



# Checklist

Essential Pediatric Domains and Considerations for  
Every Hospital's Disaster Preparedness Policies

# Introduction

Children have unique, often complex physiological, psychosocial and psychological needs that differ from adults, especially during disaster situations; and unfortunately children are often involved when disasters occur. This Checklist of Essential Pediatric Domains and Considerations for Every Hospital's Disaster Preparedness Policies is intended as a tool to help hospital administrators and leadership incorporate essential pediatric considerations into existing hospital disaster policies.

- What it is designed to do: This tool was designed to complement and augment existing disaster resources, both pediatric-specific and general, rather than to serve solely as a stand-alone document. Users may find the entire checklist useful or may focus on specific domains, depending on their unique needs and resources. The relative importance assigned to any given consideration is unique to each facility based on their specific risk assessments.
- What it is not designed to do: This is not a step-by-step guide to implementing policies. Instead, resources are provided for each domain to provide more details and help implement the considerations.

It is the consensus of national subject matter experts that the pediatric domains and considerations in this checklist be well integrated into existing all-hazards hospital disaster preparedness policies or guidelines. For example, this checklist can be used to supplement the eight healthcare preparedness capabilities so that the pediatric domains are addressed by healthcare coalitions funded by the Hospital Preparedness Program (<http://www.phe.gov/Preparedness/planning/hpp/reports/Documents/capabilities.pdf>). Furthermore, hospital disaster plans are unique to each facility and community; hence hospital administrators and managers are encouraged to work closely with their local, regional, and state healthcare systems and healthcare and/or disaster coalitions, national disaster partners, and their corresponding local chapters to adapt recommendations to their local needs, strategies, and resource availability. References to specific resources are included at the end of the document to assist users in finding relevant literature and best practices. Additionally, a comprehensive compendium of pediatric disaster resources and searchable databases is now available from the National Library of Medicine Disaster Information Management Research Center's Health Resources About Children in Disaster and Emergencies at <http://disaster.nlm.nih.gov/dimrc/children.html>.

Questions about or feedback on this checklist are greatly appreciated. To provide us your comments, please complete the Online Feedback Form at [http://emscnrc.org/EMSC\\_Resources/Feedback\\_and\\_Evaluation\\_Forms/Hospital\\_Disaster\\_Preparedness\\_Checklist.aspx](http://emscnrc.org/EMSC_Resources/Feedback_and_Evaluation_Forms/Hospital_Disaster_Preparedness_Checklist.aspx).

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# Table of Contents

<b>Introduction</b>	<b>2</b>
<b>Background</b>	<b>4</b>
Domain 1: Staff coordinator to champion pediatric disaster coordination and response - roles and responsibilities	6
Domain 2: Partnership building to facilitate surge capacity	7
Domain 3: Essential resources necessary for building pediatric surge capacity	8
Domain 4: Triage, infection control, and decontamination	9
Domain 5: Family tracking, security, support, and reunification	10
Domain 6: Legal/ethical issues	11
Domain 7: Behavioral health	12
Domain 8: Children with special health care needs	13
Domain 9: Staffing, exercises, drills, and training	14
Domain 10: Recovery and resiliency	15
<b>References and Resources By Domain</b>	<b>16</b>
<b>Acknowledgements</b>	<b>26</b>

# Background

Children comprise 27% of the U.S. population<sup>1</sup> and account for about 20% of all hospital emergency department visits.<sup>2</sup> In 2006, the Institute of Medicine's (IOM) Future of Emergency Care series reported that medical care for pediatric patients in the emergency setting continues to be uneven. The report noted deficiencies in the availability of pediatric equipment, supplies and medications, training for medical staff, and policies incorporating the unique needs of children. Furthermore, in the wake of Hurricane Katrina, the report noted that such deficiencies in everyday operational readiness are exacerbated during a disaster, calling the nation's emergency care system "poorly prepared for disasters."<sup>3</sup>

While there have been marked improvements in many areas of pediatric emergency care over the past decade,<sup>4</sup> in 2010 the National Commission on Children and Disasters reported persistent deficiencies in every functional area of pediatric disaster preparedness.<sup>5</sup> This report was followed in 2013 by the Preparedness, Response, and Recovery Considerations for Children and Families, a workshop convened by the IOM Forum on Medical and Public Health Preparedness for Catastrophic Events. Opening statements posited that "current state and local disaster plans often do not include specific considerations for children and families."<sup>6</sup> The workshop highlighted nine major events that occurred during a seven-month period from October 24, 2012 and May 31, 2013 in which there were 176 fatalities, including 46 children (26%), and discussed the numerous near-misses that could have further increased pediatric casualties.

In 2013, the American Academy of Pediatrics, the American College of Emergency Physicians, the Emergency Nurses Association, and the EMSC Program collaborated jointly on a quality improvement initiative, the National Pediatric Readiness Project. The project initiated an assessment of more than 5,000 U.S. emergency departments and more than 4,100 facilities responded (83%).<sup>4</sup> Preliminary results illustrated that less than half of all U.S. hospitals reported having written disaster plans addressing issues specific to the care of children. Based on these findings, the National Pediatric Readiness Project stakeholder group recommended convening a multidisciplinary workgroup to develop a tool to assist hospitals to assure pediatric considerations are included in existing or future disaster plans.

The primary goal of the workgroup was to build on existing resources, with a particular focus on best practice guidelines and checklists from local geographic regions, to come to consensus on essential domains of pediatric considerations that should be incorporated into disaster policies for all hospital types in the United States. While this checklist takes an all-hazards approach to pediatric hospital preparedness, it is designed primarily to identify the personnel, resources, equipment, and supplies that will be useful for rapid onset pediatric surge planning, as well as for disaster response involving pediatric patients. Specific references and links to more robust resources for disaster and pandemic events for each domain are provided at the end of the document.

Contributors to this checklist are acknowledged at the end of the document.

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<sup>1</sup> United States Census Bureau: Age and Sex, Table 1: Population by Age and Sex 2012. Accessed April 11, 2014 from <http://www.census.gov/population/age/data/2012comp.html>.

<sup>2</sup> Centers for Disease Control and Prevention, Ambulatory and Hospital Care Statistics Branch. National Hospital Ambulatory Medical Care Survey:2010. Accessed April 10, 2014 from [http://www.cdc.gov/nchs/data/ahcd/nhamcs\\_emergency/2010\\_ed\\_web\\_tables.pdf](http://www.cdc.gov/nchs/data/ahcd/nhamcs_emergency/2010_ed_web_tables.pdf).

<sup>3</sup> Institute of Medicine, Committee of the Future of Emergency Care in the United States Health System. Emergency Care for Children: Growing Pains. Washington, DC: National Academies Press. 2007.

<sup>4</sup> National Pediatric Readiness Project. National Results. Revised March 21, 2014. Accessed April 10, 2014 from [http://www.pediatricreadiness.org/State\\_Results/National\\_Results.aspx](http://www.pediatricreadiness.org/State_Results/National_Results.aspx).

<sup>5</sup> National Commission on Children and Disasters. 2010 Report to the President and Congress. Agency for Healthcare Research and Quality Publication No. 10-M037. Rockville, MD: Agency for Healthcare Research and Quality. October 2010.

<sup>6</sup> Institute of Medicine, Forum on Medical and Public Health Preparedness for Catastrophic Events. Disaster Preparedness, Response, and Recovery Considerations for Children and Families: Workshop Summary. Washington, DC: National Academies Press. 2013.

## Domain 1: Staff coordinator to champion pediatric disaster coordination and response - roles and responsibilities

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Professionals with pediatric training in medical content and disaster response, or willing to learn about disaster response (e.g., Incident Command System courses)	Yes No	
Non-pediatric professionals who could advocate for and integrate the needs of children in planning and impact pediatric disaster response (e.g. neurosurgeon, trauma surgeon, other surgical subspecialists, infectious disease, adult emergency medicine physicians, etc.)	Yes No	
<p>Formal designation of advocates with defined roles/responsibilities/authority, including:</p> <ul style="list-style-type: none"> <li>• Incorporates pediatric-specific considerations within the hazard vulnerability analysis and planning goals</li> <li>• Plans and coordinates disaster drills that include pediatric patients</li> <li>• Serves as liaison for pediatric patients/concerns on hospital committees (e.g., medical, trauma, disaster, etc.)</li> <li>• Assures pediatric considerations and priorities are included in all staff disaster education and training</li> <li>• Assures pediatric considerations and priorities are included in disaster education for prehospital providers</li> <li>• Assists with development and review of the hospital disaster policies, ensuring that pediatric needs are addressed</li> <li>• Serves as liaison representing children to regional facilities, EMS agencies, healthcare coalitions, and organizations to promote community disaster preparedness inclusive of children</li> <li>• Collaborates with disaster program manager</li> <li>• Promotes pediatric disaster awareness in the community</li> </ul>	Yes No	

## Domain 2: Partnership building to facilitate surge capacity

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Coalition-building and relationships (pact among hospitals and other healthcare facilities) with hospital and non-hospital stakeholders (e.g. primary care, churches, medical homes, EMS, schools, daycare centers, Red Cross, etc.) to support pediatric care and families	Yes No	
Process/plan to measure, prioritize, and expand pediatric surge capacity and capabilities based on resource availability	Yes No	
Process to facilitate the triage of patients including children for transport from the prehospital setting to the appropriate destination	Yes No	
Defined pediatric transfer processes, i.e., agreements and guidelines to facilitate movement of children needing pediatric specialty facilities as well as those more stable children needing to be moved to increase surge capacity of specialty centers	Yes No	
Telemedicine/telephone consultation agreements, processes, and equipment to facilitate provision of pediatric care in facilities not typically caring for children	Yes No	
Method to integrate facility disaster policy with community and regional disaster plans, including prehospital systems of care	Yes No	

### Domain 3: Essential resources necessary for building pediatric surge capacity

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Plan for expanded and alternative space for pediatric surge for key services: <ul style="list-style-type: none"> <li>• Alternative care sites (including sites for the provision of general inpatient and outpatient overflow and specialty care, such as critical care, technology dependent care, surgery, etc.)</li> <li>• Decontamination showers and mass decon areas</li> <li>• Family staging/waiting</li> </ul>	Yes No	
Pediatric equipment (e.g. ventilators, isolettes; consider equipment and supplies to support children with special health care needs) No. in facility: _____ No. in neighboring facilities: _____ Memorandum of Understandings (MOUs) to obtain additional equipment for surge	Yes No	
Pharmaceutical needs and drug administration aides (pediatric appropriate drugs, dosing, and administration guidelines including specific pediatric antidote dosing requirements for exposure to chemical/biological agents, access to pharmaceutical caches and stockpiles, Broselow tapes, kilogram scales, etc.)	Yes No	
Dietary needs: regular formula, special formula (non-dairy, lactose free), infant foods, and equipment (bottles, feeding tubes) to meet surge	Yes No	
Supplies and accommodations (e.g. cribs, diapers, recliner for parents) No.in facility: _____ No. in neighboring facilities: _____ MOUs to obtain additional supplies for surge	Yes No	
Needs for prolonged patient stays in your facility when transfer not immediately possible (shelter in place)	Yes No	



## Domain 4: Triage, infection control, and decontamination

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Pediatric disaster triage processes that include defined process when infectious disease or exposure suspected	Yes No	
Temperature- and pressure-regulated water controls for pediatric decontamination, especially for small children	Yes No	
Process for keeping families together during decontamination	Yes No	
Disposable pediatric-sized face masks	Yes No	
Pediatric isolation capabilities (e.g., contact, airborne)	Yes No	
Process for disinfection of communally available toys in the facility	Yes No	
Shelter in place and evacuation procedures for children	Yes No	

## Domain 5: Family tracking, security, support, and reunification

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Child identification (ID) forms and ID bands for all children arriving at the hospital listing information available from verbal children (name, age, parent name, address/phone, and possibly allergies) and identifying characteristics and intake source (where did they arrive from and who brought them in) of nonverbal children	Yes No	
Central transfer/tracking tool with capacity to record children's photos/ID information. This should include digital camera and photo printing capabilities	Yes No	
Processes defined to support family togetherness and reunification during triage, care, and post disaster	Yes No	
Procedures/staff/volunteers to care for unattended children brought in to the hospital	Yes No	
Process for maintaining or increasing adequate security for existing pediatric patients in all areas of the hospital in addition to the emergency department	Yes No	
Specialized, separate spaces for injured/ill and non-injured/non-ill unaccompanied children with security guard and appropriate staff	Yes No	
Defined security, support, and reunification processes for non-verbal children	Yes No	
OB/GYN – the unique considerations of disasters on pregnant women, delivery, breastfeeding, and care of newborns	Yes No	
A plan to establish a Family Information and Support Center (which could include staffing by volunteers)	Yes No	

## Domain 6: Legal/ethical issues

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Policies and education regarding assents/consents for pediatric assessment, testing, or treatment with or without a parent in a disaster situation	Yes No	
Review and understand ability to require vaccination, testing, or treatment notwithstanding parental or other consent	Yes No	
Coordinate with credentialing bodies for healthcare personnel and understand scope of practice for all healthcare providers	Yes No	
Procedures/staff/volunteers to care for unattended children brought in to the hospital	Yes No	
Process for rapid credential verification and privileges. Does the state participate in the volunteer license reciprocity programs?	Yes No	
Reporting of pediatric adverse events, including maltreatment/violence	Yes No	
Plan addressing allocation of scarce resources for children and adolescents (e.g., mechanical ventilators and pumps, etc.)	Yes No	
Understand the process for obtaining and impact of a waiver of Emergency Medical Treatment and Labor Act (EMTALA), State Children's Health Insurance Program (SCHIP), or other federal or state laws during declared emergencies	Yes No	
Legal requirements to plan and prepare for pediatric needs during emergencies	Yes No	
Liability and protections related to the implementation of crisis standards of care during declared emergencies/ disasters	Yes No	

## Domain 7: Behavioral health

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Pediatric psychological first aid protocols and training for all responders	Yes No	
Waiting area and discharge information sheets with tips for pediatric mental health/stress responses and resources	Yes No	
Mental health professionals incorporated into pediatric care-review process (PI/QI/AAR/CAP)	Yes No	
Pediatric mental health screening procedures and staff education to identify at-risk individuals based on nature and degree of exposures potentially needing additional behavioral health services and follow-up (e.g., death of family member)	Yes No	
Assessment and identification of pediatric mental health resource availability in the facility and the community	Yes No	
Death notification and bereavement support	Yes No	
Policies and processes to reduce unnecessary exposure of children (and caregivers) to television and other potentially sensitizing stimuli (e.g., curtains to reduce exposure to injured patients and other traumatic images)	Yes No	
Rapid access to urgent evaluation and treatment services when indicated	Yes No	

## Domain 8: Children with special health care needs

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Care considerations specific to neonates	Yes No	
Care considerations specific to children with developmental disabilities and/or physical limitations and disability	Yes No	
Specialized equipment (e.g., wheelchairs, ventilators, pediatric feeding tubes, pediatric suction catheters, trachs, portable source of electricity, etc.) or MOUs to obtain (See Domain 2: Resources)	Yes No	
Medications and related dietary needs	Yes No	
<p>Process to estimate hospital surge demands for children with special health care needs (CSHCN). Consider:</p> <ul style="list-style-type: none"> <li>• An estimate of the number of CSHCN in community (may want to work with state to identify number and types of special needs in catchment area to assure they can be addressed in a disaster; for example: Supplemental Assistance Nutrition Program in Delaware)</li> <li>• Resource availability (e.g., special equipment, facilities)</li> <li>• Healthcare professionals and other potential caretakers with which to partner (e.g., prehospital personnel, home health, and parent support organizations, such as Family Voices)</li> </ul>	Yes No	

## Domain 9: Staffing, exercises, drills, and training

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Pediatric victims are incorporated into regular exercises that test the system's ability to handle a surge in or evacuation of a variety of pediatric patients (e.g. infants, special needs). Lessons learned, after action reports, and improvement plans are incorporated into and drive improvement of hospital policy	Yes No	
Staffing needs during disasters and identification/prioritization of pediatric staff/expertise to care for children or pediatric champions within institution	Yes No	
Triage protocols and training to identify patients to be considered for immediate transfer (critically ill/injured or those sufficiently stable to move to another care center) and transferring patients with appropriate pediatric specific equipment and personnel	Yes No	
Pediatric care-review process (Process Improvement, Quality Improvement, After Action Report, Corrective Action Plans, etc.)	Yes No	
Curriculums and training opportunities that address gaps and increase skills specific to pediatric patients	Yes No	

## Domain 10: Recovery and resiliency

Pediatric Specifics to Consider/Discuss	YES/NO	Notes/Implementation Plan
Discharge disposition of children (including a tracking process and tool to assure that providers can readily communicate when and where children have been discharged or transferred to other facilities)	Yes No	
Short and long-term mental health assessment and continuity of care for children’s behavioral health needs	Yes No	
Culturally tailored and developmentally focused user-friendly parent information sheets	Yes No	
Partnerships with primary care and community medical homes to promote pediatric resiliency	Yes No	
Bereavement support	Yes No	
Professional self-care	Yes No	
Partnerships with community sites, such as child care centers, schools, preschools, etc., where services can be provided, including screening, primary prevention, and treatment	Yes No	

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## Domain 1: Staff coordinator to champion pediatric disaster coordination and response - roles and responsibilities

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## **Domain 2: Partnership-building for surge capacity**

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#### **Domain 4: Triage, infection control, and decontamination**

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### **Domain 5: Family tracking, security, support, and reunification**

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## Additional Resources

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