ILLINOIS EMERGENCY MEDICAL SERVICES FOR CHILDREN

PEDIATRIC FACILITY RECOGNITION RENEWAL EDUCATIONAL SESSION

MARCH 2016
Illinois Emergency Medical Services for Children

Pediatric Facility Recognition

- Emergency Medical Services for Children (EMSC) Overview
  - National
  - Illinois

- Facility Recognition Program
  - Development of process
  - Hospital requirements/criteria
  - Common survey issues

- QI/Evaluative components
  - Role of the Pediatric Quality Coordinator and Pediatric Physician Champion

- Pediatric Disaster Preparedness

- Renewal application process
In 1984, a National EMSC Program was created through federal legislation when studies found:

- Emergency Care Systems were not adequately prepared to meet the needs of children
- Children had higher mortality rates than adults in certain similar emergency situations.
Development of EMS Systems

- Began development in the late 1960’s - early 1970’s
- Based on medical advancements
  - Vietnam War
  - American Heart Association
- Primarily designed for adult trauma/cardiac patient
- Unintentionally overlooked the needs of children
Gaps in the System

- No widespread availability or dissemination of pediatric healthcare emergency care education
- Lack of pediatric emergency care treatment standards/protocols
- Lack of appropriate pediatric sized equipment in ambulances and emergency departments
- Others
Studies identified that children had **higher mortality rates** than adults in certain similar emergency situations.
Pediatric Emergency Challenges

- Chance for medical error is greater
  - Appropriately sized equipment/supplies
  - Medication dosages are calculated by weight vs standard dose for adults
  - Critical emergency care interventions are performed infrequently
  - Stages in their physiologic, emotional and behavioral development affect their responses to medical care and risk of injury and illness
Emergency Medical Services for Children

- National EMSC Program established in 1984 through federal legislation
- Jointly sponsored by
  - Maternal & Child Health Bureau
  - National Highway Traffic Safety Administration
- Funding provided to 59 states and U.S. territories to enhance the pediatric component of their emergency medical services system
EMSC Continuum of Care

- EMS Access/Communications System
- Prehospital Care
- Prevention
- Primary Care/Medical Home
- Rehabilitation
- Emergency Department
- Hospital
- Quality Improvement
- Research
Illinois Emergency Medical Services for Children (EMSC)

Established in 1994

Illinois Department of Public Health
Division of EMS & Highway Safety

Illinois Department of Human Services
Office of Family Wellness

Loyola University Chicago
Department of Emergency Medicine
Illinois Demographics

- Population: 12.9 million
  - 5th most populous state
- Over 2.7 million children age 0-15
  - 637,000 age 3 and younger
- Emergency Health System Resources
  - 11 EMS Regions
  - ~185 hospitals with ED’s
  - ~15 PICUs
  - 27 NICUs (3 located in St. Louis, MO)
  - 66 Level I/II Trauma Centers
    - 4 Pediatric (2 in St. Louis, MO)
    - 3 Pediatric/Adult
- Hospital utilization
  - 24% of ED visits are children 0-15y/o
  - 14% of inpatient admissions 0-15y/o
Evaluation of pediatric resources and capabilities within:

- Prehospital provider agencies
- Emergency departments
- EMS Systems
- Hospital pediatric inpatient units
- Rehabilitation programs within hospitals
- Rehabilitation centers
- Poison control centers
- Schools
50% of emergency departments identified that pediatric emergency care QI activities are conducted.

38% of EMS Systems noted conduction of pediatric prehospital quality improvement.
Illinois EMSC Areas of Priority

- Enhance Healthcare Professional Pediatric Education and Training
- Develop Practice and Care Standards/Guidelines
- Develop a Pediatric Data Surveillance System
- Promote Pediatric Injury Prevention Initiatives
- Assist with pediatric disaster preparedness
- Develop a process to assure Emergency and Critical Care preparedness for the pediatric patient – Pediatric Facility Recognition
Illinois Pediatric Facility Recognition

Process to identify the readiness and capability of a hospital and its staff to provide optimal pediatric emergency and critical care
Facility Categorization/Designation

- Trauma Centers
- EMS Resource Hospitals
- Burn Centers
- Perinatal System
- Stroke/STEMI Centers
- Others
Steps in the Illinois EMSC Facility Recognition Program

1994 – Convened Facility Recognition Task Force

Development of criteria that facilities need to meet to receive recognition (using other state models and national guidelines)

Developed an implementation process
  - Voluntary/inclusive process
  - Tiered recognition
    - SEDP - Standby Emergency Department for Pediatrics
    - EDAP - Emergency Department Approved for Pediatrics
    - PCCC – Pediatric Critical Care Center
  - Designation authority – Illinois Department of Public Health

1998 - Piloted process (EDAP/SEDP) in 2 regions (urban/rural)

1999 – Began statewide implementation

2002 – Rolled out PCCC level

2005 - Mandatory participation by EMS Resource Hospitals

Ongoing – Facility Recognition & QI Committee provide oversight; recommend revisions to the requirements/regulations; develop resources
Facility Recognition Committee Membership

- Illinois Chapter, American Academy of Pediatrics
- Illinois College of Emergency Physicians
- Illinois Academy of Family Physicians
- Illinois Council, Emergency Nurses Association
- Illinois Hospital Association
- Illinois Perinatal System
- Illinois Trauma System
- ED Nurses, ED Physicians, ED Nurse Manager, EMS Coordinator, Clinical Nurse Specialist, Pediatric Nurse Practitioner, Physician Assistant, Pediatric Intensivist, PICU/Pediatric Nurses, PICU/Pediatric Nurse Manager, Transport Team representatives
<table>
<thead>
<tr>
<th>SEDP</th>
<th>EDAP</th>
<th>PCCC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospitals that have the capabilities to recognize the child in trouble, initiate resuscitation and arrange transfer to a higher level</strong></td>
<td><strong>Hospitals that provide comprehensive ED care and may have some pediatric inpatient services</strong></td>
<td><strong>Hospitals that provide pediatric intensive care and pediatric specialty services</strong></td>
</tr>
<tr>
<td>□ Standby or Basic ED</td>
<td>□ Comprehensive ED</td>
<td>□ Comprehensive ED that is an EDAP</td>
</tr>
<tr>
<td>□ May not have 24 hour physician coverage in the ED</td>
<td>□ 24 hour ED physician coverage</td>
<td>□ Dedicated PICU</td>
</tr>
<tr>
<td>□ Typically does not have inpatient pediatric capabilities</td>
<td>□ Able to provide more specialized pediatric services</td>
<td>□ Range of pediatric specialty services and inpatient resources</td>
</tr>
<tr>
<td>□ Criteria aims to assure capabilities to initially manage/resuscitate patient</td>
<td>□ May have inpatient pediatric capabilities</td>
<td>□ Coordinate transfer agreements with referral facilities</td>
</tr>
<tr>
<td>□ Transfer agreements</td>
<td>□ Transfer agreements</td>
<td>□ Transport team or affiliation with transport system</td>
</tr>
</tbody>
</table>
Federal EMSC Performance Measures

Performance Measures
- Implemented in 2005
- Defined areas of priority
- Data collection/assessment

EMS Focused
- Online Medical Control
- Offline Medical Control
- Pediatric Equipment on Ambulances
- Pediatric Education Requirements for EMS License Renewal

Hospital Focused
- Pediatric Facility Recognition System
  - Medical emergencies
- Pediatric Recognition System
  - Trauma emergencies
- Written Inter-Facility Transfer Guidelines
- Written Inter-Facility Transfer Agreements

Program Focused
- Permanence of EMSC program
- Integration of EMSC priorities into state statutes/regulations
EMSC Performance Measure #74

The percent of hospitals recognized through a statewide, territorial, or regional standardized system that recognizes hospitals that are able to stabilize and/or manage pediatric medical emergencies.
EMSC Performance Measure #75

The percent of hospitals recognized through a statewide, territorial, or regional standardized system that recognizes hospitals that are able to stabilize and/or manage pediatric traumatic emergencies.
EMSC Performance Measure #76

Percentage of hospitals in the State with written pediatric inter-facility transfer guidelines that specify:

- Roles/responsibilities of referring facility and referral center (including responsibilities for requesting transfer and communication)
- Process for selecting appropriate care facility
- Process for selection of transport service based on patient acuity
- Process for patient transfer (including informed consent)
- Plan for transfer of patient medical record
- Plan for transfer of copy of signed transport consent
- Plan for transfer of personal belongings of the patient
- Plan for provision of directions and referral institution information to family
EMSC Performance Measure #77

Percentage of hospitals in the State with written inter-facility transfer agreements that cover pediatric patients.
Data on practice patterns indicate shortcomings in the treatment/care of pediatric patients


- High rates of pediatric medication errors
- Low rates of pain management for pediatric patients
- Wide variation in practice patterns in the care of children
- Under treatment of children in comparison with adults
- Many missed cases of child abuse
How Pediatric Prepared are We?

- Joint Policy Statement – Guidelines for Care of Children in the Emergency Department (October 2009)
  - American Academy of Pediatrics
  - American College of Emergency Physicians
  - Emergency Nurses Association

- Guidelines address
  - Administration and coordination of care of children
  - Physicians, Nurses, Other Healthcare Providers who staff the ED
  - Quality Improvement/Performance Improvement
  - Pediatric patient safety
  - Policies, procedures and protocols
  - ED support services
  - Equipment, supplies and medications
How Pediatric Prepared are We?

2013 National Pediatric Readiness Survey Project

- National online survey to measure ED pediatric readiness
- Conducted by National EMSC Program with collaboration:
  - American Academy of Pediatrics
  - American College of Emergency Physicians
  - Emergency Nurses Association
- Assessment of hospitals based on Guidelines for the Care of Children in the Emergency Department

National Hospital Participation (with EDs) = 4,143
- Median Score = 69

Illinois Hospital Participation = 181 (97.8%)
- Median Score = 82.5 (all hospitals)
- Median Score = 88.8 (PCCC/EDAP/SEDP hospitals)
- Median Score = 64.9 (non-recognized hospitals)
# Breakdown of Illinois Hospital Scores by Hospital Pediatric Volume

<table>
<thead>
<tr>
<th></th>
<th># of Hospitals</th>
<th>Avg. Score</th>
<th>Median Score</th>
<th>Min. Score</th>
<th>Max. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (&lt;1800 patients)</td>
<td>56</td>
<td>65.3</td>
<td>66.3</td>
<td>29</td>
<td>100</td>
</tr>
<tr>
<td>Medium (&lt;1800-4999)</td>
<td>51</td>
<td>77.8</td>
<td>83.8</td>
<td>44</td>
<td>99</td>
</tr>
<tr>
<td>Medium High (&lt;5000-9999)</td>
<td>39</td>
<td>78.4</td>
<td>85.6</td>
<td>36</td>
<td>99</td>
</tr>
<tr>
<td>High (&gt;=10,000)</td>
<td>35</td>
<td>89.9</td>
<td>91.9</td>
<td>55</td>
<td>100</td>
</tr>
<tr>
<td>Grand Total</td>
<td>181</td>
<td>76.4</td>
<td>82.5</td>
<td>29</td>
<td>100</td>
</tr>
</tbody>
</table>
### Sample of Illinois scores linked to Facility Recognition requirements

<table>
<thead>
<tr>
<th>Scored Item</th>
<th>Illinois Score</th>
<th>National Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse Coordinator</td>
<td>75.7%</td>
<td>59.4%</td>
</tr>
<tr>
<td>Physician Coordinator</td>
<td>65.7%</td>
<td>47.5%</td>
</tr>
<tr>
<td>Nurse Competency</td>
<td>72.4%</td>
<td>66.7%</td>
</tr>
<tr>
<td>ED has a pediatric patient care review process</td>
<td>68.5%</td>
<td>45.2%</td>
</tr>
<tr>
<td>Weigh in kilograms</td>
<td>72.9%</td>
<td>67.8%</td>
</tr>
<tr>
<td>If weigh in kilograms, also record in kilograms</td>
<td>82.6%</td>
<td>75.3%</td>
</tr>
<tr>
<td>Hospital disaster plan addresses issues specific to the care of children</td>
<td>78.5%</td>
<td>46.9%</td>
</tr>
<tr>
<td>Inter-facility transfer guidelines</td>
<td>81.2%</td>
<td>70.7%</td>
</tr>
</tbody>
</table>
How Pediatric Prepared are We?

2013 National Pediatric Readiness Survey Project

  - Validated that having a Pediatric Emergency Care Coordinator is:
    - Strongly correlated with improved emergency department readiness for children
    - Associated with improved compliance with published Guidelines for the Care of Children in the Emergency Department
  
- Illinois – other areas for improvement
  - 68.5% - Pediatric patient care review process in place
  - 42.5% - Policy for immunization assessment and management of the under-immunized child
  - 47.5% - Policy for promoting family-centered care
  - 55.2% - Policy for reduced-dose radiation for CT and x-ray imaging based on pediatric age or weight
  - 60.8% - Written procedure in place for notification of physicians when abnormal vital signs are found in children
Facility Recognition Criteria

- Facility requirements
- Physician, Nursing and Advance Practice Provider
  - Qualifications
  - Continuing education requirements
  - ED Coverage and On-call physician specialists availability
  - Back-up physician response time in critical situations/disasters
- Pediatric policies/procedures and treatment protocols
  - ED and Pediatric Inpatient Units
- Interfacility Transfer/Transport requirements
- Pediatric quality improvement
  - Multidisciplinary ED QI Committee
  - Pediatric Physician Champion
  - Pediatric Quality Coordinator
  - Required pediatric QI monitors
  - Participation in regional quality improvement activities
- Equipment, supplies and medication requirements
- Pediatric disaster preparedness
Physician Qualifications/Requirements

- **EDAP**
  - One MD per shift with Board Certification
  - ABEM, AOBEM, ABP, AOBP, ABFP, AOBFP
    - Current AHA-PALS or APLS for the physicians above who are not emergency medicine board certified
  - Waiver option - reapply each renewal cycle and have current PALS/APLS

- **SEDP**
  - Licensed MD
  - Training in care of pediatric patients thru residency training, clinical training or practice
  - Current AHA-PALS or APLS

- **EDAP/SEDP**
  - 16 hrs CME in pediatric emergency topics every two years for ED and Fast Track physicians
  - Availability of pediatric telephone consultation capabilities
  - ED Back-up physician within 1 hour for critical situations, increased surge
  - On-site response time guidelines for on-call physicians
  - All APLS and PALS must include both cognitive and practical skills evaluation
Physician Qualifications/Requirements: PCCC

PICU Medical Director

1. Board Certified in Pediatrics by ABP or AOBP, and Board Certified or in the process of certification in Pediatric Critical Care Medicine by ABP or Pediatric Intensive Care by AOBP; or
2. Board Certified in Pediatrics by ABP or AOBP and Board certified in a pediatric subspecialty with at least 50% practice in pediatric critical care; or
3. Board Certified in Anesthesiology by ABA or AOBA, with practice limited to infants and children and with a subspecialty Certification in Critical Care Medicine;
4. Board Certified in Pediatric Surgery by ABS with a subspecialty Certification in Surgical Critical Care Medicine by ABS.

NOTE: In situations 2, 3 & 4 above, a Board Certified Pediatric Intensivist, certified by ABP, shall be appointed as Co-Director.
Physician Qualifications/Requirements

PCCC

- PICU shall have 24 hour in-hospital coverage by:
  - A Board Certified Pediatric Intensivist, certified by ABP or AOBP, or in the process of certification by ABP or AOBP, who is available within 30 minutes in-house after determination is made that they are needed and who is responsible for the supervision of those listed below. When the intensivist is not in-house, one of the following must be in-house:
    - Board Certified Pediatrician, certified by ABP or AOBP or in the process of board certification;
    - A resident of PGY-2 or greater under the auspices of a Pediatric Training shall be in the unit, with a PGY-3 in-house.
  - All of the physicians listed above shall successfully complete and maintain current recognition in AHA-PALS or APLS
  - Availability of physician specialists

- Pediatric Inpatient Unit Hospitalists
  - Maintain AHA-PALS or APLS
Physician Specialist Availability

- Pediatric proficiency as defined by the hospital credentialing process;
- Board/sub-board certification in their specialty;
- 10 hours/year of pediatric CME (category I or II) in their specialty
- 60 minute in-house response time for the following with pediatric proficiency: surgeon, anesthesiologist and neurosurgeon (or transfer agreement)
- Subspecialists with pediatric proficiency available in-house or by phone consultation within 60 minutes after determination is made that they are needed, i.e., orthopedics, neurologist
- Access to other physician specialists as outlined in Section 515.4020 c, 2
Advanced Practice Provider Qualifications
Nurse Practitioners/Physician Assistants

EDAP/SEDP

- Credentialing reflects orientation, ongoing training, specific competencies in the care of the pediatric emergency patient
- Current recognition in APLS, ENPC or PALS
- Nurse Practitioner
  - Pediatric NP; or
  - Emergency NP; or
  - Family Practice NP; or
  - Waiver option (2000 hours of hospital-based ED or acute care as a nurse practitioner over the last 24 month period that includes pediatric patients). Must reapply for waiver each renewal cycle.
- 16 hours CEU/CME in pediatric emergency topics every two years
- All APLS and PALS must include both cognitive and practical skills evaluation
Advanced Practice Provider Qualifications

Nurse Practitioners/Physician Assistants
(providing direct patient care in the PICU)

PCCC

- **PICU Nurse Practitioner**
  - Completion of a Pediatric Nurse Practitioner program or Pediatric Critical Care Nurse Practitioner Program. Certification as an Acute Care Nurse Pediatric Practitioner

- **PICU Physician Assistant**
  - Current Illinois Physician Assistant licensure

- **NP & PA**
  - Completion of a documented, precepted, post graduate clinical experience, in the management of critically ill pediatric patients

- **NP & PA**
  - Current recognition in APLS, PALS or ENPC; 50 hours CEU/CME in pediatric critical care topics every two years
Staff Nursing Qualifications

- One RN per shift responsible for the direct care of the child in the ED with current recognition in:
  - APLS, or
  - ENPC, or
  - PALS

- All ED nurses need to maintain recognition in APLS, ENPC or AHA-PALS within 2 years of hire

- **EDAP** - 8 hours of pediatric emergency/critical care CE every two years for all nurses

- **SEDP** - 8 hours of pediatric emergency/critical care CE every two years for one nurse per shift

- All APLS and PALS must include both cognitive and practical skills evaluation
Staff Nursing Qualifications
PCCC

- **PICU Nurse Manager**
  - 3 years of clinical critical care experience with a minimum of one year in clinical pediatric care
  - Maintains APLS, ENPC or AHA-PALS recognition

- **Pediatric Unit Nurse Manager**
  - 3 years pediatric experience
  - Maintains APLS, ENPC or AHA-PALS recognition

- **Advanced Practice Nurse (CNS/NP)**
  - Completion of a documented, precepted, post graduate clinical experience, in the management of critically ill pediatric patients
  - Current Illinois Advanced Practice Nurse License
  - Current APLS, PALS or ENPC
  - 50 hours CEU/CME in pediatric critical care topics/two years

- **PICU and Pediatric Unit Staff Nurse**
  - Maintains APLS, ENPC or AHA-PALS recognition
  - 16 hrs pediatric emergency/critical care CE every 2 yrs for PICU/peds unit
Interfacility Transfer Agreements

“The transfer agreement shall include a provision that addresses communication and QI measures between the referral and receiving hospitals, as related to patient stabilization, treatment prior to and subsequent to transfer and patient outcome.”

Interfacility Transfer Guidelines (shall include)

- Process for initiation of transfer, including role and responsibilities of the referring hospital and referral center;
- Process for selecting the appropriate care 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 medical record information, signed transport consent and transfer of belongings;
- Plan for provision of directions and referral hospital information to family.
Policies and Procedures
EDAP/SEDP

- Suspected Child Abuse and Neglect Policy
  - Address identification (including screening, evaluation...)

- Latex-Allergy Policy
  - Address assessment of latex allergies..

- Pediatric Treatment Guidelines
  - The facility shall have guidelines or policies addressing initial response and assessment for the high volume/high risk pediatric population (i.e. fever, trauma, respiratory distress, seizures)
  - Encourage to link newly developed guidelines with QI monitoring

- Disaster Preparedness
  - The hospital shall integrate pediatric components into the hospital Disaster/Emergency Operations Plan
Policies and Procedures
PCCC

- Admission/discharge criteria policy
- Nursing staffing policy based on patient acuity
- Managing psychiatric/psychosocial needs of the PICU patient
- Protocols/order sets/guidelines for management of high/low frequency diagnoses
- Others
Equipment/Supplies/Medications

- Various equipment items, supplies and medications
- Dosing device (length or weight based system for dosing and equipment)
- Weighing scales in KILOGRAMS ONLY
- Access to the 1-800-222-1222 Illinois Poison Center helpline
- NOTE: MCHC Group Purchasing Services can assist with vendor identification of required items and/or required sizes (312-906-6122)
Quality Improvement
Emergency Department

- Multidisciplinary QI committee/process with documented monitors addressing pediatric care
- Must minimally address all pediatric ED deaths, and inter-facility transfers, child abuse and neglect cases, critically ill or injured children in need of stabilization (e.g. respiratory failure, sepsis, shock, altered level of consciousness, cardio/pulmonary failure) and pediatric strategic priorities of the institution.
- Designation of a Pediatric Quality Coordinator with a job description that includes the allocation of appropriate time and resources by the hospital, and works with the Pediatric Physician Champion:
  - Assure documentation of pediatric continuing education requirements
  - Coordinate data collection for identified clinical indicators/outcomes
  - Review selected pediatric cases transported to the hospital by prehospital providers and provide feedback to the EMS Coordinator/System
  - Participate in regional QI activities and attend meetings. One representative to report to the Regional EMS Advisory Board
Designation of a Pediatric Physician Champion

The Emergency Department Medical Director shall appoint a physician to champion pediatric quality improvement activities. The pediatric physician champion shall work with and provide support to the pediatric quality coordinator.
Multidisciplinary Pediatric QI Committee

Focused outcome analyses of PICU services, including:
- Pediatric deaths
- Pediatric interfacility transfers
- Pediatric morbidities or negative outcomes as a result of treatment rendered/omitted
- Child abuse cases (unless performed by another hospital committee)
- Readmissions within 48 hours of being discharged from the ED or inpatient that result in admission to the PICU
- All potential and unanticipated adverse outcomes
- Pediatric quality metrics

Provide feedback/quality review to transferring facilities on transfer and management process
Site Surveys
Pull one patient medical record for each of the 4 required QI monitors:
- Pediatric deaths
- Pediatric interfacility transfers
- Suspected child abuse/neglect cases
- Critically ill or injured children in need of stabilization

Pediatric Quality Coordinator and Pediatric Physician Champion should walk the survey team thru the review process for each of the above monitors using the medical records

Have any related QI tools/parameters available during this review process
Site Survey Issues

Education

- Non-American Heart Assn sponsored PALS courses
  - Courses need to include both cognitive and skills evaluation
    - Some online PALS courses do not meet this (NOTE: online AHA courses do have a skills component)

- Lack of conduction of pediatric mock codes
  - Multidisciplinary; incorporate utilization of crash cart
  - Incorporate into quality improvement process
  - EMSC Pediatric Mock Code Toolkit and resources available
  - PALS scenarios can be used as a resource

- Non-compliance or documentation/tracking issues with pediatric CE/CME requirements
  - Ongoing pediatric continuing education is essential for ALL practitioners who take care of children
  - On-line CME is available and easy to access
  - Need alerting/trigger process when staff nearing PALS/ENPC expiration
  - Note: Continuing Education Tracking Tool for hospital personnel developed thru EMSC is available
Site Survey Issues

Policies/Documentation

- Requirements need to be incorporated into policy or other formal documents
- Interfacility transfer agreements
  - Outdated agreements that do not address communication/feedback requirement
- Lack of pediatric treatment guidelines or lack of protocols/guidelines/clinical pathways that address high volume or low volume/high risk diagnoses
- Pediatric guidelines not consistent with current practice standards (e.g., use of DPT, Chloral Hydrate and Demerol in moderate sedation policy)
- Lack of a pediatric pain scale addressing infant and non-verbal child
  - Most hospitals use Wong-Baker FACES scale (appropriate for age 3 and older)
  - Need scales based on physiologic criteria for younger and non-verbal children (e.g., FLACC, NIPS, etc.)
Need to have a formal process for monitoring:

- **EDAP** - pediatric deaths, interfacility transfers, suspected child abuse/neglect, and critically ill or injured children in need of stabilization

- **PCCC** – all above; additionally pediatric morbidities or negative outcomes as a result of treatment or omission; re-admissions within 48 hrs after discharge from ED or inpatient unit that results in PICU admission; pediatric audit filters

- Inconsistent or lack of attendance at regional QI meetings

- Varied or lack of support provided to the Pediatric Quality Coordinator role for monitor review, data collection, quality improvement activities

- Quality improvement documentation doesn’t include thorough follow-thru or loop closure
Site Survey Issues
Quality Improvement (continued)

- Lack of sharing of quality improvement findings with physician and nursing staff, (e.g., staff meeting minutes)
- Feedback loop/communication process to referral hospitals on transferred patients
- Need to build on current pediatric quality improvement efforts
Site Survey Issues
Equipment/Supplies

- Old Poison Center phone # posted
  - National Poison Hotline 1-800-222-1222
- Expired drugs/equipment trays
- Stocking of medications that are no longer recommended, e.g., Ipecac
- All OB Kits should contain a bulb syringe
- Consider high-alert labels on look-a-like drugs, e.g., 25% and 50% Dextrose; 4.2% and 8.4% Sodium Bicarb
- Missing smaller airway supplies, i.e., nasal cannula, nasal airways, pediatric Magill forceps
- Availability of warming devices
- Scales need to be locked out to weigh in kg only
Site Survey Issues

Equipment/Supplies (continued)

- Pediatric crash cart issues
  - Poor organization or difficulty finding items
  - Lack of first-line resuscitation drugs stocked in crash cart or immediately available
  - Outdated Broselow tape and/or outdated dosing booklets/information (i.e. inconsistent with current AHA guidelines)
  - Broselow cart stocking that is not consistent with the color coded tape
  - Cart check system not consistently documented
  - Crash cart not locked
  - Pediatric crash carts not standardized within the institution

- Inpatient Pediatric Unit
  - Need for emergency airway supplies in treatment room
  - Need for pre-printed weight based resuscitation medication dosing forms available at the patient bedside or on chart

NOTE: Investigate mechanisms to group purchase items that aren’t utilized often and can be ordered in bulk
Rapid Response Teams – pediatric education should be required for team members, i.e. PALS

Security measures/drills should be in place re potential child abduction

Child abuse/neglect screening processes in place

Documents requested prior to the survey need to be available for the survey team

Lack of administrator or designee presence during site survey making it difficult to determine administrative support

Lack of sharing resources/expertise between pediatric unit/department and emergency department

ED Physician contract groups – compliance issues with requirements, especially out-of-state physician groups. Requirements should be outlined in their contract.
Pediatric Quality Improvement
Quality Improvement Goal/Objectives

Improve overall pediatric emergency/critical care

- Enhance individual emergency department (EDAP/SEDP) and PICU/pediatric inpatient (PCCC) pediatric quality improvement activities
  - Demonstrated improvements (some QI projects have shown statistically significant improvements)

- Bring together hospitals within a region to:
  - Conduct targeted regional ED/EMS quality initiatives
  - Network
  - Mentor
  - Share resources/standards/educational opportunities and experiences
A member of the professional staff who has ongoing involvement in the care of pediatric patients shall be designated to serve in the role of the pediatric quality coordinator. The pediatric quality coordinator shall have a job description that includes the allocation of appropriate time and resources by the hospital.
Pediatric Physician Champion

- A physician appointed by the ED Medical Director to champion pediatric quality improvement activities.

- Works with and provides support to the Pediatric Quality Coordinator
  - Quality Improvement
  - Education
  - Liaison to ED Medical Director and physician staff on pediatric issues
  - Assist with loop closure process
Role of PQC: Overview

- Attend & participate in regional meetings
  - Send representative if you cannot attend
- Participate in regional/statewide and internal pediatric QI projects
- Share data results with your Pediatric Physician Champion, colleagues, ED administration, EMS Coordinator, ED QI committee/process, etc.
- Collaborate with ED/EMS staff to implement positive changes in pediatric care
- Work with ED administration to ensure compliance with PCCC/EDAP/SEDP requirements (esp. related to CE requirements)
- Be aware of and offer suggestions for prehospital pediatric monitors
- Share pediatric information/continuing education opportunities with colleagues

Advocate for your pediatric patients!!
Quarterly “To-Do” Checklist

REGIONAL QI
- Review patient charts for regional QI project
- Bring hospital QI data to regional meeting
- Analyze quarterly QI data
- Prior to regional PQC meeting, review quarterly meeting materials
- Attend & participate in regional PQC meeting
- Share pediatric info & education with appropriate staff/colleagues
- Review patient charts for QI statewide project (if applicable)
- Prioritize areas of improvement

EMERGENCY DEPARTMENT QI
- Conduct quarterly QI review of all pediatric ED deaths, inter-facility transfers, suspected child abuse/neglect cases, critically ill or injured children in need of stabilization, and pediatric strategic priorities of the institution
- Bring issues to your ED multidisciplinary committee/process
- Review hospital-specific data and QI progress with ED multidisciplinary committee/process
- Provide QI review results to ED staff
- Collaborate on pediatric QI issues with Trauma Coordinator & EMS Coordinator (if applicable)
Website and Available QI Tools

http://www.luhs.org/depts/emsc/qualitytools.htm

- Pediatric Death or Resuscitation Review Tool
- Pediatric Intrafacility Transfer Review Tool
- Transferred Patient Feedback Request Form
- Pediatric Pain Assessment Tool
- Pediatric Pain Management Tool
- Pediatric Asthma Management Tool
- Pediatric Prehospital Respiratory Distress Tool
- Pediatric Seizure Management Tool
- Pediatric Prehospital Seizure Assessment and Management Tool
- Child Abuse and/or Neglect Injury Screening Tool
Rapid Cycle Model

**What are we trying to accomplish?**
Example: Improving pain reassessment prior to disposition for children 0 ≤ 15 years of age

**How will we know that a change is an improvement?**
Example: 90% of discharge pediatric medical records have a reassessment documented prior to disposition

**What changes can we make that will result in improvement?**
Examples:
- Post age appropriate pain scales in patient area
- Offer education or competency
- Revise order set to reinforce reassessment
- Seek solutions through debriefing of pain cases

**Setting Aims**

**Establishing Measures**

**Selecting Changes**

**Evaluating Changes**
Example: Review and analyze the data after implementing one of the above changes
Loop Closure

Loop Closure process

- Utilize your QI Committee to define the loop closure process
- Communicate QI findings with administration and staff (i.e. via staff meetings, meeting minutes, huddles, bulletin board postings)
  - Positive findings – recognize staff/team
  - Opportunities for improvement – identify education/changes/strategies to address the issue
- Implement changes as needed
- Re-evaluate QI findings after changes implemented to identify any improvement
- Document follow-up in meeting minutes
Region XI Success Story

Illinois EMS for Children Quality Improvement and Indicator Monitoring Report

Title of Project: Pediatric Pain Management
Date of Report: November 8, 2005
EMSC Region: Region 11
Facility: All Participating Facilities in the Regional CQI Effort

1. Opportunity / Issue / Problem Identification (PLAN)
   - Opportunity: Pediatric pain management in the ED
   - Problem: Less than optimal initial interventions including pharmacological interventions (51%), reassessment prior to discharge (50%), and decrease in pain (38%)
   - Goals: intervention, reassessment, and decrease in pain

2. Most Likely Causes:
   - Lack of staff awareness
   - Lack of staff following guidelines
   - Understanding issues

3. Solution(s) Implemented (DO) (Appendix A)
   - MD & RN Educational presentations
   - Inservice training
   - Reminders
   - Development of standing orders form
   - Development of hospital-wide pain management policy

4. Data Elements Collected for Evaluation (Appendix B)
   - Diagnosis
   - Initial assessment documented
   - Interventions and times documented
   - Reassessment documented
   - Use of pain scales documented
   - Decrease in pain documented
   - Each hospital evaluates 36 charts per quarter of patients aged 6-15 presenting with orthopedic injury

5. Results and Data Analysis (STUDY)
   - Pharmacological Intervention: 11% improvement
   - Reassessment Prior to Discharge: 10% improvement
   - Decrease in Pain: 33% improvement

6. Conclusions and Recommendations (ACT)
   - Conclusions: The EDs in Illinois EMSC Region 11 have shown progress toward meeting the goal of improving at least 10% in terms including pharmacological intervention, reassessment prior to discharge, and decrease in pain for children in the ED with orthopedic injury. This improvement follows specific educational efforts.
   - Recommendations: Continue ongoing efforts to maintain and promote awareness of pediatric pain management. Attempt to further identify barriers to assessments and interventions.
Region 11 Current QI Projects

Region XI Vital Sign and BP Data Collection

<table>
<thead>
<tr>
<th>DATE</th>
<th>AGE</th>
<th>ESI Triage</th>
<th>Triage Temp</th>
<th>Triage Pulse</th>
<th>Triage RR</th>
<th>Triage BP</th>
<th>Weight</th>
<th>Abnormal VS Recheck</th>
<th>Cap refill</th>
<th>Discharge VS</th>
<th>Temp</th>
<th>Pulse</th>
<th>RR</th>
<th>BP</th>
<th>Disposition</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Data Dictionary**

**Objective:** To assess consistency with obtaining blood pressures and weights in kg, in pediatric patients presenting to our hospital ED's. All ESI 3 pediatric patients age 3 years or older should have a blood pressure measurement.

**Data:** Assess 5 charts per month for the year 2015 of any pediatric patient presenting to your ED either medical or trauma complaint.

**Definitions:**

- Date- date of arrival
- Age- age of patient presenting. If months - example 9m
- ESI Triage level- level assigned by the triage nurse either 1,2,3,4
- Weight of patient obtained in KG- either write the kg weight or place NO if in pounds
- Triage vital signs- Temp, P, RR, BP write in the values that were obtained-
- Discharge vitals- Temp, P, RR, BP write in values that were obtained- if absent place NO
- Capillary refill- was this documented. Yes or no
- Abnormal VS recheck- if abnormal vitals noted or abnormal per policy document the values. a yes or no and vitals
- Admit, Transfer or Discharge- of admitted place an (A), if Transferred (T), if Discharged (DC)
- No BP documented- place and X here is unable to locate any BP measurement in the chart
- Other- any additional comments for your institution. Example: Policy followed, ESI 1 and no BP, WEIGHT only in pounds, etc

**References:**

Educational Modules  (Free)

Available (with Continuing Education Credit) on http://www.publichealthlearning.com/
NOTE: Presentations are also available on: www.luhs.org/depts/emsc/education.htm
Using hospital discharge data, mortality rates per 1,000 inpatients were calculated for 0-15 year olds who were admitted with an injury related diagnosis.

Records were restricted to facilities that obtained recognition at any level from 1994 - 2014.

Mortality rates were evaluated.
Pre/Post-Recognition Comparison:

- The pre-recognition mortality rate was 12.2 deaths per 1,000 inpatients with an injury-related diagnosis.
- The post-recognition mortality rate was 10.1 deaths per 1,000 inpatients with an injury-related diagnosis.
- This difference is statistically significant.

NOTE: Decreases in mortality can likely be attributed to multiple factors, one of which may be the increased awareness and attention to pediatric emergency care needs emphasized through facility recognition.

<table>
<thead>
<tr>
<th></th>
<th>Pre-Recognition</th>
<th>Post-Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients</td>
<td>31,945</td>
<td>58,061</td>
</tr>
<tr>
<td>Deaths</td>
<td>391</td>
<td>586</td>
</tr>
<tr>
<td>Rate</td>
<td>12.2</td>
<td>10.1</td>
</tr>
</tbody>
</table>
How Prepared Are Hospitals for a Surge of Pediatric Patients?
Vulnerabilities of Children in Disasters

- May require more time, resources and personnel
- May be sicker than adults – more symptomatic and show earlier symptoms
- Can be more challenging to care for
- May be susceptible to abduction/custodial issues
- Reactions influenced by age, developmental level and physiology
- Increased risk of psychological trauma – may need continuous psychological support
- Require help from adults
  - Understanding the event, communication, decision making, protection
- Others
Convened by President and Congress
- Conduct first ever comprehensive review of Federal disaster-related laws, regulations, programs
- Assess responsiveness to needs of children

Final Report released October 2010
- Characterizes “benign neglect” of children in disaster planning

Areas of focus
- Disaster management and recovery
- Mental health
- Child physical health and trauma
- Emergency medical services and pediatric transport
- Disaster case management
- Child care
- Elementary and secondary education
- Child welfare and juvenile justice
- Sheltering standards, services and supplies
- Housing
- Evacuation

http://www.childrenanddisasters.acf.hhs.gov/
State Pediatric Planning Initiatives

- IDPH ESF-8 Plan
  - State health and medical disaster plan
  - Outlines overall disaster response activities at the state level

- Pediatric and Neonatal Surge Annex
  - Part of the IDPH ESF-8 Plan
  - Addresses the statewide coordination of care for children during large scale disasters
  - Assists individual hospitals with the care of pediatric patients

- Regional ESF-8 Plan
  - Each region is charged with developing their own regional response plan
How Pediatric Prepared are Illinois Hospitals?

2013 National Pediatric Readiness Survey Project:
Hospital disaster plan addresses issues specific to the care of children
National Score = 46.8%
Illinois Score = 78.5%

Illinois scores based on Facility Recognition Level:

<table>
<thead>
<tr>
<th>Facility Recognition Level (total #)</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP (87)</td>
<td>6</td>
<td>75</td>
</tr>
<tr>
<td>SEDP (13)</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>PCCC/EDAP (10)</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Not Recognized (75)</td>
<td>32</td>
<td>45</td>
</tr>
</tbody>
</table>
Pediatric Disaster Preparedness Evaluation during Hospital Surveys

- Emergency Management/Safety staff need to be present during the survey
- Include emergency preparedness component in SWOT presentation
  - Discuss pediatric emergency preparedness activities
- Tour of facility disaster related areas (e.g. decontamination area)
- Provide emergency operations plan and other disaster related plans for EMSC review
- Review of the submitted Hospital Pediatric Preparedness Checklist
- Review improvement plan submitted after last survey
Hospital Pediatric Preparedness Checklist

- Revised in 2015
  - Based on recommendations from hospitals
  - Ensure consistency with National EMSC guidelines

- Key changes:
  - Clarification of components that frequently caused confusion
  - Provide more guidance to hospitals regarding requirements
  - Expanded options to meet exercise requirements
  - New Recovery component
  - Checklist part of a Toolkit, not just free standing document
Components of Hospital Pediatric Preparedness Checklist

- Overall Emergency Operations Planning
- Surge Capacity
- Decontamination
- Reunification/Patient Tracking
- Security
- Evacuation
- Mass Casualty Triage/JumpSTART
- Children with Special Health Care Needs/Children with Functional Access Needs
- Pharmaceutical Preparedness
- Recovery
- Exercises/Drills
Overall Emergency Operations Planning

- Pediatrics integrated into the hospital Emergency Operations Plan (EOP)/Disaster Plans
  - Separate considerations or under “at risk” population category
    - Recommendation only

- Population assessment of children in hospital service area and incorporate findings into HVA
  - Schools
  - Child care centers
  - Recreational centers/parks
  - Juvenile detention centers
Overall Emergency Operations Planning

- **Staff with pediatric focus** consulted when developing and updating the EOP/Disaster Plan
- **Staff with pediatric focus** regularly attend hospital emergency preparedness committee meetings and continue to contribute to overall hospital preparedness
- **Staff with pediatric focus** encouraged to take courses such as FEMA IC 100, 200 & 700
  - Recommendation only
- **Staff with pediatric focus** integrated into hospitals ICS/EOC as indicated by type of event
- **Disaster preparedness coordinator** regularly attend/participate in regional healthcare coalition meetings
Pediatric Community Snapshot

“On the morning of September 11, 2001 approximately 1.2 million children were enrolled in the New York City public schools...In the immediate vicinity of Ground Zero, more than six thousand children were in 7 elementary, middle and high schools, as well as in 28 licensed child care centers, 58 family child care and group homes, and 14 school age child care sites, including one childcare center in the Twin Towers.”

National Advisory Committee on Children and Terrorism, 2003
Resource: Pediatric HVA
## Region 11 Pediatric Resources

<table>
<thead>
<tr>
<th>RHCC Hospital Address</th>
<th>ED Phone</th>
<th>Pediatric Designation*</th>
<th>Trauma Center Level</th>
<th>Trauma Transfer</th>
<th>PICU Transfer</th>
<th>PICU Phone</th>
<th>Perinatal Level**</th>
<th>NICU Transfer</th>
<th>NICU Phone</th>
<th>Transport Team Phone</th>
<th>PHMSRF/ Decompression Category***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocate Illinois Masonic Medical Center 836 W. Wellington Ave., Chicago, IL 60657</td>
<td>(773) 296-5878</td>
<td>EDAP</td>
<td>Level I</td>
<td>(658) 872-9620</td>
<td></td>
<td></td>
<td>III NICU</td>
<td>(773) 296-5332</td>
<td>(773) 296-5474</td>
<td>(773) 296-5233</td>
<td>Chicago Category 1</td>
</tr>
<tr>
<td>Advocate Trinity Hospital 2230 E. 32nd St., Chicago, IL 60617</td>
<td>(773) 976-2424</td>
<td>PCC/EDAP</td>
<td>Pediatric Level</td>
<td>(312) 227-3700</td>
<td>(312) 227-1600</td>
<td>(312) 227-3700</td>
<td>III NICU</td>
<td>(312) 227-3700</td>
<td>(312) 227-1400</td>
<td>(312) 227-3700</td>
<td>Chicago Category 4</td>
</tr>
<tr>
<td>Ann &amp; Robert H Lurie Children’s Hospital 255 E Chicago Ave, Chicago, IL 60611</td>
<td>(312) 227-3800</td>
<td>EDAP</td>
<td>Level I</td>
<td>(312) 227-3700</td>
<td>(312) 227-3700</td>
<td></td>
<td>III NICU</td>
<td>(312) 227-3700</td>
<td>(312) 227-3700</td>
<td>(312) 227-3700</td>
<td>Chicago Category 1</td>
</tr>
<tr>
<td>Holy Cross Hospital 2701 W. 68th St., Chicago, IL 60629</td>
<td>(773) 864-4010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 4</td>
</tr>
<tr>
<td>Jackson Park Hospital and Medical Center 7531 South Stony Island Ave. Chicago, IL 60649</td>
<td>(773) 947-7610</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 4</td>
</tr>
<tr>
<td>John H. Stroger Jr. Hospital of Cook County 1901 W. Harrison St., Chicago, IL 60612</td>
<td>(312) 884-1500</td>
<td>EDAP</td>
<td>Level I &amp; Pediatric Level</td>
<td>(312) 864-1000</td>
<td>(312) 864-4100</td>
<td>(312) 864-4100</td>
<td>III NICU</td>
<td>(312) 864-4100</td>
<td>(312) 864-4100</td>
<td>(312) 864-4100</td>
<td>Chicago Category 1</td>
</tr>
<tr>
<td>La Rabida Children’s Hospital 6501 South Promontory Drive, Chicago, IL 60649</td>
<td>(773) 753-6645</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 2</td>
</tr>
<tr>
<td>Loretto Hospital 645 S. Central Ave., Chicago, IL 60644</td>
<td>(773) 544-5466</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 3</td>
</tr>
<tr>
<td>Mercy Hospital &amp; Medical Center 2525 S. Michigan Ave., Chicago, IL 60616</td>
<td>(312) 567-0200</td>
<td>EDAP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 2</td>
</tr>
<tr>
<td>Methodist Hospital of Chicago 5025 N. Paulina St., Chicago, IL 60640</td>
<td>(773) 989-1387</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 3</td>
</tr>
<tr>
<td>Mount Sinai Medical Center California Ave at 15th St., Chicago, IL 60603</td>
<td>(773) 257-6241</td>
<td>EDAP</td>
<td>Level I &amp; Pediatric Level</td>
<td>(773) 257-6241</td>
<td>(773) 257-6241</td>
<td>(773) 257-6241</td>
<td>III NICU</td>
<td>(773) 257-6241</td>
<td>(773) 257-6241</td>
<td>(773) 257-6241</td>
<td>Chicago Category 1</td>
</tr>
<tr>
<td>Northwestern Memorial Hospital 251 E. Huron St., Chicago, IL 60611</td>
<td>(312) 926-5188</td>
<td>EDAP</td>
<td>Level I</td>
<td>Adult (312) 926-3221</td>
<td></td>
<td></td>
<td>III NICU</td>
<td>(312) 472-1000</td>
<td>(312) 472-1000</td>
<td></td>
<td>Chicago Category 4</td>
</tr>
</tbody>
</table>

---

**PEDIATRIC DESIGNATION**
- PCCC: Pediatric Critical Care Center
- EDAP: Emergency Department Approved for Pediatrics
- SEDP: Standby Emergency Department for Pediatrics

**ILLINOIS PERINATAL LEVELS**
- Level I: General Nursery
- Level II: Intermediate Care Nursery
- Level II-E: Special Care Nursery with Extended Capabilities
- Level III: Neonatal Intensive Care
- Level IV: Neonatal Intensive Care with Extended Services

*La Rabida Children’s Hospital typically cares for pediatric patients with chronic illnesses and disabilities. Their Emergency Department capabilities may be available in the event of a disaster.*
<table>
<thead>
<tr>
<th>Hospital Address</th>
<th>ED Phone</th>
<th>Pediatric Designation*</th>
<th>Trauma Center Level</th>
<th>Trauma Transfer</th>
<th>PICU Transfer PICU Phone</th>
<th>Perinatal Level**</th>
<th>NICU Transfer NICU Phone</th>
<th>Transport Team Phone</th>
<th>PHMSR/Decompression Category***</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Bernard Hospital &amp; Health Care Center 325 W. 64th St., Chicago, IL 60621</td>
<td>(773) 962-4620</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>II</td>
<td></td>
<td></td>
<td>Chicago Category 4</td>
</tr>
<tr>
<td>Shriners Hospital for Children 2211 N. Oak Park Ave., Chicago, IL 60707</td>
<td>(773) 622-5400</td>
<td>Limited (see below)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 2</td>
</tr>
<tr>
<td>South Shore Hospital 8012 S. Crandon, Chicago, IL 60617</td>
<td>(773) 356-5931</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 3</td>
</tr>
<tr>
<td>Swedish Covenant Hospital 5145 N. California Ave., Chicago, IL 60625</td>
<td>(773) 969-3660</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 4</td>
</tr>
<tr>
<td>Thorek Hospital and Medical Center 850 W. Irving Park Rd., Chicago, IL 60613</td>
<td>(773) 975-6770</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 3</td>
</tr>
<tr>
<td>University of Chicago Medical Center 5841 S. Maryland Ave., Chicago, IL 60637</td>
<td>(773) 702-6250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 1</td>
</tr>
<tr>
<td>University of Chicago Comer Children's Hospital 5841 S. Maryland Ave., Chicago, IL 60637</td>
<td>(773) 702-8249</td>
<td>EDAP</td>
<td>Pediatric Level I</td>
<td>(800) 621-7827</td>
<td>(800) 621-7827</td>
<td>III NICU</td>
<td>(773) 795-3665</td>
<td>(773) 702-6881</td>
<td>Chicago Category 1</td>
</tr>
<tr>
<td>University of Illinois Medical Center at Chicago 1740 W. Taylor St., Chicago, IL 60612</td>
<td>Pediatric (312) 413-2767</td>
<td>PCCO/EDAP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 1</td>
</tr>
<tr>
<td>Weiss Memorial Hospital 4646 N. Marine Dr., Chicago, IL 60640</td>
<td>(773) 564-7300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chicago Category 3</td>
</tr>
</tbody>
</table>

**PEDIATRIC DESIGNATION**
PCCC: Pediatric Critical Care Center
EDAP: Emergency Department Approved for Pediatrics
SEDAP: Standby Emergency Department for Pediatrics

**ILLINOIS PERINATAL LEVELS**
Level 0: Non-Birthing Center
Level I: General Nursery
Level II: Intermediate Care Nursery
Level III: Neonatal Intensive Care

*Shriners Hospital for Children's PICU typically cares for pediatric patients with a limited scope of diagnoses (orthopedics, spinal cord and cleft lip/palate). Their critical care capabilities may be available in the event of a disaster.

**Public Health & Medical Services Response Regions (PHMSRR)/Decompression Category**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1:</td>
<td>Specialty Centers (PICU/NICU); provides care to ages 0-6 y/o</td>
</tr>
<tr>
<td>Category 2:</td>
<td>Hospitals with some pediatric services; will accept ages 0-12 y/o</td>
</tr>
<tr>
<td>Category 3:</td>
<td>Hospitals with some pediatric services; will accept ages 0-12 y/o</td>
</tr>
<tr>
<td>Category 4:</td>
<td>Hospitals with some pediatric services; will accept ages 0-1 y/o</td>
</tr>
</tbody>
</table>

Local Health Departments

Cook County: (708) 633-4000
Chicago Department of Public Health: (312) 747-9884
Illinois Poison Center: 1-800-222-1222

EMSC http://www.luhs.org/EMSC May 2014

Development and printing of this card has been supported in part by a federal grant from the Assistant Secretary for Preparedness & Response (ASPR), U.S. Department of Health & Human Services.
# Burn Centers/Units That Manage Children

<table>
<thead>
<tr>
<th>Hospital / City</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>** Illinois **</td>
<td>(312) 864-3144</td>
</tr>
<tr>
<td>John H. Stroger Jr. Hospital of Cook County - Chicago, IL</td>
<td>(217) 788-3325</td>
</tr>
<tr>
<td>Loyola University Medical Center - Maywood, IL</td>
<td>**</td>
</tr>
<tr>
<td>Memorial Medical Center - Springfield, IL</td>
<td>**</td>
</tr>
<tr>
<td>OSF St. Anthony Medical Center - Rockford, IL</td>
<td>**</td>
</tr>
<tr>
<td>University of Chicago Medical Center - Chicago, IL</td>
<td>**</td>
</tr>
<tr>
<td>** Indiana **</td>
<td>877-447-4539</td>
</tr>
<tr>
<td>Indiana University Riley Burn Unit, Indianapolis</td>
<td>**</td>
</tr>
<tr>
<td>St Joseph’s Burn Center, Fort Wayne</td>
<td>**</td>
</tr>
<tr>
<td>** Iowa **</td>
<td>319-356-2496 or 319-354-5000</td>
</tr>
<tr>
<td>University of Iowa Burn, University of Iowa Hospitals and Clinics, Iowa City</td>
<td>**</td>
</tr>
<tr>
<td>** Kentucky **</td>
<td>877-452-4543</td>
</tr>
<tr>
<td>Kosair Children’s Hospital Burn Unit, Louisville</td>
<td>**</td>
</tr>
<tr>
<td>University of Kentucky Healthcare Burn Center, Lexington</td>
<td>**</td>
</tr>
<tr>
<td>** Michigan **</td>
<td>313-966-5343</td>
</tr>
<tr>
<td>Children’s Hospital of Michigan, Detroit</td>
<td>**</td>
</tr>
<tr>
<td>Spectrum Health Regional Burn Center, Grand Rapids</td>
<td>**</td>
</tr>
<tr>
<td>University of Michigan Trauma Burn Center, Ann Arbor</td>
<td>**</td>
</tr>
<tr>
<td>** Minnesota **</td>
<td>612-873-4282</td>
</tr>
<tr>
<td>Hennepin County Medical Center Burn Center, Minneapolis</td>
<td>**</td>
</tr>
<tr>
<td>Regions Hospital Burn Center, St Paul</td>
<td>**</td>
</tr>
<tr>
<td>SMDC Medical Center-Miller-Dwan Burn Center, Duluth</td>
<td>**</td>
</tr>
<tr>
<td>** Missouri **</td>
<td>314-251-6055</td>
</tr>
<tr>
<td>St John’s Mercy Medical Center, St Louis</td>
<td>**</td>
</tr>
<tr>
<td>St Louis Children’s Hospital, St Louis</td>
<td>**</td>
</tr>
<tr>
<td>** Ohio **</td>
<td>330-543-4567</td>
</tr>
<tr>
<td>Children’s Hospital Medical Center of Akron /CR Boeckman Regional Burn Center, Akron</td>
<td>**</td>
</tr>
<tr>
<td>Shriners Hospital for Children/Shriners Burn Hospital, Cincinnati</td>
<td>**</td>
</tr>
<tr>
<td>MetroHealth Medical Center, Cleveland</td>
<td>**</td>
</tr>
<tr>
<td>Nationwide Children’s Hospital, Columbus</td>
<td>**</td>
</tr>
<tr>
<td>** Wisconsin **</td>
<td>414-291-1163</td>
</tr>
<tr>
<td>Columbia St Mary’s Hospital, Milwaukee</td>
<td>**</td>
</tr>
<tr>
<td>University of Wisconsin Hospital, Madison</td>
<td>**</td>
</tr>
</tbody>
</table>

** American Burn Association, Burn Center Verification

Emc
http://www.luhs.org/EMSC
May 2014
Surge: Planning

- Designate pediatric surge areas/space
  - Alternate treatment sites
  - Pediatric safe areas

- Surge resources/capabilities
  - Cribs/beds/isolettes/mattresses
  - Access to pediatric equipment/supplies
    - Pediatric isolation equipment, pediatric face masks
  - Ventilators
  - Infant/child nutritional needs
    - Age appropriate foods/ formula
    - Number of hours of stockpile on site
  - Hygiene needs
    - Infants/toddlers
  - Distraction devices/toys
  - MOUs with external vendors
Use of Strategic National Stockpile [SNS] Ventilators in the Pediatric Patient

Instructional Guidelines with Training Scenarios


Use of SNS Ventilators in the Pediatric Patient (LP-10, LTV-1200, and Uni-Vent Eagle)

Concepts of Rapid or Volume Based Pediatric Ventilation

- If volume ventilating, start at 10 ml/kg (unless protective lung strategy ventilation required)
- Volume lost to circuit must be replaced unless measurements taken at “wye”
- Set I-time generally between 0.7 – 1.0 sec.

NORMAL RESPIRATORY RATES

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant</td>
<td>30-60</td>
</tr>
<tr>
<td>Toddler</td>
<td>24-40</td>
</tr>
<tr>
<td>Preschooler</td>
<td>22-34</td>
</tr>
<tr>
<td>School-age child</td>
<td>18-30</td>
</tr>
<tr>
<td>Adolescent</td>
<td>12-16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest rise</td>
</tr>
<tr>
<td>Breath sounds</td>
</tr>
<tr>
<td>Respiratory rate</td>
</tr>
<tr>
<td>Work of Breathing</td>
</tr>
<tr>
<td>Pressures required to deliver volume</td>
</tr>
<tr>
<td>ABG/TCO2</td>
</tr>
</tbody>
</table>

UNI-VENT® Eagle™ Ventilation System “Quick Set-Up”

- SIMV, Assist Control (A/C), CPAP
- Volume: 10 ml/kg (displayed on LCD above control)
- Breath rate: Set age appropriate (dial is sensitive, 1-150 bpm)

- Inspiratory time: (0.7:1.0) Combination of Inspiratory time and I:E ratio is displayed on LCD (I:E ratio default 1:1 preset)
- FiO2: Read desired FiO2 (21-100%) value displayed on LCD
- PEEP: Push button switch; each push = 1 cmH2O
- Alarms: Set based on average Peak Inspiratory Pressure
- Low Alarm Limit: 5 cmH2O below spontaneous Peak Inspiratory Pressure
- High Alarm Limit: 10 cmH2O above Mechanical Breaths Peak Inspiratory Pressure
- Battery Life: 3 hours maximum using internal compressor; 12 hours using external gas source

Development of this document was conducted under the direction and oversight of Illinois Emergency Medical Services for Children and the Pediatric Work Group, Illinois Ternary Task Force. The development, printing, and distribution of this material tool has been supported through federal funding from the Assistant Secretary for Preparedness and Response (ASPR) Hospital Preparedness Grant.
Provides information about the needs of children that could assist with staff in a pediatric safe area:

- How children react to disaster and responders
- Physical and emotional needs based on their age group
- Tips for caring for and talking to children based on their age group
- Information on children with chronic medical/behavioral conditions
- Caring for unaccompanied children
- Tips for how to verify guardianship before releasing unaccompanied minors
Surge: Staffing Issues

- Pediatric staff
  - Review call rosters
  - Ensure access to translators
  - Identify staff who can address psychosocial needs
    - Child Life Specialists
    - Mental Health Professionals
    - Social Workers
    - Chaplains and Hospice Staff
    - Community Clergy
  - Identify other options for accessing staff in times of disasters
    - Illinois Helps
Are you prepared to handle deliveries and newborn care in a disaster?

2010 Haiti Earthquake
- Injured women in labor
- Premature labor
- Preeclampsia and eclampsia
- Most response teams were not prepared for healthy or sick newborns (except initially the Israeli teams)

Processes in place to address the needs of pregnant women and newborns (e.g. equipment, surge areas, care guidelines)
Surge: Newborn Equipment Needs

Healthy Newborn

- Eye treatment
- Umbilical cord care
- Identification bracelets/process
- Initial clothing
- Diapers
- Formula if mother too sick to breastfeed

Premature Newborn

- Same as the healthy ones
- Incubator
- Basic medications (i.e., Ampicillin/Gentamicin)
- IV pumps to deliver fluids and medications
- Small NG tubes for feeding
Decontamination

- **Water**
  - Low pressure/high volume water
  - Warmed water: >98°F and < 110°F (36.6°C - 43.3°C)
    - How temperature of water will be monitored during decon

- **Supplies**
  - Soft decon brushes
  - Small gowns/clothing

- **Warming devices/supplies**
  - At risk for hypothermia
Decontamination

- Process to safely transport/move children through decon shower system
  - Slippery
  - May be uncooperative due to fear

- Exercise/drill/training
  - Conducted decon exercise/drill/training within the last 12 months that has included pediatrics and method to decon infants/young children

Keep family unit together!
Reunification/Patient Tracking

- Identify methods for patient identification and tracking
  - Triage tags
  - Surgical marking pens/waterproof markers
  - Wrist/ankle bands
  - Camera with printer

- Develop protocol/process for reuniting/releasing children with parents/caregivers
  - Verification of guardianship

- Link with social services and community partners
  - National Center for Missing & Exploited Children
  - Local law enforcement
  - American Red Cross

- Reunification process tested in exercise/drill/training
Reunification/Patient Tracking: Identification Strategy

**BLUE** Marker - Lighter Skin Tone

**RED** Marker - Darker Skin Tone
Method to keep information about a child in one place

- Demographics
- Description of child
- Spot to post the child’s picture
- Who accompanied child
- Plans to reunify child with parent
- Medical treatment provided
- Disposition

Same form as in:

- Pediatric & Neonatal Surge Annex
- Burn Surge Annex
Personal Preparedness: Child ID Kits

- Put together a Child ID Kit
- Take photos of your children and update every 6 months
- Email digital photos of all family members to extended relatives and/or friends
- Photocopy important documents (e.g. birth certificate) and mail to a friend/relative in a distant location
- Give children identification info to carry with them

www.missingkids.com/publications/ChildIDKit

www.savethechildren.org/Connect
Security

☐ Keep families together

☐ Develop lock down or secure access procedures

☐ Test hospital infant/child abduction procedures within the last 12 months

☐ Unidentified/unaccompanied children
  ☐ Designate holding area/pediatric safe area
  ☐ Address security needs/staffing guidelines
  ☐ Address issues of verifying guardianship
Evacuation

- Ensure all staff are familiar with evacuation procedures designated evacuation routes
- Adequate supplies and equipment for evacuation
  - Pediatrics, nursery, med/surg unit that admits pediatric patients
- Predesignate evacuation staging areas that can be secured
  - Stockpiled supplies including resuscitation equipment
- Prepare unit specific evacuation plans for pediatric areas
  - ED, newborn nursery, pediatric unit, med/surg unit that admits pediatric patients
- Conduct unit specific evacuation exercises/drills/training
Mass Casualty Triage/JumpSTART

- **START** – Simple Triage and Rapid Treatment
  - Adult field mass casualty triage system
  - Assesses Respirations, Perfusion and Mental Status
  - Utilizes four triage categories

- **JumpSTART** (www.jumpstarttriage.com)
  - Tendency to over/under triage children using adult triage tools
  - Addresses physiologic/developmental differences
    - Young children not ambulatory
    - Age specific RR normally > 30/minute
    - Capillary refill subject to external influences
    - Mental status may be difficult to judge
    - Apneic children may still have pulse and may be salvageable
  - JumpSTART included in exercise/drill/training within the last 12 months
JumpSTART Mass-Casualty Training

- 3 hour workshop aimed at all healthcare professionals
- Developed out of a training module created by Lurie Children’s Hospital, Chicago
- ASPR Hospital Preparedness grant funds used to support multiple trainings annually
- Instructor and provider courses offered

- 23% of U.S. households have at least 1 child that meets criteria
- 15.1% of U.S. kids meet criteria
  - Illinois: 452,574 kids (14.3%)
- Examples of criteria:
  - Technology assisted i.e. ventilators, G-tubes, Shunts, Insulin Pumps
  - Developmentally Disabled
  - Chronic Diseases
  - Immunocompromised
  - Psychiatric/Behavioral Illnesses
- Disproportionately poor & socially disadvantaged
- Strong need for healthcare provider education & awareness
Children with Special Healthcare Needs (CSHCN)/ Children with Functional Access Needs (CFAN)

- Systems in place to handle CSHCN/CFAN during a disaster, especially for hospitals that typically transfer these children to pediatric specialty centers (e.g. MOUs to obtain extra medications, ventilators, care guidelines, etc.).
Children with Special Health Care Needs

- Listen to the caregivers. They know their child best. Inquire about:
  - child's baseline abilities
  - syndromes/diseases
  - devices & medications
  - usual vital signs
  - symptoms
  - what is different today
- Bring care plans or Emergency Information Forms (EIF) to the hospital with the patient.
- Assess and communicate directly with the child based on developmental age, not chronological age. DO NOT make assumptions about their level of understanding based on their appearance.
- Look for MedicAlert® jewelry or health forms, if usual caregiver is not available.
- Bring necessary specialized equipment and medications into the ED with the child if possible (ventilator, tracheostomy tube or gastrostomy tube, etc)
- Ask caregivers for the best way to move the child, particularly if the child is very prone to fractures, such as with osteogenesis imperfecta ('brittle bone disease'). If child suffers a fracture & has a brace or splint on the affected area, leave the brace or splint on & immobilize around it.
- Down Syndrome patients may have upper cervical instability and may be prone to spinal cord injury. Immobilization is important in any mechanism of injury in which there has been significant movement of the neck.
- Cardiac patients may have absent pulses in limbs, may be chronically hypoxic or have hypoxic spells. Confirm the baseline assessment with caregiver.

TECHNOLOGY-ASSISTED CHILDREN: Among Children with Special Health Care Needs is a growing sub-population of children with chronic illnesses who are dependent on medical devices. Several of the most common devices are summarized below with information to assist in the care of children with those devices.

TRACHEOSTOMY: Breathing tube into trachea through opening in neck
- Use: Respiratory problems — narrow or obstructed airways, bronchopulmonary dysplasia (chronic lung disease seen in premature babies), etc.
- Neurological or Neuromuscular conditions — brain damage, muscular dystrophy, etc.
- May be ventilator dependent totally, part of the time or may breathe on own
- Types: Uncuffed — infant & young child; Cuffed — older child (usually > age 1yr) & adolescent
- Fenestrated — hole in stem allows breathing through vocal cords to permit talking, or weaning off tracheostomy
- May be single tube or have inner cannula, which can be removed & cleaned

Assessment Issues: Evaluate for DOPE & Infection (tracheal or pulmonary). Recentness pulse/respiratory rates frequently.
- Displaced — total or partial removal of tube
- Obstructed — mucous plug, blood, foreign body; or moved against soft tissues
- Pulmonary problems — pneumonia, pneumothorax, pneumonia, reactive airway, aspiration
- Equipment — ventilator malfunction, oxygen depletion, tubing kinked

Treatment:
- If on ventilator, disconnect and attempt to oxygenate with bag using tracheostomy adaptor (if present) or infant mask over trach opening or stoma (hole in neck). Call ALS if available, especially if respiratory distress present.
  - If not on ventilator, administer oxygen with bag or infant mask over trach opening as needed. Call ALS as needed. No more than 10 sec. Insert no more than 3/4 length of neck
  - If unable to suction because of thick secretions, request caregiver to instill 2-3 ml saline, then suction
  - If inner cannula present, request that caregiver remove and clean with saline
  - If unable to ventilate, cover opening with gauze and ventilate with bag and mask over mouth & nose
- ALS:
  - If above does not work, may remove tube and either重新insert new tube or use endotracheal tube of same approximate size. If unable to find opening, may thread suction catheter through new tracheostomy tube or endotracheal tube and use catheter tip to probe opening, sliding tube over catheter into opening and then removing catheter.
  - Attempt to ventilate and check breath sounds.

NOTE: This reference card should not replace or supersede regional pediatric medical treatment protocols. Development and printing of this card has been supported in part by a federal grant from the Assistant Secretary for Preparedness & Response (ASPR), U.S. Department of Health & Human Services. This card was adapted from a document developed by New York State EMSG. Drawings are primarily by Susan Gilbert and are adapted from the Teaching Resources for Instructors in Prehospital Pediatrics (TRIP).

September 2007
Illinois EMSC  http://www.idhs.org/EMSC
# EMERGENCY INFORMATION FORM (EIF)

- Brief comprehensive medical summary
  - Information for pre-hospital and hospital & emergency care personnel
  - Formulated by care givers
  - Requires updating
  - Standardized content
  - 24 hour access
  - Mechanism to identify CSHCN needs

- EIF for Autistic Children

Available at: [http://www2.aap.org/advocacy/emergprep.htm](http://www2.aap.org/advocacy/emergprep.htm)
Pharmaceutical Preparedness

- Medication distribution plan or process
- Process outlined within plan for converting pills to liquid for:
  - Amoxicillin
  - Ciprofloxacin
  - Doxycycline
  - Tamiflu
- Access to medication instructions specific to children
Creating Liquid Amoxicillin

for infants and children exposed to a disease

How to Make Liquid Amoxicillin
400 mg per 5 mL (teaspoon)

You will need:
• Two (2) 500 mg amoxicillin capsules
• Something heavy to crush the contents of the capsule, such as a metal spoon
• Measuring teaspoon(s), regular eating teaspoon, medicine cup or medicine syringe
• Water and one of the following: sugar, flavored syrup, or fruit juice
• One (1) bowl or cup
• Two (2) spoons

Please read all instructions before you begin.

Step 1
Carefully pull apart two (2) 500 mg amoxicillin capsules.

Carefully empty contents into bowl. Use back of spoon to crush contents in a bowl.

Add two and one-half (2 1/2) teaspoons (12.5 mL) of water to the medicine powder.

Mix well until the powder dissolves and there is no more powder at the bottom of the bowl.

Amoxicillin Dosage Chart for Children

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Dose (teaspoon)</th>
<th>Dose (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 11 lbs</td>
<td>1/4 teaspoon</td>
<td>1.25 mL</td>
</tr>
<tr>
<td>11 lbs to 20 lbs</td>
<td>1/2 teaspoon</td>
<td>3 mL</td>
</tr>
<tr>
<td>20 lbs to 29 lbs</td>
<td>3/4 teaspoon</td>
<td>5 mL</td>
</tr>
<tr>
<td>29 lbs to 38 lbs</td>
<td>1 teaspoon</td>
<td>7.5 mL</td>
</tr>
<tr>
<td>38 lbs to 47 lbs</td>
<td>1 1/2 teaspoons</td>
<td>10 mL</td>
</tr>
<tr>
<td>47 lbs to 71 lbs</td>
<td>2 teaspoons</td>
<td>12.5 mL</td>
</tr>
<tr>
<td>71 lbs to 100 lbs</td>
<td>3 teaspoons</td>
<td>15 mL</td>
</tr>
<tr>
<td>More than 100 lbs</td>
<td>4 teaspoons</td>
<td>20 mL</td>
</tr>
</tbody>
</table>

*Dosage applicable to patients with normal renal function as defined by the CDC. Dosing range for patients 7 lbs - 19 lbs is from 75 mg to 125 mg (1/4 to 1/2 of a 250 mg capsule); for patients 20 lbs - 59 lbs is from 125 mg to 250 mg (1/2 to 1 teaspoon of a 250 mg capsule). Refer to the manufacturer's instructions for complete dosing information.

Dosage Chart
• You can find out how much medicine to give your child based on your child’s weight.
• Use this chart to find the amount for one (1) dose.
• Give this dose three (3) times a day - once in the morning, once in the afternoon, and once in the evening - for as many days as you are told to give this medication.

Dosage Chart
• You can find out how much medicine to give your child based on your child’s weight.
• Use this chart to find the amount for one (1) dose.
• Give this dose two (2) times a day - once in the morning and once in the evening - for as many days as you are told to give this medication.

Creating Liquid Ciprofloxacin

for infants and children exposed to a disease

How to Make Liquid Ciprofloxacin
125 mg per 5 mL (teaspoon)

You will need:
• One (1) 500 mg ciprofloxacin tablet
• Measuring teaspoon(s), regular eating teaspoon, medicine cup or medicine syringe
• One (1) small glass, bowl, or cup
• Water and one of the following: sugar, chocolate or flavored syrup, apple juice or apple sauce

Please read all instructions before you begin.

Step 1
Put four (4) teaspoons of room-temperature water into a small glass or bowl.

Put one (1) 500 mg ciprofloxacin tablet into the water and let it sit for five (5) minutes until the tablet breaks apart.

Mix well until the powder dissolves and there is no more powder left in the bottom.

Ciprofloxacin Dosage Chart for Children

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Dose (teaspoon)</th>
<th>Dose (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 7 lbs</td>
<td>1/4 teaspoon</td>
<td>1.25 mL</td>
</tr>
<tr>
<td>7 lbs to 13 lbs</td>
<td>1/2 teaspoon</td>
<td>3 mL</td>
</tr>
<tr>
<td>13 lbs to 19 lbs</td>
<td>3/4 teaspoon</td>
<td>5 mL</td>
</tr>
<tr>
<td>19 lbs to 26 lbs</td>
<td>1 teaspoon</td>
<td>7.5 mL</td>
</tr>
<tr>
<td>26 lbs to 40 lbs</td>
<td>1 1/2 teaspoons</td>
<td>10 mL</td>
</tr>
<tr>
<td>40 lbs to 55 lbs</td>
<td>2 teaspoons</td>
<td>12.5 mL</td>
</tr>
<tr>
<td>55 lbs to 70 lbs</td>
<td>3 teaspoons</td>
<td>15 mL</td>
</tr>
<tr>
<td>70 lbs to 90 lbs</td>
<td>4 teaspoons</td>
<td>20 mL</td>
</tr>
<tr>
<td>More than 90 lbs</td>
<td>5 teaspoons</td>
<td>25 mL</td>
</tr>
</tbody>
</table>

*Dosage applicable to patients with normal renal function as defined by the CDC. Dosing range for patients 7 lbs - 19 lbs is from 75 mg to 125 mg (1/4 to 1/2 of a 250 mg capsule); for patients 20 lbs - 59 lbs is from 125 mg to 250 mg (1/2 to 1 teaspoon of a 250 mg capsule). Refer to the manufacturer’s instructions for complete dosing information.

Dosage Chart
• You can find out how much medicine to give your child based on your child’s weight.
• Use this chart to find the amount for one (1) dose.
• Give this dose two (2) times a day - once in the morning and once in the evening - for as many days as you are told to give this medication.

Dosage Chart
• You can find out how much medicine to give your child based on your child’s weight.
• Use this chart to find the amount for one (1) dose.
• Give this dose two (2) times a day - once in the morning and once in the evening - for as many days as you are told to give this medication.
Creating Liquid Doxycycline for infants and children exposed to a disease

How to Make Liquid Doxycycline

25 mg per 5 mL (tspn.)

You will need:
- 1 (250 mg) doxycycline tablet
- Water and one of the following sugar, milk, chocolate or flavored syrup, apple juice or apple sauce

Directions

Step 1
- Put one (1) 100 mg doxycycline tablet into a small bowl. Crush into powder using the back of a metal spoon or the bottom of a cup or glass.
- You can also place the tablet in a plastic bag and crush it with something heavy like a hammer or rolling pin.
- The powder should not have any large pieces of medicine.
- Add four (4) teaspoons (60mL) of water into the medicine powder.
- Mix well until the powder dissolves and there is no more powder at the bottom of the bowl.

Step 2
- Weigh your child. Use your child’s weight to find the correct dosage on the chart below.

Dosage Chart

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Dosage (tspn.)</th>
<th>Dosage (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5</td>
<td>1/4 tspn.</td>
<td>1.25 mL</td>
</tr>
<tr>
<td>5 to 10</td>
<td>2/4 tspn.</td>
<td>3.1 mL</td>
</tr>
<tr>
<td>10 to 15</td>
<td>1 tspn.</td>
<td>5 mL</td>
</tr>
<tr>
<td>15 to 25</td>
<td>1 1/2 tspn.</td>
<td>7.5 mL</td>
</tr>
<tr>
<td>25 to 35</td>
<td>2 tspn.</td>
<td>10 mL</td>
</tr>
<tr>
<td>35 to 50</td>
<td>2 1/2 tspn.</td>
<td>12.5 mL</td>
</tr>
<tr>
<td>50 to 75</td>
<td>3 tspn.</td>
<td>15 mL</td>
</tr>
<tr>
<td>More than 75</td>
<td>3 1/2 tspn.</td>
<td>17.5 mL</td>
</tr>
</tbody>
</table>

* Dosage applicable for prophylaxis against infections, please and guidelines as referenced by the CDC. Dosage range for patients 7 days to 12 years: 1 tspn. = 25 mg/kg/day. Dosage range for infants 7 days to 2 months: 1 tspn. = 1.3 mg/kg/day.

Creating Liquid Tamiflu® for children during a Pandemic Flu

How to Make Liquid Tamiflu®

25 mg per 5 mL (tspn.)

You will need:
- 75 mg Tamiflu® capsule
- Water and one of the following sugar, chocolate or flavored syrup, flavored dessert toppings

Dosage Chart

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Dosage (tspn.)</th>
<th>Dosage (mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 12 lbs</td>
<td>1 tspn.</td>
<td>2.5 mL</td>
</tr>
<tr>
<td>12 to 23 lbs</td>
<td>2 tspn.</td>
<td>5 mL</td>
</tr>
<tr>
<td>23 to 35 lbs</td>
<td>2 1/2 tspn.</td>
<td>7.5 mL</td>
</tr>
<tr>
<td>35 to 55 lbs</td>
<td>3 tspn.</td>
<td>10 mL</td>
</tr>
<tr>
<td>More than 55 lbs</td>
<td>3 1/2 tspn.</td>
<td>12.5 mL</td>
</tr>
</tbody>
</table>

* Tamiflu® is only recommended for young children up to 6 months of age.

See reverse side for more directions.
Recovery

- Process to work with primary providers, social services, public health or other health services to provide screening, primary prevention and treatment for behavioral health for children and CSHCN
- Process to provide parents information resources to address needs of children after disaster
- Process to assist staff with self care/mental health needs after disaster
Exercises/Drills/Trainings

- Practice, Practice, Practice!!
  - Mock codes:
    - Utilize pediatric resuscitative equipment
    - Calculate and draw up dosages
Incorporate children of all ages and CSHCN into exercises/drills/trainings:

- Infants
- Toddlers
- School age children
- Adolescents
- Children with Special Healthcare Needs

Exercises/drills/trainings required for:

- Evacuation
- Surge
  - Include use of JumpSTART
  - Include reunification
- Decon
- Infant/child abduction
Possible sources for “victims” during drills:
- Local schools
- Employees’ children
- Boy scout/girl scout troops
- Manikins
- Dolls
- Paper victims (Flat Stanley)

Types of exercises/drills/trainings:
- Tabletop
- In-service
- Annual training/review
- Functional
- Full Scale
Addressing Identified Gaps During Site Survey

- **Improvement/Action Plan**
  - Address all identified gaps
  - Can be multi-year plan
  - Outline what, who, how and when for each gap

- **Exercise Plan**
  - Can be multi-year plan
  - Must be hospital specific
Disaster Preparedness Exercises Addressing the Pediatric Population

December 2006

Scenario 2: Incubator Resource

<table>
<thead>
<tr>
<th>Victim</th>
<th>Injury</th>
<th>Incident/Coronal</th>
<th>Mental Status</th>
<th>Other</th>
<th>Triage Tag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devy</td>
<td>9 mo</td>
<td>Capillary refill &gt; 2 seconds</td>
<td>Shaky, tremors</td>
<td>Stimulate or manipulate to establish consciousness</td>
<td>RED</td>
</tr>
<tr>
<td>Tori</td>
<td>9 mo</td>
<td>Capillary refill &gt; 2 seconds</td>
<td>Shaky, tremors</td>
<td>Stimulate or manipulate to establish consciousness</td>
<td>RED</td>
</tr>
<tr>
<td>Devy</td>
<td>9 mo</td>
<td>Capillary refill &gt; 2 seconds</td>
<td>Shaky, tremors</td>
<td>Stimulate or manipulate to establish consciousness</td>
<td>RED</td>
</tr>
<tr>
<td>Tori</td>
<td>9 mo</td>
<td>Capillary refill &gt; 2 seconds</td>
<td>Shaky, tremors</td>
<td>Stimulate or manipulate to establish consciousness</td>
<td>RED</td>
</tr>
<tr>
<td>Devy</td>
<td>9 mo</td>
<td>Capillary refill &gt; 2 seconds</td>
<td>Shaky, tremors</td>
<td>Stimulate or manipulate to establish consciousness</td>
<td>RED</td>
</tr>
<tr>
<td>Tori</td>
<td>9 mo</td>
<td>Capillary refill &gt; 2 seconds</td>
<td>Shaky, tremors</td>
<td>Stimulate or manipulate to establish consciousness</td>
<td>RED</td>
</tr>
</tbody>
</table>

Note: Triage tag assignments are listed here as a guide based on the information provided for each victim. START was used for new and revised victims, with equipment used for assessment and triage. Your disaster may incorporate additional information on each victim which may result in different tag assignments.

Resource

Undergoing Revisions
Pediatric Preparedness Resource Catalog

This catalog contains a pictorial listing of pediatric preparedness resources that have been developed and disseminated by Illinois EMSC through funding from the Assistant Secretary for Preparedness and Response (ASPR). Other key resources are also listed in this document that can assist in pediatric preparedness efforts.

Further information is available on the Illinois EMSC website at www.ilhhs.org/emsc (click on the Disaster Preparedness link).

Illinois Emergency Medical Services for Children

IDPH Illinois Department of Public Health Learning Resource

Loyola University Chicago
Resource

- Identifying and protecting displaced children
- Implementing Child ID Forms
- Psychosocial effects of disasters on Children
- Decontamination for the pediatric patient
- Legal considerations
- Other resources
Children in Disasters

Hospital Guidelines for Pediatric Preparedness

Created by:
Centers for Bioterrorism Preparedness Program Pediatric Task Force
NYC DOHMH Pediatric Disaster Advisory Group
NYC DOHMH Healthcare Emergency Preparedness Program

- Pediatric Decontamination
- Dietary Considerations
- Equipment Recommendations for EDs
- Family Information and Support Center
- Infection Control in a Large Scale Communicable Disease Emergencies
- Pharmaceutical Needs
- Psychosocial Considerations
- Security and Tracking of Pediatric Patients
- Staffing
- Surge Considerations
- Training
- Transporting Children during a Disaster
- Triage
- Other Resources
Resources

- Agency for Healthcare Research and Quality
  - Pediatric Hospital Surge Capacity in Public Health Emergencies
    - [archive.ahrq.gov/prep/pedhospital/](archive.ahrq.gov/prep/pedhospital/)

- American Red Cross
  - [www.redcross.org](www.redcross.org)

- National Center for Missing and Exploited Children
  - [www.missingkids.com](www.missingkids.com)

- NYC Department of Health
  - [www.fema.gov/kids](www.fema.gov/kids)

- FEMA for Kids
  - [www.sesameworkshop.org/initiatives/emotion/ready](www.sesameworkshop.org/initiatives/emotion/ready)

- Sesame Workshop
  - [www.sesameworkshop.org/initiatives/emotion/ready](www.sesameworkshop.org/initiatives/emotion/ready)

- American Academy of Pediatrics
  - [www.aap.org/disasters](www.aap.org/disasters)
Key Disaster Points

- Children may represent the majority or a significant percentage of victims during a disaster.
- Children have unique physiologic and psychosocial needs.
- Children are often forgotten when planning an emergency response or responding to a disaster.
- Newborns are very often not considered when preparing for a disaster.
- The specific needs of children of all ages should be met.

Guiding Principle: Assuring excellence of pediatric emergency care on a daily basis is the best preparedness for pediatric disaster care.
Facility Recognition Goal

To decrease childhood morbidity and mortality by ensuring the availability of appropriately trained personnel, along with appropriate emergency department resources and capabilities in order to effectively manage the critically ill and injured child.
Participation within Illinois

- 110 hospitals (~60%) recognized as a PCCC, EDAP or SEDP (represents > 90% of pediatric inpatient admissions in Illinois)

- Database created to assist with tracking
  - Facility Recognition status and history
  - Renewal application summary
  - Survey observations
  - Other

- List of recognized hospitals on Illinois EMSC & Illinois Department of Public Health websites
  - [www.luhs.org/emsc](http://www.luhs.org/emsc)
  - [www.idph.state.il.us](http://www.idph.state.il.us)
In 2014:

- Hospitals in Illinois with EDs = 185
- Total Pediatric ED Visits = 963,457
- Inpatient Admits via the ED = 28,541

- Recognized Hospitals = 110 (includes 3 out-of-state hospitals)
- Pediatric ED Visits = 767,229 (80% of total)
- Inpatient Admits via the ED = 27,071 (95% of total)
Renewal/Application Instructions

- Carefully review the application packet
- Obtain and review your previous PCCC/EDAP, EDAP/SEDP renewal application
- Review the PCCC/EDAP, EDAP and SEDP requirements
  - Some new requirements have been added
  - Revisions have been made in some requirements
- Revise policies/guidelines/scope of practice/etc accordingly to assure consistency with criteria
- Verify supplies/equipment/medications
- Using the Pediatric Renewal Plan Checklist, begin to pull together the required documentation
- NOTE: Development of the Pediatric Renewal Plan should be a multidisciplinary effort
**EDAP & SEDP Renewal Pediatric Plan Checklist**

**Instructions:**
- Complete an updated EDAP or SEDP Pediatric Plan for your facility using the guideline below and the EDAP criteria located on page 7 or the SEDP criteria located on page 11.
- Use the tabs provided by the EMSC office to organize your application.

For each requirement outlined below, select the response(s) as directed and attach supporting documentation.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit an organizational chart identifying the administrative relationships among all departments in the hospital, including the Emergency Department and Department of Pediatrics.</td>
<td>_____ Submissions required.</td>
</tr>
</tbody>
</table>
| Review the criteria in section 515.4000 a, 1 and 2 (page 7) or 515.4010 a, 1 and 2 (page 11), for the physician staff qualifications and continuing medical education and submit each of the below. | _____ Enclosed is a policy (s) that incorporates the physician qualifications and CME requirements.  
_____ Enclosed is a completed CREDENTIALS OF EMERGENCY DEPARTMENT PHYSICIANS Form.  
_____ Enclosed is the curriculum vitae for the ED Medical Director.  
_____ Enclosed is a current one-month physician schedule for the ED. |
| Review the criteria in section 515.4000 or 515.4010 a, 3, for the ED Physician coverage and submit one of the below. | _____ Enclosed is a previously approved policy. There are no changes.  
_____ Enclosed is a revised policy for approval. (Necessary if any ED physicians have a waiver). |
| Review the criteria in section 515.4000 or 515.4010 a, 4, for ED Consultation and submit the below. | _____ Enclosed is a one month on-call schedule identifying availability of board certified/board prepared pediatricians or pediatric emergency medicine physicians. |
| Review the criteria in section 515.4000 or 515.4010 a, 5, for ED Physician Back-up and submit one of the below. | _____ Enclosed is a previously approved policy. There are no changes.  
_____ Enclosed is a revised policy for approval. |
There needs to be submission of formal documents that incorporate the criteria requirements, i.e., policies, procedures, scope of practice/care, bylaws, etc.

Use the provided nursing, physician and mid-level practitioner credentialing forms

- Site survey teams may request additional CE information, so assure tracking mechanisms and back-up documentation is available
- Illinois EMSC has developed an electronic continuing education tracking resource tool
  - PC and network versions along with instructional guidelines available per Dan Leonard at dleonar@luc.edu
What You Need to Submit

The original signed *Request for Re-recognition of PCCC/EDAP, EDAP or SEDP* form and the Pediatric Plan comprised of:

- Completed PCCC/EDAP, EDAP or SEDP Pediatric Plan Checklist
- Supporting documentation (follow checklist format)
- Completed Physician, Mid-Level Provider, Nursing credentialing forms
- Completed PCCC, EDAP or SEDP equipment checklists
- Completed Pediatric Hospital Preparedness Checklist
What You Need to Submit

- Number of copies to submit for renewal
  - 1 original copy (with tabbed page dividers)
  - 3 additional copies

- Submit single-sided format and unstapled.

- Maintain a copy for your files (with tabbed page dividers)

- Confirm the application due date

- Mail the above copies to the IDPH Springfield office by the due date noted on the application

- NOTE: If there are dates that you would like us to avoid when scheduling your site survey - include a memo in your application or send an email to Evelyn.Lyons@illinois.gov. We will try to avoid those date(s).
Renewal/Application Tips

- Forms are available electronically on the EMSC website – [www.luhs.org/emsc](http://www.luhs.org/emsc). Click on the Facility Recognition link
  - Credentialing forms and equipment checklist
  - Physician and Nurse Practitioner waiver application form and information

- Equipment/supply waivers must be submitted in a letter format and identify how waiver will not result in any compromise in care. A waiver for an equipment/supply item should identify:
  - The item requested for waiver
  - Where the item is currently stored
  - How easily/quickly the item can be accessed in an emergency situation
  - Identify how care will not be compromised or harm occur by not having item located in the ED

Do not hesitate to contact EMSC for any questions
Ongoing/Future Plans

- Continue emphasis on Pediatric Quality Improvement
- Integrate pediatrics further into disaster preparedness planning
- Ongoing renewal of PCCC/EDAP, EDAP and SEDP status every four years
- Ongoing process and outcome evaluation of facility recognition program
**Resources**

- **Technical assistance with Facility Recognition requirements and renewal process**
  - Paula Atteberry: 217-785-2083 or Paula.Atteberry@illinois.gov
  - Evelyn Lyons: 708-327-2556 or Evelyn.Lyons@illinois.gov

- **Pediatric education/quality improvement (QI) resources**
  - Dan Leonard: 309-451-1763 or dleonar@luc.edu
  - Christine Swain: 708-327-2717 or cswain2@luc.edu

- **Data resources**
  - Dan Leonard: 309-451-1763 or dleonar@luc.edu
  - Ruth Kafensztok: 708-327-9019 or rkafens@luc.edu

- **Pediatric disaster preparedness resources**
  - Laura Prestidge: 708-327-2558 or lprestidge@luc.edu

- **National EMSC website**
  - www.childrensnational.org/emsc

- **Illinois EMSC website**
  - www.luhs.org/emsc

- **Illinois Department of Public Health website**
  - www.idph.state.il.us
Remember: PCCC/EDAP/SEDP renewal is a team effort!
Pediatric Facility Recognition

SUCCESS IS LIKE AN ICEBERG

SUCCESS

People see this.

What really happens.

Risks, Hard Work, Late Nights, Struggles, Failures, Persistence, Action, Discipline, Courage, Breaking Habits, Creating Habits, Practicing Till it Hurts, Early Mornings, Doubts, Changes, Criticism, Disappointments, Adversity, Pushing Past Comfort Zone, Rejections, Losses, Sacrifices