Disclosure

- No relevant conflicts of interest to report

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This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.
How do WE ensure readiness to deliver HIGH QUALITY emergency care for children in our communities?
How is the Foundation of Our Nation’s Emergency Care System?

- Overcrowding
- ED environment difficult to control
- Prioritization of adult metrics/outcomes => limited resources and effort to address pediatric metrics/outcomes
- Critically ill children are seen relatively infrequently
The State of Emergency Care for Children

- >80% of pediatric visits are to general EDs
- Average ED sees < 13 children a day
- Known gaps in day-to-day readiness
  - Unique pediatric characteristics and needs
- Lags in translation of pediatric evidence base

TO ERR IS HUMAN
BUILDING A SAFER HEALTH SYSTEM

INSTITUTE OF MEDICINE

Performance on a poor foundation......
The State of Emergency Care for Children

- Variability in pediatric emergency care
  - Imaging and radiation exposure
  - Pediatric resuscitation performance
  - Patient-centered outcomes

Knapp et al. Pediatrics 2013
Li et al. Ped Emerg Care. 2017
Michelson et al. Pediatrics. 2018
Niles et al. Pediatrics. 2017
The State of Prehospital Emergency Care for Children

- 7-13% of EMS patients
- Most EMS agencies (>80%) see < 8 children/month
- Known gaps in day-to-day readiness
  - Written pediatric protocols: BLS agencies 63%; ALS agencies 90%
  - Pediatric equipment: BLS agencies 91%; ALS agencies 96%
- Pediatric education requirements for licensing: 82% of states/territories
- Lags in translation of pediatric evidence base


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

“a regionalized, coordinated, and accountable system”
2006 IOM Report

Emergency medical services agencies should appoint a pediatric emergency coordinator, and hospitals should appoint two pediatric emergency coordinators—one a physician—to provide pediatric leadership for the organization.
Emergency Medical Services for Children
- authorized in 1984

30 million children will receive emergency care this year.
They can’t all belong to someone else.

The Little Program That Could: Saving Emergency Medical Services for Children
Pelligrini C, Krug S, and Wright J. 2014
HRSA - EMS for Children

Department of Health and Human Services

Health Resources and Services Administration

Maternal and Child Health Bureau

EMSC

Emergency Medical Services for Children
The EMS for Children Program

- Designed to reduce childhood death and disability due to severe illness or injury

- Enhances the pediatric capability of existing emergency care systems designed for adults
EMS for Children Program Aims

- To ensure state of the art emergency medical care for ill/injured child/adolescent is available when needed

- To ensure that pediatric services are well integrated in the existing state EMS system and backed by optimal resources

- To ensure that the entire spectrum of emergency services (primary prevention, acute care, rehab) is provided to children at the same level as adults
The need

- Approximately 30 million children each year will encounter the US emergency care system
  - 25% of ED visits
  - 10% of EMS transports
  - >80% seen in general EDs, 26% in rural or remote areas

- Critical to the success in outcomes for the population is addressing the continuum
  - Injury prevention efforts
  - Disaster preparedness
  - Integrating with the medical home
  - Day-to-day readiness…
HRSA and EMSC

- HRSA Vision: Healthy Communities, Healthy People

- EMSC 1985-2016
  - Brought children to the forefront of national efforts
  - Highly successful in identifying gaps in the ability of our emergency care systems to meet the needs of children
  - Increased Funding: 4M 1985 → 22M 2018

- Transition from NRC to EIIC
  - Need to expedite progress of improving outcomes
  - Improvement science as a means to rapid transformation
  - EIIC established through a cooperative agreement with HRSA

EMSC Innovation and Improvement Center – https://emscimprovement.center
EIIC Goals

• Facilitate strategic planning to bridge 58 states and territories

• Implement program strategies to improve outcomes of care for children

• Develop QI and pediatric emergency educational tools/resources

• Support states and institutions to participate in QI collaboratives

• Facilitate benchmarking
Partners of EMSC Innovation and Improvement Center
Clinical systems integration

“The means to facilitate the coordination of patient care across conditions, providers, settings, and time in order to achieve care that is safe, timely, effective, efficient, equitable, and patient focused.”

- The American Medical Association

- QI education
- QI interventions
- Dissemination/advocacy
<table>
<thead>
<tr>
<th>EMSC 01</th>
<th>The degree to which EMS agencies submit NEMSIS compliant version 3.x data to the State EMS Office.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSC 02</td>
<td>The percentage of EMS agencies in the state or territory that have a designated individual who coordinates pediatric emergency care.</td>
</tr>
<tr>
<td>EMSC 03</td>
<td>The percentage of EMS agencies in the state or territory that have a process that requires EMS providers to physically demonstrate the correct use of pediatric-specific equipment.</td>
</tr>
<tr>
<td>EMSC 04</td>
<td>The percentage of hospitals with an Emergency Department (ED) recognized through a statewide, territorial or regional standardized program that are able to stabilize and/or manage pediatric medical emergencies.</td>
</tr>
<tr>
<td>EMSC 05</td>
<td>The percentage of hospitals with an Emergency Department (ED) recognized through a statewide, territorial or regional standardized system that are able to stabilize and/or manage pediatric trauma.</td>
</tr>
<tr>
<td>EMSC 06</td>
<td>The percent of hospitals with an Emergency Department (ED) in the state or territory that have written interfacility transfer guidelines that cover pediatric patients.</td>
</tr>
<tr>
<td>EMSC 07</td>
<td>The percent of hospitals with an Emergency Department (ED) in the state or territory that have written interfacility transfer agreements that cover pediatric patients.</td>
</tr>
<tr>
<td>EMSC 08</td>
<td>The degree to which the state or territory has established permanence of EMSC in the state or territory EMS system.</td>
</tr>
<tr>
<td>EMSC 09</td>
<td>The degree to which the state/territory has established permanence of EMSC in the state/territory EMS system by integrating EMSC priorities into statutes/regulations.</td>
</tr>
</tbody>
</table>
National Pediatric Readiness Project

- Collaborative quality improvement (QI) effort for pediatric care in Emergency Departments (EDs)
- Based on 2009 “Guidelines for the Care of Children in the Emergency Department”

FROM 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, Emergency Nurses Association Pediatric Committee
Of the 5,017 assessments sent - 4,149 (82.7%) ED Managers responded
## Benchmarking

### Average Pediatric Readiness Scores

<table>
<thead>
<tr>
<th>Volume Category</th>
<th>Score</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Volume (&lt;1800 patients)</td>
<td>62</td>
<td>1629</td>
</tr>
<tr>
<td>Medium Volume (1800-4999 patients)</td>
<td>70</td>
<td>1248</td>
</tr>
<tr>
<td>Medium to High Volume (5000-9999)</td>
<td>74</td>
<td>708</td>
</tr>
<tr>
<td>High Volume (&gt;=10000)</td>
<td>84</td>
<td>561</td>
</tr>
<tr>
<td>All Participating Hospitals</td>
<td>69</td>
<td>4146</td>
</tr>
</tbody>
</table>
The number of hospitals with a Pediatric ED in either a children’s hospital or a general hospital in Texas is 7%.
41% of facilities had a pediatric QI plan

47% had a disaster plan that includes children

68% had one or more pediatric emergency care coordinators

50% Reduced-dose radiation imaging based on age or weight

60% Promoting family-centered care

>90% of EDs have the majority of recommended equipment
Two Approaches to ENSURING Pediatric Readiness
State-level Recognition:
Pediatric Readiness Program Collaborative

EMSC Innovation Improvement Center
Administrative Team

State Improvement Teams
CO | CT | DC | FL | IN | KS | KY | LA | MI | NM | NY | PA | OK | SC | TX

Steering Committee: EIIC | AAP | ACEP | ENA | HRSA | NEDARC | Content Coaches | QI Experts

Content Coaches
QI Specialists

Education Workgroup
Analytics Workgroup
Intervention Workgroup
Pediatric Readiness Quality Collaborative INTERVENTION BUNDLES

By December 2019, the median pediatric readiness score for participating sites will collectively improve by 10-points.

- **Pediatric Patient Safety**
  - Recording pediatric patients’ weight in kilograms

- **Pediatric Assessment and Reassessment**
  - Developing a notification process for abnormal vital signs

- **Timely, Effective, Patient-Centered Care**
  - Integrating inter-facility transfer guidelines

- **Disaster Planning**
  - Establishing disaster plans that include children

146 EDs divided among 16 teams across 17 states: Alaska; California; Connecticut; Georgia; Illinois; Indiana; Kansas; Missouri; New Jersey; New York; Oregon; Tennessee; Texas; Vermont; Washington; Wisconsin
EMS for Children Data Collection 2017-2018

- 11,027 EMS agencies contacted
- 8,730 EMS agencies responded (79.2%)
- 80% of EMS agencies see fewer than 8 pediatric patients per month

<table>
<thead>
<tr>
<th>Annual 911 Pediatric Call Volume*</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>None - Zero pediatric calls in the last year</td>
<td>2.8%</td>
</tr>
<tr>
<td>Low - Twelve (12) or fewer pediatric calls in the last year (1 or fewer pediatric calls per month)</td>
<td>39.4%</td>
</tr>
<tr>
<td>Medium - Between 13-100 pediatric calls in the last year (1 - 8 pediatric calls per month)</td>
<td>39.0%</td>
</tr>
<tr>
<td>Medium High - Between 101-600 pediatric calls in the last year (8 - 50 pediatric calls per month)</td>
<td>13.9%</td>
</tr>
<tr>
<td>High - More than 600 pediatric calls in the last year (more than 50 pediatric calls per month)</td>
<td>4.4%</td>
</tr>
<tr>
<td>Pediatric Call Volume Not Reported</td>
<td>0.5%</td>
</tr>
</tbody>
</table>
Prehospital Pediatric Emergency Care Coordinator Learning Collaborative

- Connecticut
- Kentucky
- Montana
- New Mexico
- New York
- Ohio
- Pennsylvania
- Rhode Island
- Wisconsin

Participating states represent 10% of EMS agencies in the US.
Resources for Quality Improvement *Taking a focused approach*

- One size doesn’t fit all
- Identifying relevant gap areas & metrics
- Strategic tools and skills to make a change
- Align with partner organizations

www.pediatricreadiness.org
EMERGENCY MEDICAL SERVICES FOR CHILDREN
INNOVATION AND IMPROVEMENT CENTER

The mission of the Emergency Medical Services for Children (EMSC) is to reduce child and youth mortality and morbidity resulting from severe illness or trauma.

To that end, EMSC funds and supports improvements in pediatric emergency care in every state and territory through competitive demonstration grants or cooperative agreements to state governments and accredited schools of medicine.

The four main programs in EMSC are:
- State Partnership (SP) grants that ensure that pediatric emergency care is integrated into the larger emergency medical services system.
- Targeted Issues (TI) grants that support innovative cross-cutting pediatric emergency care projects of national significance.
- State Partnership Regionalization of Care (SPROC) grants that develop systems of care models to improve pediatric emergency care capacity in rural and underserved areas.
- PreHospital grants that support the development and dissemination of evidence-based guidelines and protocols for pediatric emergency care.
How to reach us

- www.EMSCIImprovement.Center

- All stakeholders matter, all concerns are important, all questions will be answered

- The portal to the EIIC will provide a front door

  EMSCInnovation@TexasChildrens.org

“Transforming healthcare is a 20 mile march”

–Jim Collins
Healthcare Analytics Summit 2015, Salt Lake City, Utah
Questions and discussion