children

EMSC PM #74: Regionalization/ Categorization for Medical Emergencies

- AAP 2007 'Hot Topic' - Use of PALS/APLS by Community Physicians to Reverse All-Cause Pediatric Shock is Associated with Reduced Mortality and Functional Morbidity: A Multicenter Cohort Study
  - Principal Investigator – Joseph A. Carcillo, MD
  - Senior Investigator – Richard A. Orr, MD

    Children's Hospital Pittsburgh

- Funding for this work was provided by Emergency Medical Services for Children, Maternal and Child Health Bureau grant 1-1434-MC-00040-01 (RAO)

Pediatrics, August 2009

Mortality and Functional Morbidity After Use of PALS/APLS by Community Physicians

WHAT'S KNOWN ON THIS SUBJECT: We previously demonstrated in a single-center study that early PALS/APLS resuscitation practice performed by community physicians saved children from mortality caused by septic shock. However, a criticism of this study was that septic shock is relatively uncommon.

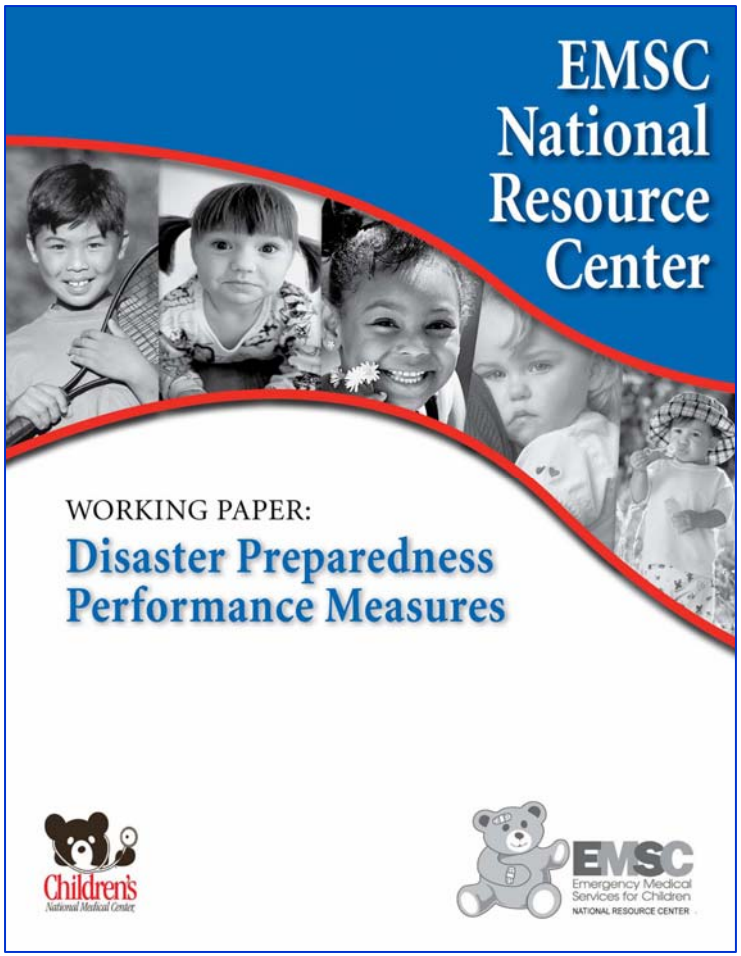
WHAT THIS STUDY ADDS: We demonstrated that shock is common, occurring in 37% of 4856 children transported to 5 children's hospitals. PALS/APLS resuscitation performed by community physicians reduced mortality rates in trauma patients and mortality and neurological morbidity rates in nontrauma patients alike.

CONTRIBUTORS: Joseph A. Carcillo, MD,[a] Bradley A. Kuch, RRT-NPS,[a] Yong Y. Han, MD,[b] Susan Day, MD,[c] Bruce M. Greenwald, MD,[d] Karen A. McCloskey, MD,[e†] Anthony L. Pearson-Shaver, MD,[e] and Richard A. Orr, MD[a]

[a]Departments of Pediatrics and Critical Care Medicine, University of Pittsburgh School of Medicine, Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania; [b]Department of Pediatrics and Communicable Diseases, University of Michigan Medical School, C. S. Mott Children's Hospital, Ann Arbor, Michigan; [c]Department of Pediatrics, University of Wisconsin School of Medicine, Milwaukee Children's Hospital, Milwaukee, Wisconsin; [d]Division of Pediatric Critical Care Medicine and Department of Pediatrics, Weill Cornell Medical College, New York, New York; and [e]Department of Pediatrics, Medical College of Georgia, Georgia Children's Hospital, Augusta, Georgia

Inclusion of Pediatric Concerns in Disaster Preparedness

- Johnson T, Weik T, Wright JL. Performance Measures for Pediatric Disaster Preparedness
  - Pediatric Academic Societies 2010, Vancouver, BC



Organized Medicine Advocacy:

AAP Annual Leadership Forum and the AMA House of Delegates Resolution(s)

Title: Emergency Department Readiness to Care for the Care of Children

RESOLVED, That our American Medical Association affirm the importance that all emergency departments stand ready to care for children of all ages (New HOD Policy); and be it further

RESOLVED, That our AMA advocate for hospital administrators, emergency department medical directors and emergency department nurse managers to be aware of the *Guidelines for Care of Children in the Emergency Department.* (New HOD Policy)

- **Implementation Barriers, Benefits, Cost**

  Marianne Gausche-Hill, MD, FAAP, FACEP

Benefits

- In the emergency department, readiness has impact daily on the lives of critically ill and injured children presenting to the ED often unannounced.
- Emergency preparedness or readiness includes appropriate staff, policies, equipment and medications to care for all ages of patients at anytime or on any day.
- Studies have shown that hospitals that make the commitment to assign the role of physician and nursing coordinator for pediatric emergency care are significantly more likely to be in compliance with national guidelines for care of children in emergency departments.

Benefits

- Increases satisfaction of staff working the emergency department
- Achieve accreditation goals
- Reduce medical legal liability
- Improve outcomes

Perceived Barriers

- Identifying needed staff and equipment
- Obtaining pediatric emergency expertise to assist in implementation of guidelines
- Cost of purchase of equipment

Identifying Staff

- Pediatric Emergency care coordinators can be a shared role
  - Assess resources in your community/region
- Some hospitals have assigned a QI director and/or clinical nurse specialist
- Others have assigned the Trauma Coordinator
- Be creative!

Identifying Needed Equipment

- You can download copies of a checklist to see if your emergency department is compliant with national guidelines!
- Easy to work through the checklist and see what is needed.
- Other resources are downloadable at the conclusion of this webcast to help you get prepared.

What about cost?

- Median cost to achieve compliance with equipment recommendations was low $217 (IQR $83-509); and to maintain that equipment was even lower $68 (IQR $25-164).
- It would cost < 5 million dollars to ensure that all 3,833 emergency department in the country had appropriate pediatric equipment; or 18 cents per pediatric visit.

Overall – cost is not a barrier!

As physicians, what is our role in ensuring emergency department preparedness to receive children with emergent conditions?

ED Preparedness Actions

- Emergency department managers must take action to ensure that staff has appropriate equipment, medications, and competency to care for children

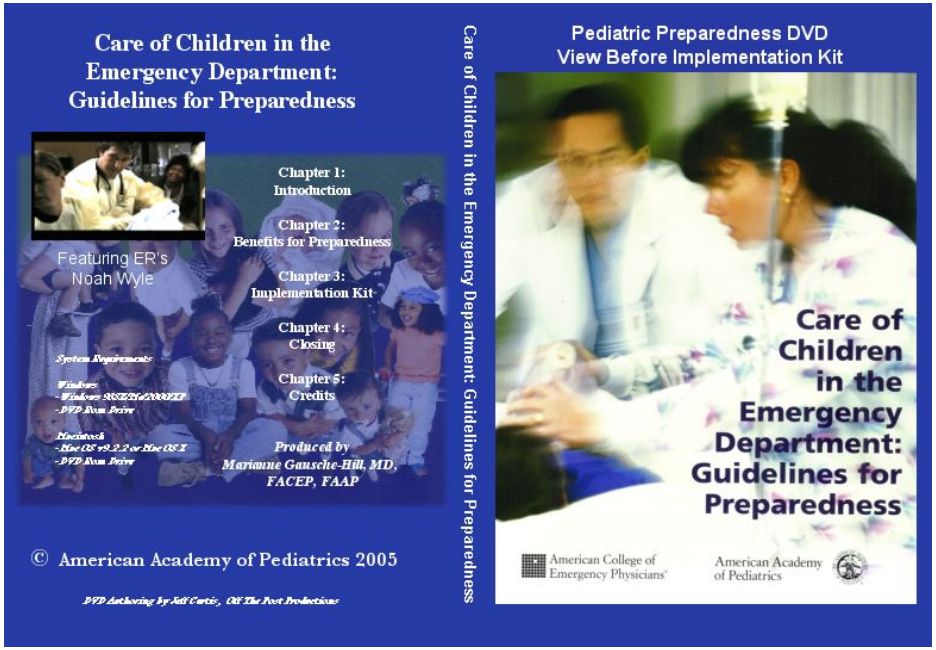
How can you help your community get prepared for children with emergencies?

- Become a physician or nurse coordinator for pediatric emergency medicine
  - Hospital
  - EMS system
  - Regional committees
  - Disaster planning

Emergency Department Pediatric Preparedness

Video Featuring Noah Wyle from the TV Show “ER”

This video was produced in 2005 in support of the 2001 joint policy guidelines from the American Academy of Pediatrics and American College of Emergency Physicians. These guidelines were revised in 2009 to include the Emergency Nurses Association and were endorsed by 22 national organizations. This video is still 100% relevant today in promoting the importance of preparedness for the emergency care of children.



Questions?