



## Checklist and Available Resources

July 20, 2020

The [National Pediatric Readiness Project](#) is a multi-phase quality improvement initiative to ensure that all U.S. emergency departments have the essential guidelines and resources in place to provide effective emergency care to children. In late 2019, the [National Pediatric Readiness Project Steering Committee](#) underwent an extensive revision of the [assessment](#), [checklist](#) and accompanying [Readiness Toolkit](#) in order to align with the 2018 joint policy statement “Pediatric Readiness in the Emergency Department,” which can be accessed online at: <https://pediatrics.aappublications.org/content/pediatrics/142/5/e20182459.full.pdf>.

The updated [checklist](#)—which was reviewed and endorsed by the boards of the American Academy of Pediatrics (AAP), the American College of Emergency Physicians (ACEP) and the Emergency Nurses Association (ENA)—is intended to be a concise enough to be printed and used by a hospital care team to take inventory of the emergency department. The [checklist](#) is supported by a comprehensive online [Readiness Toolkit](#) that mirrors of the structure of the checklist and offers additional resources.

In an effort to connect the [checklist](#) with the most relevant resources found in the [Readiness Toolkit](#), the EMSC Innovation and Improvement Center together with the two [Pediatric Disaster Care Centers of Excellence](#)—the Western Regional Alliance for Pediatric Emergency Management (WRAP-EM) and the Eastern Great Lakes Pediatric Consortium for Disaster Response (EGLPCDR) developed the following document for use by hospital emergency departments.





## 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

<input type="checkbox"/> Physician Coordinator for Pediatric Emergency Care (PECC)*	<a href="https://emscimprovement.center/domains/hospital-based-care/pediatric-readiness-project/readiness-toolkit/">https://emscimprovement.center/domains/hospital-based-care/pediatric-readiness-project/readiness-toolkit/</a>  <a href="https://emscproduction-NPRP Checklist">https://emscproduction-NPRP Checklist</a>  <a href="#">Importance of the Pediatric Care Coordinator</a>
<ul style="list-style-type: none"> <li>Board certified/eligible in EM or PEM (preferred but not required for resource limited hospitals)</li> </ul>	<a href="#">Role Responsibilities of an MD ED Coordinator</a>
<ul style="list-style-type: none"> <li>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.</li> </ul>	<a href="#">Is Your ED Ready for Children</a>
<input type="checkbox"/> Nurse Coordinator for Pediatric Emergency Care (PECC)*	<a href="#">Role Responsibilities of a Nursing ED Coordinator</a>
<ul style="list-style-type: none"> <li>CPEN/CEN (<i>preferred</i>)</li> </ul>	<a href="https://bcen.org/cen/">https://bcen.org/cen/</a> <a href="https://bcen.org/cpen/">https://bcen.org/cpen/</a>
<ul style="list-style-type: none"> <li>Other credentials (e.g. CPN, CCRN)</li> </ul>	<a href="https://www.aacn.org/certification/get-certified/ccrn-peds">https://www.aacn.org/certification/get-certified/ccrn-peds</a>
<p><i>*An Advanced Practice Provider may serve in either of these roles. Please see the guidelines/ toolkit for further definition of the role(s).</i></p>	

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

<p>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:</p>	<p>Nursing -Equipment Competency Validation Record</p> <p><a href="#">Orientation Knowledge and Skills Checklist for the RN</a></p>
<ul style="list-style-type: none"> <li>Assessment and treatment (e.g. triage)</li> </ul>	<p><a href="#">Physical Assessment Pediatric Checklist</a></p>

• Medication administration	
• Device/equipment safety	<a href="#">Equipment Competency Validation Record</a>
• Critical procedures	<a href="#">Clinical Pathways</a>
• 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	<a href="#">Check Your Pediatric Preparedness</a>  <a href="#">Example QI Plan: Illinois EMSC Pediatric Mile Traumatic Head Injury</a>  <a href="#">Quality Improvement Resources</a>
• Data are collected and analyzed	<a href="#">HCA Pediatric Readiness Gap Analysis (Example)</a>
• System changes are implemented based on performance	<a href="#">Rapid-Cycle Improvement Controlling Change</a>
• System performance is monitored over time	<a href="#">Pediatric Readiness Data: An Opportunity to Improve Quality of Care in Your ED</a>
<i>Please see the guidelines / toolkit for additional details</i>	

### ED Policies, Procedures, and Protocols

Policies, procedures, and protocols for the emergency care of children. <i>(These policies may be integrated into overall ED policies as long as pediatric-specific issues are addressed)</i>	
<input type="checkbox"/> Illness and injury triage	<a href="#">Illness and Injury Triage</a>
<input type="checkbox"/> Pediatric patient assessment and reassessment	<a href="#">Pediatric Assessment and Reassessment</a>
<input type="checkbox"/> Identification and notification of the responsible provider of abnormal pediatric vital signs	<a href="#">Documentation of Vital Signs</a>
<input type="checkbox"/> Immunization assessment and management of the under- immunized patient	<a href="#">Immunization Assessment</a>
<input type="checkbox"/> Sedation and analgesia, for procedures including medical imaging	<a href="#">Sedation and Analgesia</a>
<input type="checkbox"/> Consent, including when parent or legal guardian is not immediately available	<a href="#">Consent</a>  <a href="#">Consent Template</a>
<input type="checkbox"/> Social and behavioral health issues	<a href="#">Social and Mental Health Issues</a>

	<a href="#">Behavioral Health</a>
<input type="checkbox"/> Physical or chemical restraint of patients	<a href="#">Physical or Chemical Restraint of Patients</a>
<input type="checkbox"/> Child maltreatment reporting and assessment	<a href="#">Child Maltreatment</a>
<input type="checkbox"/> Death of the child in the ED	<a href="#">Death of the Child in the ED</a> <a href="#">Death of a Child Template</a>
<input type="checkbox"/> Do not resuscitate (DNR) orders	<a href="#">Do Not Resuscitate Orders</a>
<input type="checkbox"/> Children with special health care needs	<a href="#">Children with Special Healthcare Needs</a>
<input type="checkbox"/> Family and guardian presence during all aspects of emergency care, including resuscitation	<a href="#">Family-Centered Care</a> <a href="#">Family Presence</a>
<input type="checkbox"/> Patient, family, guardian, and caregiver education	
<input type="checkbox"/> Discharge planning and instruction	<a href="#">Discharge Planning</a>
<input type="checkbox"/> Bereavement counseling	<a href="#">Bereavement</a>
<input type="checkbox"/> Communication with the patient's medical home or primary care provider as needed.	<a href="#">Communication with Primary Care Providers</a>
<input type="checkbox"/> Telehealth and telecommunications	<a href="#">Telehealth and Telecommunications</a>

<b>All-Hazard Disaster Preparedness</b>	
The written all-hazard disaster-preparedness plan addresses pediatric-specific needs within the core domains including:	<a href="#">Checklist of Essential Pediatric Domains and Considerations for Every Hospital's Disaster Preparedness Policies</a> <a href="#">Family Resources</a>
<input type="checkbox"/> Medications, vaccines, equipment, supplies and trained providers for children in disasters	
<input type="checkbox"/> Pediatric surge capacity for injured and non-injured children	
<input type="checkbox"/> Decontamination, isolation, and quarantine of families and children of all ages	
<input type="checkbox"/> Minimization of parent-child separation	<a href="#">Location for Family Reunification</a> <a href="#">Checklist for Locating Families</a>
<input type="checkbox"/> Tracking and reunification for children and	<a href="#">Tracking Children</a>

families	<a href="#">Family Sign In and Tracking Form</a> <a href="#">Unaccompanied Minor Tracking Form</a>
<input type="checkbox"/> Access to specific behavioral health therapies, and social services for children	
<input type="checkbox"/> Disaster drills include a pediatric mass casualty incident at least every two years	<a href="#">Disaster Planning: Preparing for Pediatric Surges</a>
<input type="checkbox"/> Care of children with special health care needs	

<b>Evidence-Based Guidelines</b>	
<input type="checkbox"/> Evidence-based clinical pathways, order sets or decision support available to providers in real time	<a href="#">PECARN Publications</a> <a href="#">TREKK</a> <a href="#">AHA Pediatric Resuscitation</a> <a href="#">AHA Neonatal Resuscitation</a>

<b>Inter-facility Transfers</b>	
<input type="checkbox"/> Written pediatric inter-facility transfer agreements	<a href="#">Interfacility Transfer Tool</a>
<input type="checkbox"/> Written pediatric inter-facility transfer guidelines. These may include:	<a href="#">Interfacility Template</a> <a href="#">Interfacility Transfer Toolkit</a>
<ul style="list-style-type: none"> <li>• Criteria for transfers (e.g. specialty services)</li> </ul>	
<ul style="list-style-type: none"> <li>• Criteria for selection of appropriate transport service</li> </ul>	
<ul style="list-style-type: none"> <li>• Process for initiation of transfer</li> </ul>	
<ul style="list-style-type: none"> <li>• Plan for transfer of patient information</li> </ul>	
<ul style="list-style-type: none"> <li>• Integration of family-centered care</li> </ul>	
<ul style="list-style-type: none"> <li>• Integration of telehealth/telecommunications</li> </ul>	

<b>Guidelines for Improving Pediatric Patient Safety</b>	
Pediatric patient and medication safety needs are addressed in the following ways:	
<input type="checkbox"/> Children are weighed in kilograms only	<a href="#">EBroselow System</a>
<input type="checkbox"/> Weights are recorded in kilograms only	

<input type="checkbox"/> For children who require emergency stabilization, a standard method for estimating weight in kilograms is used (e.g., a length-based system)	<a href="#">Pediatric Resuscitation and Emergency Medications - Excel Calculator</a>
<input type="checkbox"/> Infants and children have a full set of vital signs recorded	<a href="#">Quick Reference Code Cards</a>
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<a href="#">Vital Sign Assessment</a>
<input type="checkbox"/> CO2 monitoring for children of all ages	
<input type="checkbox"/> Process for safe medication delivery that includes:	<a href="#">Key Points on Medication Errors</a>
<ul style="list-style-type: none"> <li>• Prescribing</li> </ul>	
<ul style="list-style-type: none"> <li>• Administration</li> </ul>	
<ul style="list-style-type: none"> <li>• Disposal</li> </ul>	
<input type="checkbox"/> Pre-calculated drug dosing and formulation guides	
<input type="checkbox"/> 24/7 access to interpreter services in the ED	
<input type="checkbox"/> Timely tracking and reporting of patient safety events	

### Guidelines for ED Support Services

<input type="checkbox"/> Medical imaging capabilities and protocols address age- or weight-appropriate dose reductions for children.	
<input type="checkbox"/> All efforts made to transfer completed images when a patient is transferred from one facility to another.	
<input type="checkbox"/> Collaboration with radiology, laboratory and other ED support services to ensure the needs of children in the community are met.	
<i>Please see the guidelines / toolkit for additional details</i>	

### 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.	<a href="#">2020 ED Checklist</a>
<input type="checkbox"/> ED staff is educated on the location of all items	

<input type="checkbox"/> Daily method in place to verify the proper location and function of pediatric equipment and supplies	
<input type="checkbox"/> 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	
<input type="checkbox"/> Standardized chart or tool used to estimate weight in kilograms if resuscitation precludes the use of a weight scale (eg, length-based tape)	

<b>Medications</b>	
<input type="checkbox"/> Analgesics (oral, intranasal, and parenteral)	
<input type="checkbox"/> Anesthetics (eutectic mixture of local anesthetics; lidocaine 2.5% and prilocaine 2.5%; lidocaine, epinephrine, and tetracaine; and MX 4 4% lidocaine )	
<input type="checkbox"/> Anticonvulsants (benzodiazepines, levetiracetam, valproate, carbamazepine, fosphenytoin, and phenobarbital)	
<input type="checkbox"/> Antidotes (common antidotes should be accessible to the ED e.g. naloxone)	
<input type="checkbox"/> Antipyretics (acetaminophen and ibuprofen)	
<input type="checkbox"/> Antiemetics (ondansetron and prochlorperazine)	
<input type="checkbox"/> Antihypertensives (labetalol, nicardipine, and sodium nitroprusside)	
<input type="checkbox"/> Antimicrobials (parenteral and oral)	
<input type="checkbox"/> Antipsychotics (olanzapine and haloperidol)	
<input type="checkbox"/> Benzodiazepines (midazolam and lorazepam)	
<input type="checkbox"/> Bronchodilators	
<input type="checkbox"/> Calcium chloride and/or calcium gluconate	
<input type="checkbox"/> Corticosteroids (dexamethasone, methylprednisolone, and hydrocortisone)	
<input type="checkbox"/> Cardiac medications (adenosine, amiodarone, atropine, procainamide, and lidocaine)	
<input type="checkbox"/> Hypoglycemic interventions (dextrose, oral glucose)	
<input type="checkbox"/> Diphenhydramine	
<input type="checkbox"/> Epinephrine (1mg/ml 1M and 0.1 mg/ml IV solutions)	
<input type="checkbox"/> Furosemide	
<input type="checkbox"/> Glucagon	
<input type="checkbox"/> Insulin	
<input type="checkbox"/> Magnesium sulfate	
<input type="checkbox"/> Intracranial hypertension medications	

(mannitol, 3% hypertonic saline)	
<input type="checkbox"/> Neuromuscular blockers (rocuronium and succinylcholine)	
<input type="checkbox"/> Sucrose solutions for pain control in infants	
<input type="checkbox"/> Sedation medications (midazolam, etomidate and ketamine)	
<input type="checkbox"/> Sodium bicarbonate (4.2%)	
<input type="checkbox"/> Vasopressor agents (dopamine, epinephrine and norepinephrine)	
<input type="checkbox"/> Vaccines (tetanus)	

<b>Equipment/Supplies: General Equipment</b>	
<input type="checkbox"/> Patient warming device (infant warmer) IV blood and/or fluid warmer Restraint device	
<input type="checkbox"/> 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)	
<input type="checkbox"/> Pain scale assessment tools that are appropriate for age Rigid boards for use in CPR	
<input type="checkbox"/> Pediatric-specific AED pads	
<input type="checkbox"/> Patient warming device (infant warmer) IV blood and/or fluid warmer Restraint device	
<input type="checkbox"/> 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)	
<input type="checkbox"/> Pain scale assessment tools that are appropriate for age Rigid boards for use in CPR	
<input type="checkbox"/> Pediatric-specific AED pads	

<b>Equipment/Supplies: Vascular Access</b>	
<u>Arm boards</u>	
<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	
<u>Atomizer for intranasal administration of medication</u>	



<u>Catheter-over-the-needle device</u>	
<input type="checkbox"/> 22 gauge	
<input type="checkbox"/> 24 gauge	
<u>Intraosseous needles or device</u>	
<input type="checkbox"/> Pediatric	
<input type="checkbox"/> 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)	
<u>IV solutions</u>	
<input type="checkbox"/> Normal saline	
<input type="checkbox"/> Dextrose 5% in 0.45% normal saline	
<input type="checkbox"/> Actated Ringer's solution	
<input type="checkbox"/> Dextrose 10% in water	

### **Equipment/Supplies: Fracture-Management Devices**

<u>Extremity splints (including femur splints)</u>	
<input type="checkbox"/> Pediatric	
<u>Cervical Collar</u>	
<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	

### **Equipment/Supplies: Monitoring Equipment**

Blood pressure cuffs	
• Neonatal	
• Infant	
• Child	
<input type="checkbox"/> Doppler ultrasonography devices	
<input type="checkbox"/> ECG monitor and/or defibrillator with pediatric and adult capabilities, including pediatric-sized pads and/or paddles	
<input type="checkbox"/> Pulse oximeter with pediatric and adult probes	
<input type="checkbox"/> Continuous end-tidal CO2 monitoring	

### **Equipment/Supplies: Respiratory**

<u>Endotracheal Tubes</u>	
<input type="checkbox"/> Uncuffed 2.5 mm	
<input type="checkbox"/> Uncuffed 3.0 mm	
<input type="checkbox"/> Cuffed or uncuffed 3.5 mm	
<input type="checkbox"/> Cuffed or uncuffed 4.0 mm	

<input type="checkbox"/> Cuffed or uncuffed 4.5 mm	
<input type="checkbox"/> Cuffed or uncuffed 5.0 mm	
<input type="checkbox"/> Cuffed or uncuffed 5.5 mm	
<input type="checkbox"/> Cuffed 6.0 mm	
<u>Feeding Tubes</u>	
<input type="checkbox"/> 5F	
<input type="checkbox"/> 8F	
<u>Aryngoscope Blades</u>	
<input type="checkbox"/> Straight: 0	
<input type="checkbox"/> Straight: 1	
<input type="checkbox"/> Straight: 2	
<input type="checkbox"/> Curved: 2	
<u>Magill Forceps</u>	
<input type="checkbox"/> Pediatric	
<u>Nasopharyngeal Airways</u>	
<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	
<u>Oropharyngeal Airways</u>	
<input type="checkbox"/> size 0	
<input type="checkbox"/> size 1	
<input type="checkbox"/> size 2	
<input type="checkbox"/> size 3	
<u>Stylets for endotracheal tubes</u>	
<input type="checkbox"/> Pediatric	
<input type="checkbox"/> Infant	
<u>Suction Catheters</u>	
<input type="checkbox"/> Infant (6-8F)	
<input type="checkbox"/> Child (10-12F)	
<u>Rigid Suction Device</u>	
<input type="checkbox"/> Pediatric	

<b>Equipment/Supplies: Respiratory (cont.)</b>	
<u>Bag-mask device, self-inflating</u>	
<input type="checkbox"/> Infant (250 ml)	
<input type="checkbox"/> Child (450-500 ml)	
<u>Non-rebreather masks</u>	

<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	
<u>Clear Oxygen masks</u>	
<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	
<u>Masks to fit bag-mask device adaptor</u>	
<input type="checkbox"/> Neonatal	
<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	
<u>Nasal cannula</u>	
<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	
<u>Gastric tubes</u>	
<input type="checkbox"/> Infant (8F)	
<input type="checkbox"/> Child (10F)	

<b>Equipment/Supplies: Specialized Pediatric Trays or Kits</b>	
<u>Difficult airway supplies and/or kit</u>	
Contents to be based on pediatric patients served at the hospital and may include some or all of the following:	
<input type="checkbox"/> Supraglottic airways of all sizes	
<input type="checkbox"/> Needle cricothyrotomy supplies	
<input type="checkbox"/> Surgical cricothyrotomy kit	
<input type="checkbox"/> Video laryngoscopy	
<u>Newborn delivery kit (including equipment for initial resuscitation of a newborn infant:</u>	
<input type="checkbox"/> Umbilical clamp	
<input type="checkbox"/> Scissors	
<input type="checkbox"/> Bulb syringe	
<input type="checkbox"/> Towel	
<u>Urinary catheterization kits and urinary (indwelling) catheters:</u>	
<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	

<b>Additional Recommendations for High-Volume EDs (&gt;10000 Pediatric Patient Visits per Year)</b>	
<u>Alprostadil (prostaglandin E1)</u>	
<u>Central venous catheters</u>	
<input type="checkbox"/> 4.0F	

<input type="checkbox"/> 5.0F	
<input type="checkbox"/> 6.0F	
<input type="checkbox"/> 7.0F	
<u>Chest tubes</u>	
<input type="checkbox"/> Infant (8-12F catheter)	
<input type="checkbox"/> Child (child: 14-22F catheter)	
<input type="checkbox"/> Adult (24-40F catheter) or	
<input type="checkbox"/> Pigtail catheter kit (8.5-14F catheter)	
<u>Hypothermia thermometer</u>	
<u>Inotropic agents (eg, digoxin and milrinone)</u>	
<u>Aryngoscope blade</u>	
<input type="checkbox"/> Size 00	
<input type="checkbox"/> <u>Umbar puncture tray, spinal needles:</u>	
<input type="checkbox"/> Infant	
<input type="checkbox"/> Child	
<u>Noninvasive ventilation</u>	
<input type="checkbox"/> Continuous positive airway pressure or	
<input type="checkbox"/> High-flow nasal cannula	
<input type="checkbox"/> Self-inflating bag-mask device	
<input type="checkbox"/> Pediatric	
<u>Tube thoracostomy tray</u>	
<u>Tracheostomy tubes</u>	
<input type="checkbox"/> Size 0	
<input type="checkbox"/> Size 1	
<input type="checkbox"/> Size 2	
<input type="checkbox"/> Size 3	
<input type="checkbox"/> Size 4	
<input type="checkbox"/> Size 5	
<input type="checkbox"/> Size 6	
<u>Umbilical vein catheters</u>	
<input type="checkbox"/> 3.5F	
<input type="checkbox"/> 5.0F	
<u>Video laryngoscopy</u>	

Produced by the AAP, ACEP, ENA and the EMSC Innovation and Improvement Center

American Academy  
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

American College of  
Emergency Physicians®

ADVANCING EMERGENCY CARE 

**ENA**  
EMERGENCY NURSES  
ASSOCIATION

Innovation and Improvement Center  
**EIC**  
Emergency Medical Services for Children