Pediatric Readiness in the Emergency Department

This checklist is based on the American Academy of Pediatrics (AAP), American College of Emergency Physicians (ACEP), and Emergency Nurses Association (ENA) 2018 joint policy statement "Pediatric Readiness in the Emergency Department," which can be found online at: https://pediatrics.aappublications.org/content/pediatrics/142/5/e20182459.full.pdf. Use this tool to check if your hospital emergency department (ED) has the most critical components listed in this joint policy statement.

Administration and Coordination of the ED for the Care of Children

- ☐ Physician Coordinator for Pediatric Emergency Care (PECC)*
  - Board certified/eligible in EM or PEM (preferred but not required for resource limited hospitals)
  - The Physician PECC is not board certified in EM or PEM but meets the qualifications for credentialing by the hospital as an emergency clinician specialist with special training and experience in the evaluation and management of the critically ill child.
- ☐ Nurse Coordinator for Pediatric Emergency Care (PECC)*
  - CPEN/CEN (*preferred*)
  - Other credentials (e.g. CPN, CCRN)

**An Advanced Practice Provider may serve in either of these roles. Please see the guidelines/ toolkit for further definition of the role(s).*

Physicians, Advanced Practice Providers (APPs), Nurses, and Other ED Healthcare Providers

- ☐ Healthcare providers who staff the ED have periodic pediatric-specific competency evaluations for children of all ages. Areas of pediatric competencies include any/all of the following:
  - Assessment and treatment (e.g. triage)
  - Medication administration
  - Device/equipment safety
  - Critical procedures
  - Resuscitation
  - Trauma resuscitation and stabilization
  - Disaster drills that include children
  - Patient and family-centered care
  - Team training and effective communication

Guidelines for QI/PI in the ED

- ☐ The QI/PI plan includes pediatric-specific indicators
  - Data are collected and analyzed
  - System changes are implemented based on performance
  - System performance is monitored over time

Please see the guidelines / toolkit for additional details

ED Policies, Procedures, and Protocols

Policies, procedures, and protocols for the emergency care of children. (*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
- ☐ Identification and notification of the responsible provider of abnormal pediatric 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 behavioral health issues
- ☐ Physical or chemical restraint of patients
- ☐ Child maltreatment reporting and assessment
- ☐ Death of the child in the ED
- ☐ Do not resuscitate (DNR) orders
- ☐ Children with special health care needs
- ☐ Family and guardian presence during all aspects of emergency care, including resuscitation
- ☐ Patient, family, guardian, and caregiver education
- ☐ Discharge planning and instruction
- ☐ Bereavement counseling
- ☐ Communication with the patient's medical home or primary care provider as needed.
- ☐ Telehealth and telecommunications

All-Hazard Disaster Preparedness

The written all-hazard disaster-preparedness plan addresses pediatric-specific needs within the core domains including:

- ☐ Medications, vaccines, equipment, supplies and trained providers for children in disasters
- ☐ Pediatric surge capacity for injured and non-injured children
- ☐ Decontamination, isolation, and quarantine of families and children of all ages
- ☐ Minimization of parent-child separation
- ☐ Tracking and reunification for children and families
- ☐ Access to specific behavioral health therapies, and social services for children
- ☐ Disaster drills include a pediatric mass casualty incident at least every two years
- ☐ Care of children with special health care needs

Evidence-Based Guidelines

- ☐ Evidence-based clinical pathways, order sets or decision support available to providers in real time

Inter-facility Transfers

- ☐ Written pediatric inter-facility transfer agreements
- ☐ Written pediatric inter-facility transfer guidelines. These may include:
  - Criteria for transfers (e.g. specialty services)
  - Criteria for selection of appropriate transport service
  - Process for initiation of transfer
  - Plan for transfer of patient information
  - Integration of family-centered care
  - Integration of telehealth/telecommunications

Guidelines for Improving Pediatric Patient Safety

Pediatric patient and medication safety needs are addressed in the following ways:

- ☐ Children are weighed in kilograms only
- ☐ Weights are recorded in kilograms only
- ☐ For children who require emergency stabilization, a standard method for estimating weight in kilograms is used (e.g., a length-based system)
- ☐ Infants and children have a full set of vital signs recorded
  - A full set of vital signs includes temperature, heart rate, respiratory rate, pulse oximetry, blood pressure, pain, and mental status when indicated in the medical record.
- ☐ CO2 monitoring for children of all ages
- ☐ Process for safe medication delivery that includes:
  - Prescribing
  - Administration
  - Disposal
- ☐ Pre-calcuated drug dosing and formulation guides
- ☐ 24/7 access to interpreter services in the ED
- ☐ Timely tracking and reporting of patient safety events

Guidelines for ED Support Services

- ☐ Medical imaging capabilities and protocols address age- or weight-appropriate dose reductions for children.
- ☐ All efforts made to transfer completed images when a patient is transferred from one facility to another.
- ☐ Collaboration with radiology, laboratory and other ED support services to ensure the needs of children in the community are met.

Please see the guidelines / toolkit for additional details

Guidelines for Medication, Equipment and Supplies

Pediatric equipment, supplies, and medications are appropriate for children of all ages and sizes (see list below), and are easily accessible, clearly labeled, and logically organized.

- ☐ ED staff is educated on the location of all items.
- ☐ Daily method in place to verify the proper location and function of pediatric equipment and supplies
- ☐ Medication chart, length-based tape, medical software, or other systems is readily available to ensure proper sizing of resuscitation equipment and proper dosing of medications.
- ☐ Standardized chart or tool used to estimate weight in kilograms if resuscitation precludes the use of a weight scale (eg, length-based tape)

Medications

- ☐ Analgesics (oral, intranasal, and parenteral)
- ☐ Anesthetics (eutectic mixture of local anesthetics; lidocaine 2.5% and prilocaine 2.5%; lidocaine, epinephrine, and tetracaine; and LMX 4 [4% lidocaine])
- ☐ Anticonvulsants (benzodiazepines, levetiracetam, valproate, carbamazepine, fosphenytoin, and phenobarbital)
- ☐ Antidotes (common antidotes should be accessible to the ED e.g. naloxone)
- ☐ Antipyretics (acetaminophen and ibuprofen)
- ☐ Antiemetics (ondansetron and prochlorperazine)
- ☐ Antihypertensives (labetalol, nicardipine, and sodium nitroprusside)
- ☐ Antimicrobials (parenteral and oral)
- ☐ Antipsychotics (olanzapine and haloperidol)
- ☐ Benzodiazepines (midazolam and lorazepam)
- ☐ Bronchodilators
- ☐ Calcium chloride and/or calcium gluconate
- ☐ Corticosteroids (dexamethasone, methylprednisolone, and hydrocortisone)
- ☐ Cardiac medications (adenosine, amiodarone, atropine, procainamide, and lidocaine)
- ☐ Hypoglycemic interventions (dextrose, oral glucose)
- ☐ Diphenhydramine
- ☐ Epinephrine (1mg/mL [1M] and 0.1 mg/mL [IV] solutions)
- ☐ Furosemide
- ☐ Glucagon
- ☐ Insulin
- ☐ Magnesium sulfate
- ☐ Intracranial hypertension medications (mannitol, 3% hypertonic saline)
- ☐ Neuromuscular blockers (rocuronium and succinylcholine)
- ☐ Sucrose solutions for pain control in infants
- ☐ Sedation medications (midazolam, etomidate and ketamine)
- ☐ Sodium bicarbonate (4.2%)
- ☐ Vasopressor agents (dopamine, epinephrine and norepinephrine)
- ☐ Vaccines (tetanus)

Equipment/Supplies: General Equipment

- ☐ Patient warming device (infant warmer)
- ☐ IV blood and/or fluid warmer
- ☐ Restraint device
- ☐ Weight scale, in kilograms only (no opportunity to weigh or report in pounds), for infants and children
- ☐ Tool or chart that relies on weight (kilograms) used to assist physicians and nurses in determining equipment size and correct drug dosing (by weight and total volume)
- ☐ Pain scale assessment tools that are appropriate for age
- ☐ Rigid boards for use in CPR
- ☐ Pediatric-specific AED pads

Equipment/Supplies: Vascular Access

Arm boards
- ☐ infant
- ☐ child

Atomizer for intranasal administration of medication

Catheter-over-the-needle device
- ☐ 22 gauge
- ☐ 24 gauge

Intraosseous needles or device
- ☐ pediatric
- ☐ IV administration sets with calibrated chambers and extension tubing and/or infusion devices with the ability to regulate the rate and volume of infusate (including low volumes)

IV solutions
- ☐ Normal saline
- ☐ Dextrose 5% in 0.45% normal saline
- ☐ Lactated Ringer's solution
- ☐ Dextrose 10% in water

Equipment/Supplies: Respiratory

Endotracheal Tubes
- ☐ uncuffed 2.5 mm
- ☐ uncuffed 3.0 mm
- ☐ cuffed or uncuffed 3.5 mm
- ☐ cuffed or uncuffed 4.0 mm
- ☐ cuffed or uncuffed 4.5 mm
- ☐ cuffed or uncuffed 5.0 mm
- ☐ cuffed or uncuffed 5.5 mm
- ☐ cuffed 6.0 mm

Feeding Tubes
- ☐ 5F
- ☐ 8F

Laryngoscope Blades
- ☐ straight: 0
- ☐ straight: 1
- ☐ straight: 2
- ☐ curved: 2

Magill Forceps
- ☐ pediatric

Nasopharyngeal Airways
- ☐ infant
- ☐ child

Oropharyngeal Airways
- ☐ size 0
- ☐ size 1
- ☐ size 2
- ☐ size 3

Stylets for endotracheal tubes
- ☐ pediatric
- ☐ infant

Suction Catheters
- ☐ infant (6-8F)
- ☐ child (10-12F)

Rigid Suction Device
- ☐ pediatric

Bag-mask device, self-inflating
- ☐ infant (250 ml)
- ☐ child (450-500 ml)

Non-rebreather masks
- ☐ infant
- ☐ child

Clear Oxygen masks
- ☐ infant
- ☐ child

Masks to fit bag-mask device adaptor
- ☐ neonatal
- ☐ infant
- ☐ child

Nasal cannula
- ☐ infant
- ☐ child

Gastric tubes
- ☐ infant (8F)
- ☐ child (10F)

Equipment/Supplies: Fracture-Management Devices

Extremity splints (including femur splints)
- ☐ pediatric

Cervical Collar
- ☐ infant
- ☐ child

Equipment/Supplies: Monitoring Equipment

- ☐ Blood pressure cuffs
  - neonatal
  - infant
  - child
- ☐ Doppler ultrasonography devices
- ☐ ECG monitor and/or defibrillator with pediatric and adult capabilities, including pediatric-sized pads and/or paddles
- ☐ Pulse oximeter with pediatric and adult probes
- ☐ Continuous end-tidal CO2 monitoring

Equipment/Supplies: Specialized Pediatric Trays or Kits

Difficult airway supplies and/or kit

Contents to be based on pediatric patients served at the hospital and may include some or all of the following:
- ☐ supraglottic airways of all sizes
- ☐ needle cricothyrotomy supplies
- ☐ surgical cricothyrotomy kit
- ☐ video laryngoscopy

Newborn delivery kit (including equipment for initial resuscitation of a newborn infant:
- ☐ umbilical clamp
- ☐ scissors
- ☐ bulb syringe
- ☐ towel

Urinary catheterization kits and urinary (indwelling) catheters
- ☐ infant
- ☐ child

Additional Recommendations for High-Volume EDs (>10000 Pediatric Patient Visits per Year)

Alprostadil (prostaglandin E1)

Central venous catheters
- ☐ 4.0F
- ☐ 5.0F
- ☐ 6.0F
- ☐ 7.0F

Chest tubes
- ☐ Infant (8–12F catheter)
- ☐ child (child: 14–22F catheter)
- ☐ adult (24–40F catheter) or
- ☐ pigtail catheter kit (8.5–14F catheter)

Hypothermia thermometer

Inotropic agents (eg, digoxin and milrinone)

Laryngoscope blade
- ☐ size 00

Lumbar puncture tray, spinal needles:
- ☐ infant
- ☐ child

Noninvasive ventilation
- ☐ continuous positive airway pressure or
- ☐ high-flow nasal cannula

Self-inflating bag-mask device,
- ☐ pediatric

Tube thoracostomy tray

Tracheostomy tubes
- ☐ Size 0
- ☐ Size 1
- ☐ Size 2
- ☐ Size 3
- ☐ Size 4
- ☐ Size 5
- ☐ Size 6

Umbilical vein catheters
- ☐ 3.5F
- ☐ 5.0F

Video laryngoscopy

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