



***Emergency Medical Services for Children (EMSC),  
Improving the Emergency Care System for America's  
Children***

***Tasmeen Weik, DrPH, MPH***

***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 EMSC Program as they intersect with the National Emergency Medical Services Advisory Committee (NEMSAC)

Discuss the National Pediatric Readiness Project and its importance to the EMS community.

## *Mission Commonalities Intersecting*

- ❖ **HRSA** - ensuring quality of health care for all.
- ❖ **EMSC** - ensuring all children and adolescents, no matter where they live, attend school or travel receive appropriate emergency medical care.
- ❖ **NEMSAC**-Strengthening EMS systems through... education, training, equipment...





# 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 (EMSC) and Injury Prevention Branch

## HHS Entities:

National Institutes of Health (NIH)

Centers for Medicare and Medicaid (CMS)

Centers for Disease Control and Prevention (CDC)

Agency for Healthcare Research and Quality (AHRQ)

Administration for Children and Families (ACF)  
And others...



# EMSC Program



## ❖ **State Partnership Grants**

All states and the territories have successfully received funding to work on EMSC initiatives to accomplish the EMSC performance measures

## ❖ **Targeted Issue Grants**

Demonstration projects addressing EMSC Program priorities and resulting in projects that are applicable across state borders

## ❖ **Pediatric Emergency Care Applied Research** (PECARN - 2001)

Research Nodes (6) that coordinate research in 18 Hospital Emergency Departments. Network represents 1.2 million pediatric visits annually. Work supported by a Central Data Management Center



# EMSC Program



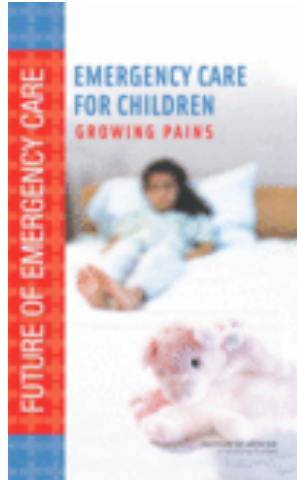
## ❖ EMSC Resource Centers

- EMSC National Resource Center
- National Emergency Data Analysis Resource Center



## ❖ 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



## Emergency Care For Children: Growing Pains

“Unfortunately, although children make up 27 percent of all visits to the ED, many hospitals and EMS agencies are not well equipped to handle these patients.”



## ❖ Performance measures to improve pediatric infrastructure;

- Availability of EMS online and off line pediatric medical direction
- Availability pediatric equipment on ambulances
- EMS pediatric continuing education requirements
- Inter facility pediatric transfer guidelines
- Inter facility pediatric transfer agreements
- Hospital pediatric facility recognition





## EMSC 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](http://www.nedarc.org)



# Measures in Action



## Data for Alaska with National Comparisons

❖ EMS and Hospitals survey data: Alaska specific and national pediatric data averages  
→

### ❖ 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





# Children in ED's



- **Most children are treated at non children's facilities– 89%.**
  - $\leq 5\%$  of all hospitals are recognized as pediatric or children's hospitals.
  - Most states have one pediatric hospital. Some have none – North Dakota, Alaska, Montana
  - 27% of pediatric emergencies are treated at rural/ local community EDs.
- **50% see <10 pediatric patients per day**
  - For hospitals in remote or frontier areas this may equate to 1-2/day.



# Children in ED's



## Ensuring that Emergency Departments are Ready/Prepared for Children

### *Pediatric Specific Standards/Guidelines that include:*

- ❖ Pediatric Specific Emergency Equipment
- ❖ Pediatric Specific Policies and Procedures
- ❖ Staff with pediatric training or expertise



# History of Pediatric Preparedness



- ❖ **1980's** Pediatric ED standards and guidelines first defined
- ❖ **1990** EMSC Demonstration Grant facilitates statewide ED guideline implementation in California.
- ❖ **1990** Simultaneously, the American Medical Association (AMA) publishes first set of recommendations for emergency departments treating children.



# History of Pediatric Preparedness



- ❖ **1993** Institute of Medicine's first report on assessing the pediatric capacity of America's emergency care system.

*"... All agencies with jurisdiction over hospitals should require hospital emergency departments to have available and maintain equipment and supplies appropriate for the emergency care of children."*

- ❖ **1995** AAP/ACEP revise AMA recommendations into policy statement on **Care of Children in the Emergency Department: Guidelines for Preparedness.**



# History of Pediatric Preparedness



## Do Guidelines Ensure ED Preparedness for Kids?

- \* **1996** Consumer Product Safety surveys **101** hospitals  
National Electronic Injury Surveillance System (NEISS)
- **Purpose to define state of hospital pediatric preparedness and distribution of pediatric resources nationally.**
  - 7% of hospitals had a separate pediatric-ED
  - 33% had a pediatric ward or a department of pediatrics
  - 76% still admitted pediatric patients to wards
  - 9% of hospitals without a PICU admit critically ill pediatric patients to wards
  - Hospitals often had adult size equipment but were less likely to have appropriate pediatric size equipment.





# History of Pediatric Preparedness



**2000**--EMSC brings multiple disciplines and organizations together to define consensus **guidelines** for emergency departments caring for children.

**Joint Guidelines passed and published, *Annals of Emergency Medicine and Pediatrics*, April 2001**  
(Guidelines have 162 items)

**17 professional organizations support the guidelines.**

American Academy of Pediatrics	American College of Emergency Physicians
American College of Surgeons	American Association of Health Plans
American Hospital Association	American Medical Association
Joint Commission Accreditation of Hospitals	National Association of Children's Hospitals and Related Institutions
National Association of State EMS Medical Directors	National Association on Quality Assurance

# History of Pediatric Preparedness

**2002-2003** CDC adds supplement to National Hospital Ambulatory Medical Care Survey (NHAMCS)--survey of non-federal, short-stay and general hospitals in the United States.

- Emergency Pediatric Services and Equipment Supplement (EPSES) .

**789** hospitals surveyed

Findings:

- **50% of hospitals have 85%** of recommended equipment
- **6%** of EDs have **all** the equipment





# Current Data

## Pediatric Preparedness



### Do Guidelines Ensure ED Preparedness for Kids?

**2003** American Academy of Pediatrics survey

- **“Implementation and Evaluation of Care of Children in the Emergency Department Guidelines for Preparedness Survey”**

5144 surveys sent to all US hospital ED Directors – **1524** responded (30%)

26% had all recommended pediatric policies

Based on 2001 Guidelines, overall pediatric preparedness of EDs is low



# Current Data Pediatric Preparedness



## Availability of Pediatric Equipment & Medications

- **6% of EDs had ALL recommended equipment**
- **90% had 80% of equipment**

Neonatal and infant sizes of equipment  
most often missing 14-22%  
Pediatric Magill forceps 17%  
LMAs 50%

Medications uniformly available





# Updated Pediatric Emergency Department Guidelines Released 2009

## ❖ Collaborative initiative:

- AAP, ACEP, Emergency Nurse Association (ENA)

## ❖ Updated components included:

- ED Administration and identification of pediatric medical and nursing coordinators.
- Pediatric ED Quality Improvement
- ED Support for the pediatric patient – radiology and lab
- Pediatric Professional Competencies
- Availability of pediatric specific Policies and Procedures, i.e. Inter facility transfer



# Current Data Pediatric Preparedness



## EPSES 2006:

**332** hospitals sample

7.2 % of hospital EDs had all recommended pediatric supplies,

45.6 % had at least 85.0 % of recommended supplies.

- EDs in children's hospitals and hospitals with pediatric intensive care units (PICUs) were more likely to meet guidelines for pediatric emergency department services, expertise, and supplies.
- Most likely to have resuscitation supplies (95.5%).
- Least likely to have airway management supplies (14.7%) and vascular access supplies (15.8%)

*Schappert, Bhuiya; National Health Statistics Report, 2012*



# Current Initiative



## The National Pediatric Readiness Survey

Based on 2009 National  
Guidelines.

Developed by Readiness  
Working group

Web based survey

Nurse Leader to complete the  
survey

Released in California January  
2012

National roll out-Fall 2012

### PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

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  
*Pediatrics* published online Sep 21, 2009;  
DOI: 10.1542/peds.2009-1807

The online version of this article, along with updated information and services, is  
located on the World Wide Web at:  
<http://www.pediatrics.org>

PEDIATRICS is the official journal of the American Academy of Pediatrics. A monthly  
publication, it has been published continuously since 1948. PEDIATRICS is owned, published,  
and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk  
Grove Village, Illinois, 60007. Copyright © 2009 by the American Academy of Pediatrics. All  
rights reserved. Print ISSN: 0031-4005. Online ISSN: 1098-4275.

American Academy of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™



Welcome to the

# National Pediatric Readiness Project

Measuring Pediatric Readiness in Emergency Departments to Improve Care for Kids

## National Pediatric Readiness Survey

### Select Your State:

To start the survey, select your State from the drop down list, click "Get Started."

California

GET STARTED >>

If you do not see your state in the dropdown list above, then your state does not have any open surveys.

Supported by:



Welcome! This site is for hospital professionals who have been invited to take an on-line survey regarding the pediatric readiness of hospital emergency departments.

We recommend that you PRINT a paper copy of the survey FIRST before you take the survey to assist you in compiling your answers. You can download a copy of the survey by clicking on the link below:

[Paper Version of Survey](#)  
(for reference purposes)

To view the survey response rates, select the link below:

[!\[\]\(9db214d549b9aeebe72aa11d3a5c4b1a\_img.jpg\) View Response Rates](#)

To view the national results, select the link below:

[!\[\]\(9a795c4c0c43d0827b424565265fc8e6\_img.jpg\) View National Results](#)





## California Pilot

- 335 hospitals surveyed
- Survey window: Jan 17 – Apr 17
- **189** (56.4%) responses as of March 26<sup>th</sup>
- Median time to take survey: 45 minutes
- Average Readiness Score 72.5 out of 100



Welcome to

# Pediatric Ready

Measuring Pediatric Readiness in Emergency Departments

## Pediatric Readiness in Emergency Departments Results:

Report Date: 10/31/2011 1:15:32 PM

[<< Print this Page >>](#)

**Hospital Name:** XYZ Hospital

**Hospital Volume:** 4700 pediatric patients last year (medium volume)

**Nationwide Pediatric Readiness Comparison Scores (out of 100):**

Your Hospital  
Score:

68

Average Score of  
Similar Pediatric  
ED Volume  
Hospitals\*:

57

n=13

Average Score of  
All Participating  
Hospitals:

63

n=43

\*Hospitals are grouped by pediatric emergency department (ED) volume: <3700 (low), 3700-6999 (medium), and >=7000 (high).

Note: If a score above contains the value "N/A" this indicates that the number of responses received so far is insufficient to provide an accurate average for that particular calculation.

Come back and visit our home page for updated [national data](#).

[Disclaimer](#) | [U of U](#) | [Webmaster](#)

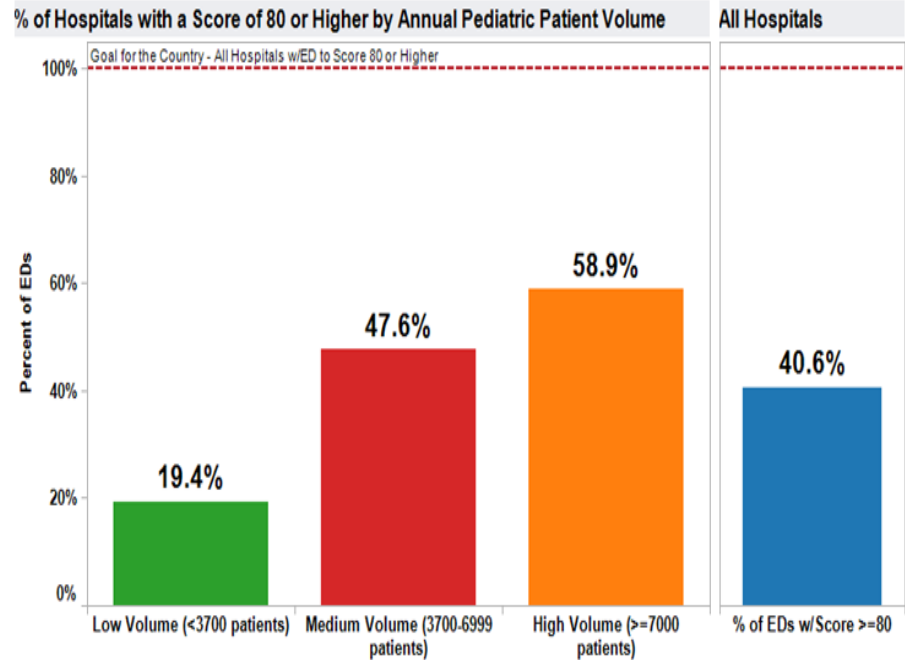
(In accordance with the Americans with Disabilities Act, the information in this site is available in alternate formats upon request.)

© 2011 Intermountain Injury Control Research Center, Salt Lake City, UT

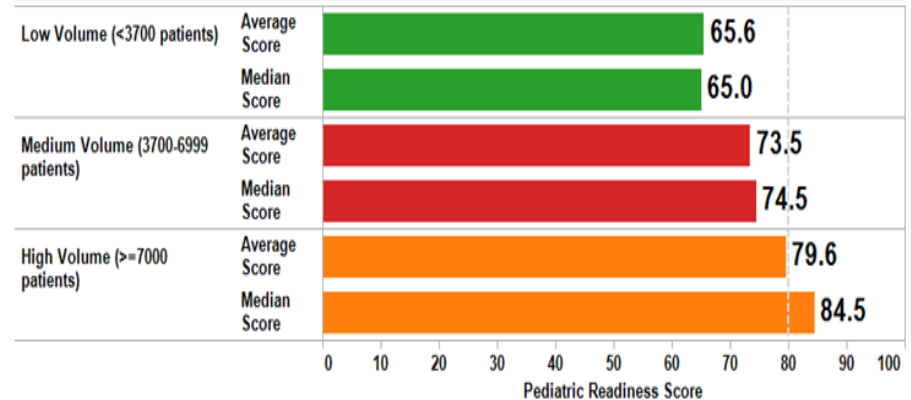
Real time  
feedback  
to the  
sites



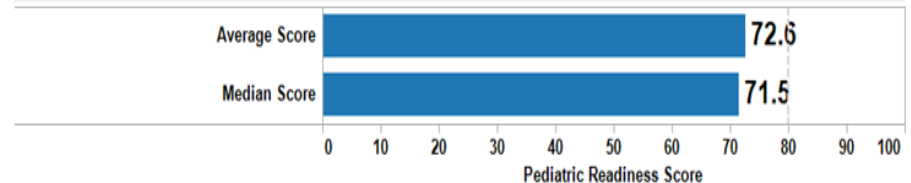
# Real time feedback to the sites



### Average and Median Pediatric Readiness Score for Emergency Departments by Patient Volume



### Overall Average and Median Pediatric Readiness Score



# Advantages of the Current Effort

- Support from multiple national organizations
- Well thought out survey design with large pilot
- **Will be the largest ED readiness project to date**
  - CA pilot has exceeded largest current survey from EPSES
- Will provide a national picture of ED readiness for EMS planners
- Leverages previous success with EMSC performance measure data collection efforts



# EMSC Next Steps

- Launch national survey to assess components that are need of support
  - Pediatric Readiness Score
  - Comparison with National Averages
- Develop local multi-organizational coalitions to support ongoing quality improvement
- Develop resources to facilitate the process
  - ENA inter-facility transport tool kit
  - Purchasing cooperatives

# NEMSAC Involvement

- Awareness and promotion of the initiative
  - State Partnership Managers will serve as point of contact
- Provide input to the EMSC Program on
  - Potential additional collaborations
  - Dissemination techniques
  - Outputs needed to make systems improvements



# Additional Resources



[www.childrensnational.org/emsc](http://www.childrensnational.org/emsc)



[www.nedarc.org](http://www.nedarc.org)





Elizabeth Edgerton, MD, MPH  
**Additional Information:**  
[EEdgerton@hrsa.gov](mailto:EEdgerton@hrsa.gov)

301-443-8930

Tasmeen Weik, DrPH, MPH  
[tweik@hrsa.gov](mailto:tweik@hrsa.gov)

301-443-8927