

Pediatric Ready Hospital Recognition

Basic Level Criteria

South Carolina DHEC EMS for Children

Administration and Coordination of Care

- Physician Champion for Pediatric Emergency Care
 - A physician specialist in emergency medicine or pediatric emergency medicine.
 - If a Physician Champion in these specialties is not available, a specialist in pediatrics or family medicine, appointed by the ED medical director, who through training, clinical experience, or focused continuing medical education (4 hours of Pediatric CME annually) demonstrates competence in the care of children in emergency settings, including resuscitation, may act as Physician Champion.
 - Up to two facilities may use the same champion provided they participate in staffing at both facilities.
- Nursing Coordinator for Pediatric Emergency Care
 - A registered nurse, appointed by the ED nursing director/manager, who possesses special interest knowledge, and skill in the emergency care of children.
 - The coordinator must be PALS and ENPC certified.
 - They must obtain at least 4 hours of CEUs annually and be engaged in regional activities.
 - Certified pediatric emergency nurse and/or certified emergency nurse board certifications are highly desirable.

Hospital administration, physician champion and nursing coordinator are responsible for ensuring facility meets all pediatric readiness criteria.

Physicians, Nurses and Other Healthcare Providers who staff the ED

- Physicians who staff the ED have the necessary skills, 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 offered by the hospital. Non EM/PEM boarded physicians must be current in PALS.
- Nurses and other ED health care providers (to include: RN, RT, Rad Tech, EMT, Paramedics, Nurse Techs, and Advanced Practitioners) 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.
 - RN: PALS required within 12 months of hire and ENPC desired
 - RT and PharmD: PALS desired
- Baseline and periodic competency evaluations completed for all clinical staff, including physicians, are age specific and include evaluation of skills related to neonates, infants, children, adolescents, and children with special care needs. (Competencies are determined by each institution's medical and nursing staff privileges policy.)
- Areas for pediatric competency may include (but not limited to):
 - assessment and treatment, including the following:
 - (a) triage (b) illness and injury assessment and management (c) pain assessment and treatment, including nonpharmacologic pain management (eg, distraction techniques and comfort holds)
 - medication administration and delivery
 - device and/or equipment safety (eg, low-volume infusion pumps)
 - procedures, including the following:
 - (a) airway management (b) vascular access (c) sedation and analgesia
 - resuscitation, including the following:
 - (a) critical care monitoring, (b) neonatal resuscitation, and (c) pediatric resuscitation
 - trauma resuscitation and stabilization, including the following:
 - (a) burn management, (b) traumatic brain injury, (c) fracture management, (d) hemorrhage control, and (e) recognition and reporting of nonaccidental trauma;
 - disaster drills that include a triage of pediatric victims, the tracking and identification of unaccompanied children, family reunification, and the determination of pediatric surge capacity
 - patient- and family-centered care, including cultural competency
 - team training and effective communication, including the following:
 - (a) transitions of care and/or handoffs and (b) closed-loop communication.

Quality or Performance Improvement

- The ED QI/PI plan must include pediatric specific indicators.
- The pediatric patient care-review process is integrated into the ED QI/PI plan. Components of the process interface with out-of-hospital, ED, trauma, inpatient pediatric, pediatric critical care, and hospital-wide QI or PI activities (if applicable).
- Primary Review between Physician Champion and Nursing Coordinator. Should be elevated as needed and outlined by facility quality plan.
- Required Indicators
 - Deaths and cardiac/respiratory arrest cases
- Recommended additional indicators (choose at least 2-3)
 - Pediatric Medication Errors
 - Transfer Out
 - Any critical care event, code, or arrest
 - Children <2 years of age with injuries
 - Non-accidental Trauma
 - Any hospital reviewed case
 - Imaging Misreads
 - Additional indicators as needed

Policies, Protocols, Procedures and Guidelines

The delivery of pediatric care should reflect an awareness of unique pediatric patient **safety concerns** and are included in the following policies and procedures. The following issues should be addressed in a facility or emergency department policy, procedure, protocol or guideline.

- Children must be weighed only in kilograms and recorded in a prominent place in the medical record.
- For children who are not weighed, a standard method for estimating weight in kg is used.
- Infants and children must have temperature, heart rate, and respiratory rate captured in the medical record.
- Blood pressure and pulse oximetry monitoring are available for children of all ages, on the basis of illness and injury severity.
- A process for identifying age-specific abnormal VS and notifying the physician of these, if present.
- Pediatric emergency services are culturally and linguistically appropriate.
- Infection-control practices, including hand hygiene and use of personal protective equipment are implemented and monitored.
- ED environment is safe for children and supports patient-and-family-centered care.
- Patient identification policies meet accreditation standards.
- Policies for the timely reporting and evaluation of patient safety events, medical errors, and unanticipated outcomes are implemented and monitored.

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- Processes in place for safe medication storage, prescribing, and delivery that includes pre-calculated dosing guidelines for children of all ages.
- Create a standard formulary for pediatric high-risk and commonly used medications
- Standardize concentrations of high-risk medications
- Reduce the number of available concentrations to the smallest possible number
- For facilities with computerized physician order entry: implement clinical decision support with pediatric-specific, kilogram-only dosing rules, including upper dosing limits, within ED information systems

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- Illness and Injury triage with standards for timeliness of reassessment.
- 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, including medical imaging.
- Consent, including when parent or legal guardian is not immediately available.
- Social and mental health issue screening.
- Physical or Chemical restraint of patients.
- Child maltreatment and domestic violence reporting criteria, requirements, and processes.
- Death of the child in the ED.
- Family-centered care to include; Family involvement 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; and bereavement counseling.

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- Communication with the patient's medical home or primary care provider.
- Medical imaging, specifically policies that address pediatric age- or weight-based appropriate dosing for studies that impart radiation consistent with ALARA (as low as reasonably achievable) principles.
- Inter-facility transfer plan.
- Pediatric pain assessments with developmentally appropriate scale.
- Administration of blood products in pediatric patients.
- Radiology capability must meet the needs of the children in the community served. Specifically:
 - An established process for referring children to appropriate facilities for radiological procedures that exceed the capability of the hospital.
 - An established process for timely review, interpretation, and reporting of medical imaging by a qualified radiologist.
- Laboratory capability must meet the needs of the children in the community served, including techniques for small sample sizes. Specifically:
 - An established process for referring children or their specimens to appropriate facilities for laboratory studies that exceed the capability of the hospital.

Policies, Protocols, Procedures and Guidelines

- Policies, procedures, and protocols should also be developed and implemented for **all-hazard disaster-preparedness**. The plan should address the following preparedness issues
 - Availability of appropriate medications, vaccines, equipment, and trained providers for disaster situations involving children.
 - Pediatric surge capacity for injured and non-injured children.
 - Decontamination, isolation, and quarantine of families and children.
 - Minimization of parent-child separation (to include pediatric patient tracking and timely reunification of separated children with their families).
 - Access or referral to specific medical and mental health therapies, and social services for children.
 - Disaster exercises which include a pediatric mass casualty incident at least every two years to include nonverbal and non-ambulatory children.
 - Care of children with special health care needs.
 - Evacuation of pediatric units and pediatric subspecialty units (if applicable).

Sample Performance Improvement Measures for Pediatric Emergency Care

- Patient Triage
 - Infrastructure and personnel
 - Patient-centered care
 - ED Flow
 - Pain management
 - Quality and safety
 - Trauma
 - Respiratory diseases
- Measurement of wt in kg for pediatric patients; method to identify age-based abnormal vital signs
 - Presence of all recommended pediatric equipment in the ED; presence of physician and nurse coordinators for pediatric emergency care
 - Patient and/or caregiver understanding of discharge instructions
 - Door to provider time; total LOS
 - Pain assessment and reassessment for children with acute fractures
 - Number of return visits within 48h resulting in hospitalization; medication error rates
 - Use of head CT in children with minor head trauma; protocol for suspected child maltreatment
 - Administration of systemic steroids for pediatric asthma exacerbation; use of an evidence-based guideline to manage bronchiolitis

Equipment - General

- Patient warming method
- Intravenous blood/fluid warmer
- Weight scale locked in kilograms (not pounds)
- Oral medication syringe
- Tool or chart that incorporates weight (in kg) and length to determine equipment size and correct drug dosing
- Age appropriate pain scale-assessment tools

Equipment - Specialized

- Lumbar puncture tray (including infant/
- Pediatric 22 gauge and adult 18-21 gauge needles
- Supplies/kit for patients with difficult airway
- Tube thoracostomy tray
- Chest tubes:
 - Infant
 - Child
 - Adult
- Newborn delivery kit, including equipment for resuscitation of an infant (umbilical clamp, scissors, bulb syringe, and towel)
- Extremity splints
 - Femur splints, pediatric sizes
 - Femur splints, adult sizes
 - Spine-stabilization devices appropriate for children of all ages

Equipment - Monitoring

- Blood pressure cuffs:
 - Neonatal
 - Infant
 - Child
 - Adult-arm
 - Adult-thigh
- Doppler ultrasonography devices
- Electrocardiography monitor/defibrillator with pediatric and adult capabilities including pads/paddles
- hypothermia thermometer
- Pulse oximetry with pediatric and adult probes
- Continuous end-tidal CO₂ monitoring device

Equipment – Respiratory Supplies

- Endotracheal tubes
 - Uncuffed 2.5mm
 - Uncuffed 3.0mm
 - Cuffed or uncuffed 3.5mm
 - Cuffed or uncuffed 4.0mm
 - Cuffed or uncuffed 4.5mm
 - Cuffed or uncuffed 5.0mm
 - Cuffed or uncuffed 5.5mm
 - Cuffed 6.0mm
 - Cuffed 6.5mm
 - Cuffed 7.0mm
 - Cuffed 7.5mm
 - Cuffed 8.0mm
- Stylets for endotracheal tubes
 - Pediatric
 - Adult
 - ETT introducer
- Feeding tubes
 - 5F
 - 8F
- Laryngoscope blades
 - Straight: 0
 - Straight: 1
 - Straight: 2
 - Straight: 3
 - Straight: 4
 - Curved: 1
 - Curved: 2
 - Curved: 3
 - Curved: 4
- Laryngoscope handle
- Magill forceps
 - Pediatric
 - Adult
- Nasopharyngeal airways
 - Infant
 - Child
 - Adult
- Oropharyngeal airways
 - Infant
 - Child
 - Adult

Equipment – Respiratory Supplies

- Suction catheters
 - Infant
 - Child
 - Adult
- Rigid suction tip
- Bag-mask device, self-inflating
 - Pediatric: 750ml
 - Adult: 1000ml
- Masks to fit bag-mask device adaptor
 - Neonatal
 - Infant
 - Child
 - Adult
- Nasogastric tubes
 - Infant
 - Child
 - Adult
- Clear oxygen masks
 - Standard infant
 - Standard child
 - Standard adult
 - Nonrebreather child
 - Nonrebreather adult
- Nasal cannulas
 - Infant
 - Child
 - Adult
- Nebulizer Masks
 - Pediatric
 - Adult
- Blind insertion airway device
 - Infant
 - Child
 - Adult
 - Large adult
- CO2 colorimetric detector
 - Pediatric
 - Adult

Medications

- Atropine
- Adenosine
- amiodarone
- Antiemetic agents
- Calcium chloride
- Dextrose (D10W, D50W)
- Epinephrine (1:1,000; 1:10,000 solutions)
- Lidocaine
- Magnesium sulfate
- Naloxone hydrochloride
- Sodium bicarbonate (4.2%, 8.4%)
- 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

Examples of Pediatric Emergency Care PI Activities and Resources

- Clinical ED Registry (<https://www.acep.org/cedr/>)
- Committee on Quality Transformation, Section on Emergency Medicine (<https://www.aap.org/en-us/about-the-aap/CommitteesCouncils-Sections/Section-on-EmergencyMedicine/Pages/About-Us.aspx>)
- EMSC Innovation and Improvement Center (<https://emscimprovement.center>)
- ENA (<https://www.ena.org/#practiceresources>)
- Education in QI for Pediatric Practice (<https://eqipp.aap.org/>)
- The National Pediatric Readiness Assessment (<https://www.pedsready.org>)
- PediaLink: The AAP Online Learning Center (<https://pedialink.aap.org/visitor>)
- Pediatric Readiness Toolkit (www.pediatricreadiness.org)
- Pediatric Trauma Society (<http://pediatrictraumasociety.org/>)
- Interfacility Tool Kit for the Pediatric Patient (<http://www.traumanurses.org/inter-facilitytool-kit-for-the-pediatric-patient>)
- Pediatric TQIP (<https://www.facs.org/qualityprograms/trauma/tqip/pediatric-tqip>)
- PECARN guidelines (<http://www.pecarn.org>)