Texas Emergency Department
Pediatric Readiness

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EMS for Children State Partnership
National Pediatric Readiness Project (NPRP)

• Quality improvement effort for pediatric care in Emergency Departments (EDs)

• Based on 2009 “Guidelines for the Care of Children in the Emergency Department”

• Voluntary, confidential, and web-based
National Pediatric Readiness Project (NPRP)

• Texas data collection Jan-Mar, 2013

• National assessment complete

• Participating hospitals received
  ▪ Immediate feedback
  ▪ Comparison to similar hospitals
  ▪ Individual gap analysis to assist with accreditation goals

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Information Gathered

• Assessment of EDs open 24/7
• Gathered demographics about:
  ▪ Accreditation
  ▪ ED configuration
  ▪ Inpatient pediatric capabilities (PICU, NICU…)
  ▪ Pediatric age cut-offs for medical and trauma
Why Does This Matter?

• 30 million ED visits per year for children in the US
  • 1 in 3 ED visits are for a child
• Most children are not seen at children’s hospitals
  • Every ED needs to be prepared for children
• 2 million children per year arrive to EDs via EMS
  • That’s a lot of kids!
• 1 in 6 children who use EMS get admitted
  • Higher acuity relative to rest of ED users
Relevance to EMS
Limited communication with receiving hospitals
Lack of access to the patient’s medical history
Disconnected communication between dispatch, EMS, ED, and public health systems
Few interfacility transfer guidelines and agreements
Lack of common radio frequencies and protocols


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Goal: To direct critically ill and injured patients to facilities within a community with the personnel and resources to deliver high-level emergency care

Adult successes:
- Cardiac care
- Stroke
- Trauma

Pediatric opportunities:
- Trauma
- Critical care
- Emergency care
Statewide and Regional Data
Domains Assessed by NPRP

• Administration and coordination (19)

• Health care providers (10)

• Quality/process improvement (QI/PI) (7)

• Patient safety (14)

• Policies, procedures and protocols (17)

• Equipment, supplies, and medications (33)
Overall Response and Score

National Pediatric Readiness Project: National Results

The following results represent a national initiative sponsored by the federal Emergency Medical Services for Children Program (EMSC) to ensure that emergency departments (EDs) are ready to care for children. EDs were asked to take an assessment regarding available resources for the care of children and received a score based on a 100 point scale.

Rev. 8/29/2013 - 14:53 MDT (Updated Daily)

TX response = 60.5% (305/504)
TX average score = 70

<table>
<thead>
<tr>
<th>Average Pediatric Readiness Scores</th>
<th>Low Volume (&lt;1800 patients)</th>
<th>Medium Volume (1800-4999 patients)</th>
<th>Medium to High Volume (5000-9999 patients)</th>
<th>High Volume (&gt;=10000 patients)</th>
<th>All Participating Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX</td>
<td>62</td>
<td>70</td>
<td>74</td>
<td>84</td>
<td>69</td>
</tr>
<tr>
<td>n</td>
<td>1,632</td>
<td>1,241</td>
<td>707</td>
<td>563</td>
<td>4,143</td>
</tr>
</tbody>
</table>

- As annual pediatric ED volume ↑, hospital pediatric readiness scores ↑
- Texas scores were similar to national scores for all hospital volume categories

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ED Demographics

Which one of the following is the best description of your ED configuration for the care of children? (children as defined by your hospital)

- General ED
- Free standing ED, unattached to a hospital with inpatient services
- Pediatric ED in a children's hospital
- Standby ED with physician on call
- Separate pediatric ED in a general hospital
- Other

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Number of hospitals with a Pediatric ED in either a children’s hospital or a general hospital
Inpatient Demographics

Importance of this info:
- Guide EMS in regional destination plans
- Avoid unnecessary transfers
- Anticipate surge capabilities in disasters

Are any children admitted to your inpatient services?

Inpatient Services that Admit Children

<table>
<thead>
<tr>
<th>Service</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult inpatient unit</td>
<td>56.1%</td>
<td>171</td>
</tr>
<tr>
<td>Newborn nursery</td>
<td>43.6%</td>
<td>133</td>
</tr>
<tr>
<td>Pediatric inpatient unit</td>
<td>36.4%</td>
<td>111</td>
</tr>
<tr>
<td>Neonatal intensive care unit</td>
<td>28.5%</td>
<td>87</td>
</tr>
<tr>
<td>Adult intensive care unit</td>
<td>24.6%</td>
<td>75</td>
</tr>
<tr>
<td>Pediatric intensive care unit</td>
<td>8.9%</td>
<td>27</td>
</tr>
</tbody>
</table>

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% of hospitals that admit children to a Pediatric Inpatient Unit
% of hospitals that admit children to a Neonatal Intensive Care Unit
% of hospitals that admit children to a Pediatric Intensive Care Unit
Importance of this info:
- Guide regional transport destination decisions for EMS
Does your hospital have a **physician coordinator** who is assigned the role of overseeing various administrative aspects of pediatric emergency care?
Does your hospital have a nurse coordinator who is assigned the role of overseeing various administrative aspects of pediatric emergency care?
Does your ED have a pediatric patient care review process?

Coordination between EMS and hospital EDs provides an opportunity for both to engage in process improvement.
Physician Training

•<1% of each of the following:
  - Obstetrics/gynecologist
  - Anesthesiologist
  - Critical care/pulmonologist
  - Gastroenterologist
  - General practitioner
  - Orthopedics
  - Pediatric critical care

Thinking of the physicians who currently staff your ED and care for children, what types of training are represented?

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Are all of your physicians in the ED who care for children board certified in Pediatric Emergency Medicine or ABEM or ABOEM?
Does your hospital disaster plan address issues specific to the care of children?
Does your hospital care for children with social and mental health issues?
Does your hospital have **written inter-facility guidelines** for the transfer of patients of all ages including children?
Equipment, Supplies, and Medications

- Most TX EDs were equipped with >90% of the equipment, supplies, and medications

- TX EDs were within 3% of the national average on the availability of these items

Essential Items Missing

- Laryngoscope (straight 00: 76%)
- Continuous end-tidal CO$_2$ monitoring (80%)
- Pediatric Magill forceps (82%)
- Non-rebreather masks (infant: 84%)

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Equipment, Supplies & Medications

Availability of **00 straight laryngoscope** for immediate use in the ED?
Availability of end-tidal $\text{CO}_2$ for immediate use in the ED?
Availability of pediatric Magill forceps for immediate use in the ED?
Availability of **infant non-rebreather masks** for immediate use in the ED?
Barriers to Readiness

• Lack of educational resources (48%)
• Lack of a QI plan (47%)
• Lack of pediatric-specific policies (46%)
• Not aware of the guidelines (45%)
• Cost of training personnel (43%)
• Lack of a disaster plan (42%)
• Lack of trained nurses (40%)
• Lack of trained physicians (36%)
• Lack of administrative support (15%)
• Not interested (9%)
• Low pediatric volume (1%)

Common barriers are not due to cost, personnel, interest or support of administration
Next Steps

• **EMS for Children State Partnership**
  • Share this data with more stakeholders (TCEP, ENA, TPS, CHAT, SORH, statewide webinar)
  • Compile a statewide resource document for hospitals
  • Pursue development of a voluntary, pediatric facility recognition program in collaboration with stakeholders
  • Pilot the program in several interested RACs prior to statewide implementation

• **Requests for the GETAC Pediatrics Committee**
  • Support the development and implementation of the following in the GETAC strategic plan:
    • A **voluntary** pediatric **facility recognition** program for hospitals
    • A **voluntary** pediatric **equipment recognition** program for EMS agencies

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