Improving the Emergency Care System for America's Children

National Association of State EMS Officials
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Emergency Medical Services for Children
A Program Administered by the
Department of Health and Human Services'
Health Resources and Services Administration
(HRSA) Maternal Child Health Bureau (MCHB)

Objectives:

- Discuss the mission and activities of the EMS for Children Program as they intersect with NASEMSO
- Discuss the National Pediatric Readiness Project and its importance to the EMS community.

Health and Human Services (HHS)

Health Resources and Services Administration (HRSA)

Maternal and Child Health Bureau

Division of Child, Family and Adolescent Health

Emergency Medical Services for Children (EMS-C)

Intersecting Missions

HRSA - ensuring quality of health care for all.

EMSC - ensuring all children and adolescents receive appropriate emergency medical care

NASEMSO- seamless nationwide network of coordinated and accountable state, regional and local EMS and emergency care systems. The systems use public health principles, data and evidence as a basis for safe and effective care in day-to-day operations as well as during catastrophic events.

NASEMSO GOALS

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration

- To promote the orderly development of **coordinated EMS systems** across the nation.
- To promote **uniformly high quality care of acutely ill and injured patients.**
- To facilitate interstate cooperation in such areas as **patient transfer**, communications and reciprocity of EMS personnel.
- To maintain ongoing and **effective liaison** with state and national governments, professional organizations, and other appropriate public and private entities.
- To improve the **quality and efficiency of state EMS program administration.**
- To enhance the professional knowledge, skill and abilities of state EMS officials and staff.
- To encourage research and **evaluation in all areas of EMS**.

EMS for Children

- **State Partnership Grants**

Focus on EMS-C initiatives to accomplish the EMS-C performance measures

- **State Regionalization of Care Demonstration Grants**

Develop innovative models of improving pediatric emergency care in rural, tribal and territorial communities. (AK, AZ, CA, MT, NM, PA)

- **Targeted Issue Grants**

Demonstration projects addressing EMS-C Program priorities and resulting in projects that are applicable across state boarders

- **Pediatric Emergency Care Applied Research (PECARN)**

Research Nodes (6) that coordinate research in 18 Hospital Emergency Departments. Network represents 1.2 million pediatric visits annually.

EMS for Children

- **EMSC Resource Centers**
  - EMSC National Resource Center
  - EMSC Data Coordinating Center
    - National Emergency Data Analysis Resource Center (NEDARC)
    - PECARN-DCC

- **Interagency Agreements with Federal Partners**
  - IHS –supports full time EMSC Coordinator
  - NHTSA-Supports the Office of EMS to ensure integration of pediatric policies and procedures
  - AHRQ-support analysis of administrative data to measure pediatric health outcomes

Benchmarking the quality of pediatric emergency care

Prehospital:

Access to online and offline medical direction
Appropriate pediatric equipment
Appropriate pediatric training

Hospital:

Designation for pediatric trauma or medical care
Processes for transfer to a higher level of care

Permanence measures (sustainability):

Institutionalization pediatric emergency care within the larger system

Success with Data Collection

- Data collected from EMS agencies
  - Over **6,300** agencies surveyed
  - Overall survey response rate was 82%

- Data collected from hospitals
  - **2,644** hospitals surveyed
  - Overall survey response rate was 79%

  - More information available at www.nedarc.org

Measures in Action

Data for Alaska

Alaska Action Steps

- Identify missing pediatric equipment needs.
- EMSC supplement grant application submitted - $13,000.
- Missing equipment purchased for services in need.

Measure	Alaska Data	National Average
BLS on line Med. Direction	71%	84%
ALS on line Med. Direction	89%	93%
BLS off line Med. Direction	50%	70%
ALS off line Med. Direction	91%	89%
BLS Equipment	**19%**	**27%**
ALS Equipment	**13%**	**36%**
BLS Peds CEU	0	4
ALS Peds CEU	6	8

From EMS Preparedness….

To ED Preparedness

Pediatric Readiness

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration

Pediatric readiness is the capability of an emergency department to provide the right resources and the right care at the right time to an ill or injured child

EMSC
Emergency Medical Services for Children

National PRP
Pediatric Readiness Project
Ensuring Emergency Care for All Children

Background

- In 2002 and 2003, two separate national surveys revealed less than ideal % of ED's had all of the appropriate supplies and equipment to care for pediatric patients.
- Both surveys were paper based
- Both surveys received a 30% response rate

What we learned…

- The majority of children are seen in community hospitals (non-children's hospital)
- 50% of the nation's EDs see fewer than 10 pediatric patients per day

Pediatric Preparedness of US Emergency Departments: A 2003 Survey

Emergency Department Configuration	Number	Percent
Pediatric and adult patients seen in main ED	1320	89%
Pediatric patients seen in separate area of main ED	57	4%
Pediatric patients seen in separate peds ED, non-children's hospital	46	3%
Pediatric patients seen in children's hospital	40	3%
Other	12	1%

Gausche-Hill, M. Pediatrics. Dec 2007; 120(6): 1229-37

Pediatric Preparedness of ED: 2003 Survey

- Percent of hospitals with Physician or Nurse Coordinators:
  - ☐ Physician Coordinator 18%
  - ☐ Nursing Coordinator 12%

Institution Type	No Coordinator	RN and MD Coordinator	p value
Standby	57 [51-69]	81 [71-85]	0.008
Basic	68 [58-76]	80 [69-83]	0.013
General	72 [63-81]	84 [74-87]	<0.0001
Comprehensive	79 [68-85]	87 [81-92]	<0.0001

Gausche-Hill, M. Pediatrics. Dec 2007; 120(6): 1229-37

What we learned…

Hospitals with higher level of readiness had these characteristics:

- urban
- high pediatric volume
- separate care area for pediatric patients
- physician and nursing coordinator for the ED

What we learned

- It will cost less than five million dollars to ensure every ED in the US has appropriate pediatric equipment; or 18 cents per pediatric visit.

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

2009

- Guidelines for Care of Children in the Emergency Department published in October issue of *Pediatrics*
- Collaborators include AAP, ACEP, and ENA

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

Why another national assessment?

- Opportunity to assess the nation's ED capacity based on the Guidelines
- Opportunity to make this an ongoing quality improvement project that lives beyond the first assessment

2010

- EMS-C convened a working group to serve as an expert panel on the national project.
- Electronic assessment developed
- Pilot assessment in California
- Over 330 EDs were assessed with **90% response** rate
- Pediatric readiness improved from 2002
  - [median score 55; IQR 46-64]

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National PRP Pediatric Readiness Project
Ensuring Emergency Care for All Children

Preliminary Results

- Median overall readiness score: 69.3 [IQR 57.7-85.9]
- 9 (3%) hospitals with a perfect readiness score
- Results by hospital pediatric ED volume

Pediatric ED Volume	Median ED Readiness Score
Low (< 3700)	64.3 [IQR 52.8-74]
Med (3700-6999)	71 [IQR 57.9-85.7]
High (> 7000)	79 [IQR 65.1-92.8]

p<0.0001

California PRP Pediatric Readiness Project
Ensuring Emergency Care for All Children

EMERGENCY MEDICAL SERVICES AUTHORITY EMSA CALIFORNIA

Preliminary Results

- EDAPs* in Los Angeles vs Non-EDAPS

EDAP (n=43)	Non-EDAP (n=29)
91.8 [IQR 88.1-95.7]	68.3 [IQR 49.2-73.5]

p<0.0001

*Emergency Departments Approved for Pediatrics (pediatric medical recognition system)

California PRP Pediatric Readiness Project Ensuring Emergency Care for All Children

EMERGENCY MEDICAL SERVICES AUTHORITY EMSA CALIFORNIA

Barriers to Guidelines Implementation

- Cost of personnel 38%
- Cost of training 53%
- Lack of educational resources 46%
- Lack of trained MDs 32%
- Lack of trained RNs 42%
- Lack of Admin support 21%
- Lack of policies in peds emergency care 39%
- Lack of peds QI plan 47%
- Lack of disaster plan for children 54%
- Lack of interest in meeting guidelines 13%
- Other 3%

California PRP Pediatric Readiness Project
Ensuring Emergency Care for All Children

EMSA Emergency Medical Services Authority California

A collaborative quality improvement initiative to ensure that emergency departments are ready to care for children

A Collaborative Effort

- **Key Partners**
  - EMS for Children Program
  - American Academy of Pediatricians (AAP)
  - American College of Emergency Physicians (ACEP)
  - Emergency Nurses Association (ENA)
- **Supporting Organizations**
  - Joint Commission
  - Hospital Corporation of America

Project Leadership

- Project Champion Marianne Gausche-Hill, MD
- Federal EMS for Children Program
- Emergency Medical Services for Children National Resource Center(NRC)
- National EMSC Data Analysis Resource Center (NEDARC)

Peds Ready Project Elements

- 2009 Guidelines
- National assessment
- Assessment feedback
- Quality improvement resources

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Incentives for Participation

- ***Immediate*** Pediatric Readiness score based on key focus areas in the assessment
- Online report with further analysis of key areas
- Benchmark against hospitals with similar pediatric ED volume
- Link to a **free web-based tool kit** for performance improvement
- One year on-line subscription to PEMSoft

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Ensuring Emergency Care for All Children

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Assessment Implementation

- Staggered rollout
  - January – July 2013
- 10 States/Territory per group
- Secure web based assessment
- 3 Months to complete
- Goal: 80 percent assessment response rate

National Roll Out

National Pediatric Readiness Assessment Cohorts and Deployment Dates

2013 Deployment Dates	January - March	February - April	March - May	April-June	May-July
	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5
	Arizona	Colorado	Alabama	Alaska	Delaware
	CNMI	District of Columbia	Connecticut	American Samoa	Kansas
	Hawaii	Florida	Georgia	Arkansas	Louisiana
	Montana	Guam	Indiana	Idaho	Maine
	Nebraska	Kentucky	Iowa	Illinois	Minnesota
	Nevada	Maryland	Massachusetts	Missouri	New Hampshire
	Oregon	Michigan	New Jersey	North Carolina	North Dakota
	Rhode Island	Mississippi	New Mexico	Pennsylvania	Ohio
	Texas	Oklahoma	New York	South Dakota	Puerto Rico
	Washington	Utah	Virgin Islands	Tennessee	South Carolina
	West Virginia	Virginia	Wyoming	Vermont	Wisconsin
					Palau
					Marshall Islands
					Fed States of Micronesia

Represent mixture of small, medium and large emergency departments
Each cohort with a cross-regional sampling

Components of Assessment

- Maximum score: 100
- Highlights performance
  - Physician Coordination & Administration
  - Nurse Administration & Coordination
  - Personnel
  - Quality Improvement
  - Patient Safety
  - Policies and Procedures
  - Equipment and Supplies
- Other information
  - ED infrastructure
  - Barriers to implementation

Developed through Delphi Process

Readiness Score & Gap Analysis

U.S. Department of Health and Human Services
HRSA Health Resources and Services Administration

Hospital Name: Some Sample Hospital

Hospital Volume: 5,041 Pediatric Patients Last Year

Date of Report: 6/21/2012

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This score represents the essential components needed to establish a foundation for pediatric readiness. Not all of the questions on the assessment are scored. The score is in no way inclusive of all the components recommended for pediatric readiness; it represents a suggested starting point for hospitals. The scoring criteria was developed by a group of clinical experts thru a modified-delphi process.

Your state participates in a pediatric recognition program for hospitals. We encourage you to contact your State EMSC Program Manager, NAME, at CONTACT INFO to learn more about this program.

67	55	62
YOUR HOSPITAL SCORE	Average Score of Similar Pediatric ED Volume (n = 58)	Average Score of All Participating Hospitals (n = 300)

ANALYSIS OF YOUR SCORE:

Guidelines for Administration and Coordination of the ED for the Care of Children — YOUR SCORE: 9.5 out of 19

You indicated that your hospital **DOES NOT** have a nurse coordinator who has been assigned the responsibility of coordinating the administrative aspects of pediatric emergency care in the emergency department? (This person may have additional administrative roles in the ED.)

IMPORTANCE: This individual is important to.....

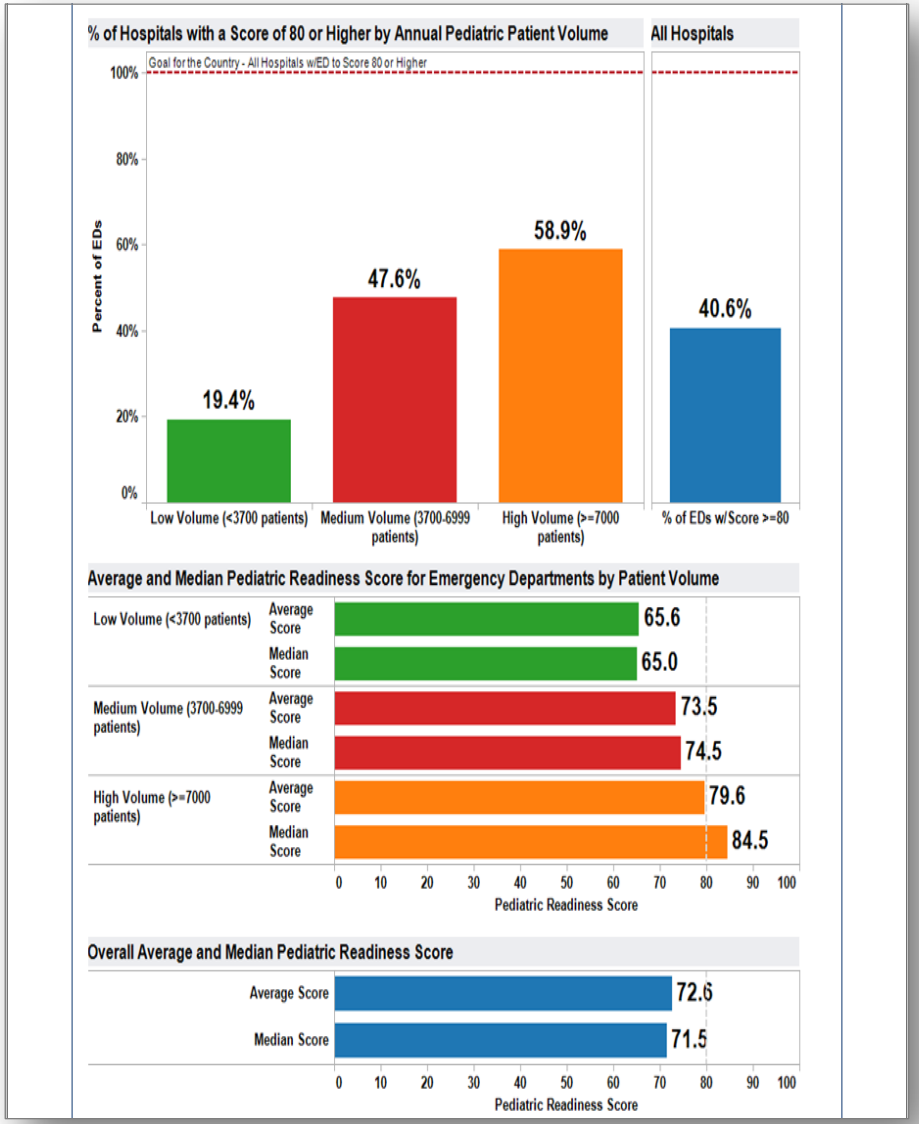
IMPROVEMENT: For information on how to setup a nurse coordinator for your hospital please refer to the "Nurse Administration/Coordination" section on pediatricreadiness.org.

Guidelines for Physician and Other Practitioners Staffing the ED — YOUR SCORE: 5 out of 10

You indicated that your hospital **DOES NOT** require specific competency evaluations of physicians staffing the ED (e.g., sedation and analgesia).

IMPORTANCE: Competency evaluations ensure.....

IMPROVEMENT: For information on how other hospitals have setup competency evaluations for.....



Quality Improvement Resources

- Dedicated website www.pediatricreadiness.org
- Web-based toolkit to align with the 2009 Guidelines
- Resources are designed to help EDs address areas of weakness

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Assessment Implementation

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Steps to improve a facility's readiness

- Take the assessment
- Access the free online resources
- Develop an ED performance improvement plan based on the online gap analysis

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Steps to improve a facility's readiness

- Prioritize implementing key areas of the Guidelines
  - **Staff** - designate a nurse and physician coordinator to oversee ED pediatric quality improvement, patient safety, and clinical care activities
  - **Policies** – implement child friendly policies and procedures
  - **Equipment**- ensure that all recommended equipment, supplies, medication for children of all ages are available

Benefits of Pediatric Readiness

- **Globally**-reduces the unevenness of pediatric emergency care by creating a foundation for all EDs
- **State level:** Disaster Preparedness
  - Day-to-day readiness of an ED increases the likelihood that it will be prepared for a disaster
  - Provides an opportunity for children to be better integrated into overall state disaster plans
  - The assessment will ask if the facility's disaster plan addresses issues specific to the care of children
  - Online toolkit will have example ED disaster preparedness policies that incorporate the needs of children

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Benefits of Pediatric Readiness

- **State level: Patient Safety**
  - Creates consistency among all EDs with obtaining and documenting weights of children in the ED
  - Provides education on the use of different systems (i.e length based tape or software) to ensure proper sizing of resuscitation equipment and dosing of medications
  - Provides standards for inter-facility transfer agreements and guidelines by incorporating the components of the EMS for Children performance measure into the assessment

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Benefits of Pediatric Readiness

- Direct linkage to the prehospital setting
- EMS agencies can appoint a coordinator focused on pediatric emergency competency, quality improvement, patient safety, etc
- Ultimate goal-EMS can transport a child to an ED regardless of geographic location knowing that it will have baseline readiness with medications, equipment, policies, and training to provide effective emergency care to stabilize a child
- Ultimate goal-Facilities that cannot care for critical pediatric patients will be linked to a broader regional system.

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Next steps

Identifying Key Stakeholders

- Regional Organizations
  - Local EMS Agencies
  - EMS Administrators and EMS Medical Directors
- State and Local Chapters of National Organizations
  - ENA, ACEP, AAP
- National Organizations
  - EMSC, AAP, ACEP, ENA, Indian Health Services, the Joint Commission
- Healthcare corporate systems
- Others….

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Next steps

- EMS for Children State Manager will be the state champion
- EMS-C program will have aggregate data to prioritize efforts
- Hospitals to reach out to EMS-C and partners to improve local quality improvement

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Advantages of Project

- Support from multiple national organizations
- Weighted assessment tailored to quality improvement
- **Will be the largest ED readiness project to date**
  - CA pilot has exceeded largest current survey
- Will provide a national assessment ED readiness to direct future resources
- Leverages previous success with EMSC performance measure data collection efforts

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A History of Partnerships

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration
Maternal and Child Health Bureau

American Academy of Pediatrics

DEDICATED TO CHILDREN™

NEDARC

EMSA
EMERGENCY MEDICAL SERVICES AUTHORITY
CALIFORNIA

EMSC
Emergency Medical Services for Children

The Joint Commission

American College of Emergency Physicians®

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SAFE PRACTICE, SAFE CARE



www.pediatricreadiness.org

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