Guidelines for Care of Children in the Emergency Department

This checklist is based on the American Academy of Pediatrics, the American College of Emergency Physicians, and the Emergency Nurses Association 2009 joint policy statement “Guidelines for Care of Children in the Emergency Department,” which can be found online at http://aappolicy.aappublications.org/cgi/reprint/pediatrics;124/4/1233.pdf. Use the checklist to determine if your emergency department (ED) is prepared to care for children.

<table>
<thead>
<tr>
<th>Appointed Pediatric Physician and Nurse Coordinator</th>
<th>Guidelines for QI/PI in the ED, Continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Pediatric physician coordinator is a specialist in pediatrics, emergency medicine, or family medicine, appointed by the ED medical director, who through training, clinical experience, or focused continuing medical education demonstrates competence in the care of children in emergency settings including resuscitation. See policy statement for details.</td>
<td>- Clinical and Professional Competency</td>
</tr>
<tr>
<td>- Pediatric Nurse coordinator is a registered nurse (RN), appointed by the ED nursing director, who possesses special interest, knowledge, and skill in the emergency medical care of children. See policy statement for details.</td>
<td>- Below are the potential areas for the development of pediatric competency and professional evaluations.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Physicians, Nurses and Other Healthcare Providers Who Staff the ED</th>
<th>Guidelines for Improving Pediatric Patient Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Physicians who staff the ED have the necessary skill, knowledge, and training in the emergency evaluation and treatment of children of all ages who may be brought to the ED, consistent with the services provided by the hospital.</td>
<td>- The delivery of pediatric care should reflect an awareness of unique pediatric patient safety concerns and are included in the following policies or practices.</td>
</tr>
<tr>
<td>- Nurses and other ED health care providers have the necessary skill, knowledge, and training in providing emergency care to children of all ages who may be brought to the ED, consistent with the services offered by the hospital.</td>
<td>- Children are weighed in kilograms.</td>
</tr>
<tr>
<td>- Baseline and periodic competency evaluations completed for all ED clinical staff, including physicians, are age specific and include evaluation of skills related to neonates, infants, children, adolescents, and children with special health care needs. Competencies are determined by each institution’s medical staff privileges policy.</td>
<td>- Weights are recorded in a prominent place on the medical record.</td>
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</tbody>
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<th>Guidelines for QI/PI in the ED</th>
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<td>- The pediatric patient care-review process is integrated into the ED QI/PI plan.</td>
<td>- For children who are not weighed, a standard method for estimating weight in kilograms is used (e.g., a length-based system).</td>
</tr>
<tr>
<td>- Components of the process interface with out-of-hospital, ED, trauma, inpatient pediatric, pediatric critical care, and hospital-wide QI or PI activities.</td>
<td>- Infants and children have a full set vital signs recorded (temperature, heart rate, respiratory rate) in the medical record.</td>
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<tr>
<td>- Blood pressure and pulse oximetry monitoring are available for children of all ages on the basis of illness and injury severity.</td>
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Produced by the AAP, the EMSC National Resource Center, and Children’s National Medical Center
Guidelines for ED Policies, Procedures, and Protocol

Policies, procedures, and protocols for the emergency care of children should be developed and implemented in the areas listed below. These policies may be integrated into overall ED policies as long as pediatric specific issues are addressed.

- Illness and injury triage
- Pediatric patient assessment and reassessment
- Documentation of pediatric vital signs and actions to be taken for abnormal vital signs
- Immunization assessment and management of the under-immunized patient
- Sedation and analgesia for procedures, including medical imaging
- Consent including when parent or legal guardian is not immediately available
- Social and mental health issues
- Physical or chemical restraint of patients
- Child maltreatment and domestic violence reporting criteria, requirements, and processes.
- Death of the child in the ED
- Do not resuscitate (DNR) orders
- Families are involved in patient decision-making and medication safety processes
- Family presence during all aspects of emergency care
- Patient, family, and caregiver education
- Discharge planning and instruction
- Bereavement counseling
- Communication with the patient’s medical home or primary care provider
- Medical imaging policies that address pediatric age- or weight-based appropriate dosing for studies that impart radiation consistent with ALARA (as low as reasonably achievable) principles.
- All-hazard disaster-preparedness plan that addresses the following pediatric issues:
  - Availability of medications, vaccines, equipment, and trained providers for children
  - Pediatric surge capacity for injured and non-injured children
  - Decontamination, isolation, and quarantine of families and children
  - Minimization of parent-child separation (includes pediatric patient tracking, and timely reunification of separated children with their family)
  - Access to specific medical and mental health therapies, and social services for children
  - Disaster drills which includes a pediatric mass casualty incident at least every 2 years
  - Care of children with special health care needs
  - Evacuation of pediatric units and pediatric subspecialty units.

Guidelines for ED Support Services

- Radiology capability must meet the needs of the children in the community served
- A process for referring children to appropriate facilities for radiological procedures that exceed the capability of the hospital is established.
- A process for timely review, interpretation, and reporting of medical imaging by a qualified radiologist is established.
- Laboratory capability must meet the needs of the children in the community served, including techniques for small sample sizes
- A process for referring children or their specimens to appropriate facilities for laboratory studies that exceed the capability of the hospital is established.
Pediatric equipment, supplies, and medications are appropriate for children of all ages and sizes, easily accessible, clearly labeled, and logically organized. See list below for the medication, equipment, and supplies. ED staff is educated on the location of all items. Daily method in place to verify the proper location and function of equipment and supplies.

**Guidelines for Equipment, Supplies, and Medications for the Care of Pediatric Patients in the ED**

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### Medications
- Atropine
- Adenosine
- Amiodarone
- Antiemetic agents
- Calcium chloride
- Dextrose (D10W, D50W)
- Epinephrine (1:1000; 1:10 000 solutions)
- Lidocaine
- Magnesium sulfate
- Naloxone hydrochloride
- Procaainamide
- Sodium bicarbonate (4.2%, 8.4%)
- Activated charcoal
- Topical, oral, and parenteral analgesics
- Antimicrobial agents (parenteral and oral)
- Anticonvulsant medications
- Antidotes (common antidotes should be accessible to the ED)
- Antipyretic drugs
- Bronchodilators
- Corticosteroids
- Inotropic agents
- Neuromuscular blockers
- Sedatives
- Vaccines
- Vasopressor agents
- Antiemetic agents
- Calcium chloride
- Dextrose (D10W, D50W)
- Epinephrine (1:1000; 1:10 000 solutions)
- Lidocaine
- Magnesium sulfate (4.2%, 8.4%)
- Activated charcoal

### Equipment/Supplies: General Equipment
- Patient warming device
- Intravenous blood/fluid warmer
- Restraint device
- Weight scale in kilograms (not pounds)
- Tool or chart that incorporates weight (in kilograms) and length to determine equipment size and correct drug dosing
- Age appropriate pain scale-assessment tools

### Equipment/Supplies: Monitoring Equipment
- Blood pressure cuffs
  - Neonatal
  - Infant
  - Child
  - Adult-arm
  - Adult-thigh
- Doppler ultrasonography devices
- Electrocardiography monitor/defibrillator with pediatric and adult capabilities including paddles/paddles
- Hypothermia thermometer
- Pulse oximeter with pediatric and adult probes
- Continuous end-tidal CO2 monitoring device

### Equipment/Supplies: Vascular Access Supplies
- Arm boards
  - Infant
  - Child
  - Adult
- Catheter-over-the-needle device
  - 14 gauge
  - 15 gauge
  - 16 gauge
  - 17 gauge
  - 18 gauge
  - 19 gauge
  - 20 gauge
  - 21 gauge
  - 22 gauge
  - 23 gauge
  - 24 gauge
- IV administration sets
  - with calibrated chambers and extension tubing and/or infusion devices with ability to regulate rate and volume of infusate
  - Umbilical vein catheters
    - 3.5F
    - 5.0F
- Central venous catheters
  - 4.0F
  - 5.0F
  - 6.0F
  - 7.0F
- Intravenous solutions
  - Normal saline
  - Dextrose 5% in normal saline
  - Dextrose 10% in water

### Equipment/Supplies: Fracture-Management Devices
- Extremity splints
  - Femur splints, pediatric sizes
  - Femur splints, adult sizes
- Spine-stabilization devices appropriate for children of all ages
### Equipment/Supplies: Respiratory

<table>
<thead>
<tr>
<th>Endotracheal tubes</th>
<th>Oropharyngeal airways</th>
<th>Tracheostomy tubes</th>
</tr>
</thead>
<tbody>
<tr>
<td>uncuffed 2.5 mm</td>
<td>size 0</td>
<td>2.5 mm</td>
</tr>
<tr>
<td>uncuffed 3.0 mm</td>
<td>size 1</td>
<td>3.0 mm</td>
</tr>
<tr>
<td>cuffed or uncuffed 3.5 mm</td>
<td>size 2</td>
<td>3.5 mm</td>
</tr>
<tr>
<td>cuffed or uncuffed 4.0 mm</td>
<td>size 3</td>
<td>4.0 mm</td>
</tr>
<tr>
<td>cuffed or uncuffed 4.5 mm</td>
<td>size 4</td>
<td>4.5 mm</td>
</tr>
<tr>
<td>cuffed or uncuffed 5.0 mm</td>
<td>size 5</td>
<td>5.0 mm</td>
</tr>
<tr>
<td>cuffed or uncuffed 5.5 mm</td>
<td></td>
<td>5.5 mm</td>
</tr>
</tbody>
</table>

**Feeding tubes**
- 5F
- 8F

**Laryngoscope blades**
- straight: 0
- straight: 1
- straight: 2
- straight: 3
- curved: 2
- curved: 3

**Magill forceps**
- pediatric
- adult

**Nasopharyngeal airways**
- infant
- child
- adult

**Suction catheters**
- infant
- child
- adult

### Equipment/Supplies: Respiratory, Continued

<table>
<thead>
<tr>
<th>Nasogastric tubes:</th>
<th>Clear oxygen masks:</th>
<th>Laryngeal mask airway</th>
</tr>
</thead>
<tbody>
<tr>
<td>infant, 8F</td>
<td>standard infant</td>
<td>size: 1</td>
</tr>
<tr>
<td>child, 10F</td>
<td>standard child</td>
<td>size: 1.5</td>
</tr>
<tr>
<td>adult, 14-18F</td>
<td>partial nonrebreather</td>
<td>size: 2</td>
</tr>
<tr>
<td></td>
<td>infant</td>
<td>size: 2.5</td>
</tr>
<tr>
<td></td>
<td>nonrebreather child</td>
<td>size: 3</td>
</tr>
<tr>
<td></td>
<td>nonrebreather adult</td>
<td>size: 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>size: 5</td>
</tr>
</tbody>
</table>

**Nasal cannulas**
- infant
- child
- adult

**Lumbar-puncture tray**
- (including infant 22 gauge, pediatric –22 gauge, and adult 18-21 gauge), lumbar puncture needles

**Supplies/kit for patients with difficult airway**
- (supraglottic airways of all sizes, laryngeal mask airway, needle cricothyrotomy supplies, surgical cricothyrotomy kit)

**Tube thoracostomy tray**

**Chest tubes to include**
- infant: 10-12F
- child: 16-24 F
- adult: 28-40 F

**Newborn delivery kit**
- including equipment for resuscitation of an infant (umbilical clamp, scissors, bulb syringe, and towel)

**Urinary catheterization kits and urinary (indwelling) catheters**
- (6F–22F)