Illinois Emergency Medical Services for Children

Pediatric Disaster Preparedness Guidelines for Hospitals

Third Edition

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Illinois Emergency Medical Services for Children is a collaborative program between the Illinois Department of Public Health and Ann & Robert H. Lurie Children's Hospital of Chicago

IDPH Illinois Department of Public Health

www.luriechildrens.org/emsc

Ann & Robert H. Lurie Children's Hospital of Chicago

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Acknowledgements

Illinois Emergency Medical Services for Children (Illinois EMSC) is a collaborative partnership between the Illinois Department of Public Health (IDPH) and Ann & Robert H. Lurie Children's Hospital of Chicago. In 2002, the Illinois EMSC Pediatric Preparedness Workgroup was established to develop and identify resources to assist in addressing the disaster preparedness needs of children. The Workgroup is multidisciplinary and includes representatives from key organizations such as the American Red Cross (ARC), Illinois Association of School Nurses, Illinois Chapter American Academy of Pediatrics, Illinois College of Emergency Physicians, Illinois State Council Emergency Nurses Association, Illinois Health & Hospital Association, Illinois Medical Emergency Response Team, and the Illinois Poison Center, among others.

This document was originally developed in 2005 under the direction of the Illinois EMSC Pediatric Preparedness Workgroup. As this third edition was developed, the workgroup again provided critical review and feedback to ensure that this edition is reflective of current disaster literature and practices.

NOTE: *A few individuals committed significant time and effort to the development of this third edition, and are thereby noted with an asterick next to their name.*

Illinois EMSC Pediatric Preparedness Workgroup

***Michele McKee, MD**
Chair
University of Chicago Medicine – Comer Children's Hospital, Chicago

John Althoff, EMT-P, LI
Decatur Memorial Hospital, Decatur

***Annaliza Camia, MSN, RN, CNL, CPEN**
Illinois EMS for Children, Chicago

Brian Churchill, EMT-P, BSHA, CHEC
HSHS St. John's Hospital, Springfield

Mary Connelly, BSN, RN
Illinois Medical Emergency Response Team, Urbana

Judy Courter, MLT, ASCP
Franklin Hospital, Benton

Troy Erbentraut
OSF St. Francis Medical Center, Peoria

***Leslie Flament, MS, APN, CPNP-PC, CEN, TNS**
Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago

***Susan Fuchs, MD, FAAP, FACEP**
Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago

Rita George, RN, IPEM
NorthShore University HealthSystem—Skokie Hospital, Skokie

Jeanne Grady, BSN, RN
UIC—Division of Specialized Care for Children, Lombard

Tina Hatzopoulos, PharmD
Huron Consulting Group, Chicago

Sharon Hebert, RN
Northwestern Medicine—Kishwaukee Hospital, DeKalb

Keneatha Johnson, MPH
Illinois Health and Hospital Association, Naperville

Tina Johnston, BSN, RN
American Red Cross, Chicago

Amy Krupa, MSN, RN, CPEN, CPN, TCRN, TNS, SANE-A, SANE -P
Advocate Children's Hospital, Oak Lawn

Moses Lee, MD, FACEP
Illinois Medical Emergency Response Team
John H. Stroger, Jr. Hospital of Cook County, Chicago

***Evelyn Lyons, MPH, RN**
Illinois Department of Public Health, Chicago

Charles Nozicka, DO, FAAP, FAAEM
Advocate Children's Hospital, Park Ridge

Cassandra O'Brien, MSN, RN, CPEN, CEN, TCRN, TNS
University of Chicago Medicine—Comer Children's Hospital, Chicago

Mary Otting, BSN, RN, TNS, CEN
Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago

Amanda Phelps, MSN, RN, TNS
Advocate Children's Hospital, Park Ridge

Michael Robbins, PharmD
Chicago Department of Public Health, Chicago

Michael Wahl, MD
Illinois Poison Center; Illinois Health and Hospital Association, Chicago

Elisabeth Weber, MA, RN, CEN, NHDP-BC
Chicago Department of Public Health, Chicago

Barbara Weintraub, MSN, RN, MPH, APN, FAEN
Gottlieb Memorial Hospital, Melrose Park

How to Use These Guidelines

These guidelines are a resource to assist hospitals and healthcare entities in addressing the unique needs of children in disaster planning. Hospitals should strive to incorporate pediatric components into their organization's Emergency Operations Plan (EOP).

Federal EMSC performance measures require each state to enhance hospital pediatric readiness processes to ensure that hospitals have appropriately trained personnel, equipment/supplies, education/training programs, quality improvement processes, and guidelines/protocols in place to meet the emergency care needs of children on a day-to-day basis.[1] This facilitates a core level of hospital readiness in managing the emergency care needs of children. **As a guiding principle, assuring excellence in pediatric emergency care on a daily basis is the best preparedness for pediatric disaster care.**

The Illinois EMSC Pediatric Facility Recognition Program assists hospitals in assuring day-to-day pediatric readiness.[2] Hospitals designated through the pediatric facility recognition program are assessed for compliance with defined pediatric requirements outlined in state regulations, including disaster preparedness.[2] Pediatric disaster preparedness requirements are further outlined in the **EMSC Hospital Pediatric Preparedness Checklist** (see Appendix B), which is utilized during hospital site visits.[3] These guidelines and the checklist are designed to be used in conjunction with each other, providing a consistent approach for Illinois hospitals as they work to develop and integrate pediatric components into their hospital's disaster planning and Emergency Operations Plan.

Please note that these guidelines represent current information within the medical and disaster literature at the time of publication. The recommendations in these guidelines do not indicate an exclusive course of treatment or serve as a standard of medical care. The strategies and recommendations in this document provide a foundation, and may need to be augmented or tailored to meet the needs of individual organizations. Hospitals should consult with key representatives within their organization to assure consistency and compliance with local policies as well as state and federal plans/regulations.

NOTE: *Within this document, pediatric resources are bolded. In addition, hyperlinks are provided to Illinois EMSC specific resources.*

Historical Perspective

Historically, the needs of children have been overlooked in disaster planning at the local, state, and federal levels. In 1997, the Federal Emergency Management Agency (FEMA) conducted a survey of state disaster plans across the country and discovered that not one state disaster plan included considerations for children. In 2006, the Pandemic and All Hazards Preparedness Act mandated that all state plans must address at-risk populations, including children. In addition to this mandate, efforts were then initiated to identify specific gaps related to children and disaster preparedness. In 2008, the National Commission on Children and Disasters was convened by the President and Congress to evaluate the inclusion of children in federal response plans and processes. In their 2010 report, the Commission found "serious deficiencies in each functional area, where children were more often an afterthought than a priority."[4] The term "benign neglect" was used throughout the report to describe the state of addressing the needs of children in disasters.[4]

Over the last several years, much progress has been made in addressing children's needs. This is due in large part to the advocacy of organizations such as the American Academy of Pediatrics (AAP), the Federal EMSC program, the Health and Sciences Division of the National Academies of Sciences, Engineering, and Medicine, the National Commission on Children in Disasters, and the National Association of State EMS Officials. These organizations have emphasized the need to incorporate children into disaster planning and response.[4,5,6,7,8]

According to the U.S. Department of Homeland Security (2015), the National Preparedness Goal is "a secure and resilient nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk."[9] Such risks (e.g., cyber-attacks, disease pandemics, manmade hazards, natural disasters, and terrorist attacks) can have varying impact on the whole community.

FEMA has defined five mission areas (see below), **that can serve as a framework for guiding and assisting an organization with integrating children into all stages of disaster management.** Furthermore, 32 core capabilities (e.g., Mass Care Services) have been identified by FEMA to further explain how to translate the National Preparedness Goal into actual practice.[10] The table on the following page illustrates this dynamic relationship.[11] More detailed information may be found on the FEMA website.[12]

- "**Prevention:** Prevent, avoid, or stop an imminent, threatened, or actual act of terrorism.
- **Protection:** Protect our citizens, residents, visitors, and assets against the greatest threats and hazards in a manner that allows our interests, aspirations, and way of life to thrive.
- **Mitigation:** Reduce the loss of life and property by lessening the impact of future disasters.
- **Response:** Respond quickly to save lives, protect property and the environment, and meet basic human needs in the aftermath of a catastrophic incident.
- **Recovery:** Recover through a focus on the timely restoration, strengthening and revitalization of infrastructure, housing and a sustainable economy, as well as the health, social, cultural, historic, and environmental fabric of communities affected by a catastrophic incident."[13]

FEMA Core Capabilities, organized by Mission Area[11]

<table>
<tr><th>Prevention</th><th>Protection</th><th>Mitigation</th><th>Response</th><th>Recovery</th></tr>
<tr><td colspan="5">Planning</td></tr>
<tr><td colspan="5">Public Information and Warning</td></tr>
<tr><td colspan="5">Operational Coordination</td></tr>
<tr><td colspan="2">Intelligence and Information Sharing</td><td rowspan="4">Community Resilience
Long-term Vulnerability Reduction
Risk and Disaster Resilience Assessment
Threats and Hazards Identification</td><td colspan="2">Infrastructure Systems</td></tr>
<tr><td colspan="2">Interdiction and Disruption</td><td rowspan="3">Critical Transportation
Environmental Response/Health and Safety
Fatality Management and Suppression
Logistics and Supply Chain Management
Mass Care Services
Mass Search and Rescue Operations
On-scene Security, Protection, and Law Enforcement
Operational Communications
Public Health, Healthcare, and Emergency Medical Services
Situational Assessment</td><td rowspan="3">Economic Recovery
Health and Social Services
Housing
Natural and Cultural Resources</td></tr>
<tr><td colspan="2">Screening, Search, and Detection</td></tr>
<tr><td>Forensics and Attribution</td><td>Access Control and Identity Verification

Cybersecurity

Physical Protective Measures

Risk Management for Protection Programs and Activities

Supply Chain Integrity and Security</td></tr>
</table>

Background

There are almost 3 million children under the age of 18 in Illinois, with nearly 800,000 under 5 years of age.[14] In the event of a disaster or crisis, children are considered a vulnerable population. Infants and children are at higher risk than adults in many ways,[15] for example:

- A child's condition can rapidly shift from stable to life-threatening due to their smaller circulating blood volume and fluid reserves. Note: Age and weight appropriate volume resuscitation can reduce the risks of irreversible shock or death.
- Children are more sensitive to changes in body temperature and have a faster metabolism. For example, the ratio of body surface area to weight contributes to relatively rapid onset of hypothermia or hyperthermia.
- Infants, toddlers, and young children may not have the motor skills or cognitive ability to escape from a disaster area. Their decision-making skills may impact their ability to know how or when to flee from danger, emphasizing the need for adult guidance.
- Other physiologic differences such as more permeable skin, faster breathing, and a higher sensitivity to certain agents can lead to more severe symptoms in children when exposed to chemical, biological, or radiological agents.

- Children are at higher risk for abduction and abuse during disasters. There is a need to be alert for potential child trafficking during disaster incidents.
- Children's lives and routines are likely disrupted during a disaster, making it particularly difficult for them to adjust to a changing and often unstable environment, and impacting their emotional well-being.

NOTE: *Because of these inherent vulnerabilities, it is essential that the unique needs of children are addressed in every stage of disaster management.*

Children with Special Health Care Needs (CSHCN)/ Children with Functional and Access Needs (CFAN)

The Centers for Disease Control (CDC) notes that approximately 1 of 5 American children meet the criteria of having a special healthcare need.[16] Furthermore, 1 in 7 children between the ages of 2 and 8 years old are affected by mental, behavioral, and developmental health concerns.[17]

Hospitals and healthcare organizations must be prepared to meet the needs of these children during disaster incidents. Note that various terms are used to define this population, such as At-Risk Population, Functional and Access Needs Population, Special Needs, as well as Vulnerable Populations. For the purposes of this document, the term *Children with Special Health Care Needs (CSHCN)/ Children with Functional and Access Needs (CFAN)* is used to describe this population. Below are definitions that can provide clarity.

- *Children with Special Health Care Needs (CSHCN)* - The American Academy of Pediatrics defines this population as those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally.[18]
- *Disability* - According to FEMA, an individual with a disability is a person who has a physical or mental impairment that substantially limits one or more major life activities that an average person can perform with little or no difficulty, or has a record of such impairment, or is regarded as having such impairment.[19] Examples of types of disabilities include, but are not limited to: hearing disabilities, vision disabilities, speech disabilities, mobility disabilities, cognitive/intellectual/developmental/mental health disabilities, brain injuries, and health maintenance needs (e.g., bronchodilators for asthma).[19] Note that one must take into account the age and developmental level of the child when considering an impairment.
- *Functional and Access Needs (FAN)* - FEMA defines this population as "individuals who need assistance due to any condition (temporary or permanent) that limits their ability to take action."[19] These individuals may have disaster-related needs in the areas of communication, transportation, supervision, medical care or maintaining independence. Examples of FAN may include a child or family member with limited or non-English speaking skills, poor reading skills, cultural or racial diversity, low socioeconomic status, limited access to transportation, living in an institutionalized setting, or CSHCN.[19]

After 9/11, the Federal Hospital Preparedness Program (HPP) and the Public Health Emergency Preparedness (PHEP) program were established and began providing funding to states in order to enhance disaster/bioterrorism preparedness of healthcare organizations, particularly hospitals and local health departments. Both the HPP and the PHEP programs require the integration of at-risk populations

(including children) into all levels of emergency planning within the whole community.[20] The inclusion of CSHCN and CFAN into all phases of hospital disaster planning can assist with promoting access to and preventing untimely delays in care. Assistance and support for this population may vary widely depending on the type and magnitude of a given disaster situation. A number of resources currently exist that can be utilized by hospital staff when caring for CSHCN/CFAN. For example, the Illinois EMSC **CSHCN Reference Guide** offers quick troubleshooting tips when caring for children dependent on medical technology/devices (e.g., tracheostomy, ventriculoperitoneal shunt, or gastrostomy feeding tube).[21] *Further information and considerations related to the inclusion of CSHCN/CFAN into disaster planning can be found throughout this document.*

Emergency Operations Planning/Disaster Planning

Each hospital and healthcare organization needs to have a disaster plan in place that outlines how their organization and staff will respond during an incident. Pediatric components/considerations need to be integrated within these disaster plans. Having pediatric expertise/representation on the hospital disaster/emergency planning committee is an essential step in assuring advocacy for pediatric needs during the development and subsequent revisions of the disaster plan. Consider the following pediatric experts:

- Hospital-based pediatricians and other sub-specialists (e.g. trauma surgeons, anesthesiologists)
- Pediatric nurses and advanced practice nurses
- Perinatal professionals (e.g. neonatologists, nursery and obstetrical nurses)
- Child-life specialists
- Staff with psychosocial expertise (e.g., mental health specialists, social workers, spiritual care, and hospice staff)
- Other pediatric personnel

For community hospitals and non-pediatric tertiary care centers, consider partnering with a pediatric hospitalist, pediatric nurse practitioner, or collaborating with pediatricians within the hospital network or corporate structure. Hospital networks that are comprised of multiple hospitals may consider pooling resources and incorporating pediatric components into a standardized plan that each hospital then adopts.

The integration of those with pediatric clinical knowledge and expertise into disaster planning helps to assure an understanding of pediatric anatomical, physiological, growth and development, and psychosocial needs is addressed in disaster planning. Below are two examples of how pediatric experts can assist:

- Children may be frightened of healthcare personnel, particularly staff wearing Personal Protective Equipment (PPE) during decontamination procedures. Specialized caregivers (e.g., pediatric trained staff, child life specialists) can help formulate safe, pediatric-friendly strategies in advance to lessen the anxiety and fear that children will likely experience associated with these types of procedures.
- Keeping children and their families together during and after a disaster incident is a goal that hospitals should make every reasonable effort to achieve. This assists in assuring the safety and security of the child, as well as assists in preventing unnecessary emotional trauma if the family is separated. Having

pediatric experts as part of the disaster planning committee can help to assure that this goal is reflected throughout the EOP.

A comprehensive resource that can assist hospitals in their efforts to include children in their disaster planning, can be found online in the ***Children in Disasters: Hospital Guidelines for Pediatric Disasters***, developed by the Centers for Bioterrorism Preparedness Program Pediatric Task Force within the New York Department of Health and Mental Hygiene.[22]

Hazard Vulnerability Assessment/Threat and Hazard Identification and Risk Assessment

Identifying potential hazards and risks is a key step in disaster preparedness. Using a Hazard Vulnerability Assessment (HVA) or a Threat and Hazard Identification and Risk Assessment (THIRA) can provide a basis for mitigation and prevention tasks. An HVA/THIRA emphasizes which types of natural or man-made disasters are likely to occur in a community (e.g., tornado, flood, chemical release, or terrorist event). They further highlight the impact those disasters may have on the community and any capabilities that are in place that may lessen the effects of the disaster.

It is advised to conduct an HVA/THIRA on an annual basis to assess specific threats unique to your organization's physical structure, as well as the surrounding geographic environment. ***Completion of a population assessment that provides a demographic overview of the community with a breakdown of the childhood population is strongly recommended in conjunction with the HVA/THIRA.*** Collaborating with other community partners, such as local health departments and emergency management agencies, can assist an organization with conduction of a comprehensive HVA/THIRA.

An HVA/THIRA contains both quantitative and qualitative components. Specific tools have been developed through private and public organizations (e.g., FEMA) that can help in the analysis.[23] Using these tools as a guide, determine what types of hazards have a high, medium, or low probability of occurring within specific geographic boundaries. Typically, these tools do not have components specific to children or other at-risk populations, however the tools can be adapted either directly through adding children to specific hazards (e.g. Mass Casualty Incident - Pediatric) or ensuring considerations specific to children are incorporated into the HVA/THIRA calculations.

> ***NOTE:*** *The HVA/THIRA should be reviewed and updated minimally on an annual basis to identify changing or external circumstances. This includes conducting a pediatric-specific disaster risk assessment to identify where children congregate and their risks (e.g., schools, popular field trip designations, summer camps, and juvenile justice facilities). After an HVA/THIRA has been completed, the results should be used to help direct and plan drills/exercises based on high impact and high probability threats.*

Community Partnerships and Coalitions

Developing partnerships with various agencies, response groups, and providers within the community before a disaster occurs is an essential component of hospital disaster preparedness, and is part of coalition building. **Community partners that can provide expertise in caring for children are not limited to primary care providers and community social/mental health services.** Join the disaster coalition (i.e. regional health care coalition) in your community/region and collaborate with other key stake holders, such as those listed on the next page.

- Child advocacy groups
- Child care facilities
- Community Emergency Response Teams
- Emergency management agencies
- Faith-based organizations
- Hospitals (including pediatric tertiary care centers)
- Long term care facilities
- Medical Reserve Corps
- Mental health organizations
- Pediatricians (hospital & community-based)
- Public health departments
- Rehabilitation centers
- Schools (faculty/nurses/administrators)
- State and regional medical response teams

Identify key resources containing pediatric considerations to distribute among collaborating partners. These resources should highlight major themes in pediatric disaster planning (e.g., emergency response procedures, mental health needs, equipment/supplies, education/training, and family preparedness resources). For example, Illinois EMSC has developed guidelines for childcare facilities that outlines emergency planning and preparedness (***Emergency Preparedness Planning Guide for Child Care Centers & Child Care Homes****)* which can be shared among community stakeholders.[24] This dialogue enables stakeholders to ensure that the scope of their existing EOPs include the pediatric population.

Family Preparedness

In general, this section is to assist facilities with their community outreach programs. Provide families in the community with guidance on home disaster preparedness and emphasize the need to develop a family disaster plan. This can be accomplished by conducting educational programs, incorporating education into existing forums (e.g., Parent-Teacher Association meetings, town hall meetings, and community fairs), mailing informative resources, or by sharing family preparedness literature in the community setting (e.g., recreation centers, child care centers, doctor/clinic offices, libraries, local fitness centers, churches, and other faith-based locations). Readily available family preparedness resources include, but are not limited to:

- Family Readiness Kit; Preparing to Handle Disasters (AAP) [25]
- Getting your Family Prepared for a Disaster (AAP) [26]
- Family Disaster Plan (ARC) [27]
- Survival Kit Supplies (ARC) [28]
- Family Preparedness Resources (IL EMSC) [29]

Also note that many CSHCN/CFAN are cared for at home, attend school, and are active in their communities, so it is essential to educate those families on how to prepare for emergencies and potential disasters. General guidance on preparedness activities for those with special needs can be found in the FEMA/ARC document titled "***Preparing for Disasters for People with Disabilities and Other Special Needs.***"[30]

Additionally, families with CSCHN/CFAN should be encouraged to:

- Develop a stockpile (96 hour provision) of needed medications, supplies, and nutritional needs.[36]
- Notify their local EMS agency and municipality regarding any specific medical needs that may arise during a disaster (e.g., ventilator needs, left ventricular assist device (LVAD) needs).

- Develop a list of contact information, as applicable, for:
  - Child rehabilitation centers and long-term care centers
  - Community emergency planners
  - **Illinois Division of Specialized Care for Children**[31] or other care coordination/advocacy centers
  - Local hospitals
  - Medical equipment suppliers
  - Primary and specialist physician offices
  - Schools and childcare centers
  - Utility companies

Emergency Information Form

The Emergency Information Form (EIF) was developed by the American College of Emergency Physicians and the AAP to assist healthcare providers who may care for CSHCN during an emergency or disaster situation.[32] This free standardized form is available online in English and Spanish.[32] A completed form should provide a very concise medical summary. Having electronic access (e.g., hospital software and/or the patient's cellphone) to an updated, completed EIF could be invaluable when caring for CSHCN/CFAN. Hospital staff are encouraged to provide families who have CSHCN with a printed EIF and/or instructions on how to obtain an EIF online. In addition, hospital staff should seek out ways to support and encourage families to keep an updated EIF readily available.

Families with CSHCN should maintain a current **Emergency Information Form** (EIF)[32] at each of the following places:

- Home
- Emergency To Go Bag
- Each parent's vehicle
- Each parent's workplace
- Each parent's wallet/purse
- Stored in cell phone(s)
- With the child
- Child's emergency contact
- On file at school/child care center
- Primary and specialist physician offices

Incident Command System

The Incident Command System (ICS) is a comprehensive management tool within the National Incident Management System (NIMS) that is used across the country when responding to disasters.[33] This federally endorsed system uses a consistent, standardized approach to enable effective management as well as communication during a disaster. It is used during all levels of response (local, regional and federal) and establishes a chain of command that is flexible and scalable. The ICS incorporates command, operations, planning, logistics, and finance/administration components throughout the management of a disaster.[33] It is recommended that all responders use NIMS and ICS as it aids in

effective communication between response agencies. Additional information and online training modules can be found on the FEMA website.[34]

Within ICS, the needs of children can be met through the use of Medical Technical Specialists and/or subject matter experts. Assign individuals who are familiar with caring for children to these roles during the response. Wallet cards, job action sheets (JAS), checklists or other forms of portable documentation that outline job responsibilities can assist these individuals with their role.

> ***NOTE:*** *Disaster drills/exercises should incorporate reference tools (e.g., JAS and checklists) so clinical providers can practice locating and using these tools, as well as providing meaningful feedback regarding their usefulness. These reference forms/tools should be accessible through various means and not solely through electronic systems, since a power outage would limit access to online documents. Another useful document to have access to is the Patient Identification Tracking Form, which can assist with the identification and tracking of children.*[35]

Surge Capacity

In a Mass Casualty Incident (MCI), it is likely that the resources (e.g., staff, space, and supplies) to care for a large surge of very high acuity children will be limited at most hospitals. Ensure the communication plan for obtaining additional staff includes those with pediatric expertise. During the preparedness phase, facilities should pre-determine their capacity for pediatric casualties and have a plan in place to handle a pediatric surge of medical and trauma patients. For example, using the population assessment information obtained during the HVA/THIRA, a hospital can identify the percent of children within their service area and then extrapolate surge estimates to determine the potential number of pediatric victims that they may have to care for during an MCI. When planning for surge, consider that children may be the majority of victims if the disaster involves a school, day care center, or other entity where a large volume of children are located.

Also plan for accessing staff that can address the mental health needs of children (e.g., social workers, child life specialists, psychiatry). Information concerning the mental health needs of children can be found later in this document.

It's important to have a process in place to access additional staff to assist during a surge event. Also, recognize that staff may need assistance with their own dependents (e.g., elderly, children, and pets) in an MCI event. This will help assure their availability during a disaster event.

Strategies to increase pediatric surge capacity within the hospital should be consistent with processes integrated into the regional disaster plan as well as the state disaster response plan. All appropriate available space should be utilized; these spaces/areas may have to be reconfigured/modified in order to reduce hazards that may potentially harm children.

Considerations to temporarily increase space to care for children may include:

- Converting outpatient procedure beds into inpatient beds
- Convert adult units to pediatric units
- Expedite discharge for patients, especially healthy newborns and their mothers
- Establish discharge holding areas to open inpatient beds more quickly
- Use hallways or create alternate treatment areas (e.g. cafeteria, on-site fitness center)
- Develop portable pediatric specific disaster supply carts/bags that will ensure availability of appropriate equipment/supplies in any area that cares for children

Considerations to create pediatric emergency treatment capacity outside the hospital may include:

- Initiate mutual agreements with other types of healthcare facilities, such as pediatric long-term care and rehabilitation facilities
- Utilize mobile clinics, faith-based facilities, fitness centers, and/or schools as alternate treatment sites

In addition, it is essential to establish relationships and transfer agreements with pediatric tertiary care centers to facilitate the transfer process.

Equipment/Supplies

During a disaster, it is important to ensure there are adequate supplies and equipment for staff, patients, and families. The federal recommendation is to maintain a stockpile of **at least 96 hours**[36] of supplies. Additional supply considerations are outlined below.

- Children range from newborns to adolescents, so a wide range of supplies and equipment sizes are essential to meet their needs. Each facility should confirm the availability of pediatric-specific equipment on site as well as have a mechanism(s) for quick access to additional supplies through processes such as a Memorandum of Understanding (MOU).
- During a disaster event, typical transfer patterns to pediatric tertiary care centers and hospitals with specialized pediatric services may be disrupted and children may need to be managed at community hospitals for an extended period of time. Consider stocking additional practical supplies to have on-hand for children, such as extra pillows and blankets, pediatric-sized clothing and hospital gowns, flashlights, batteries, diapers, wipes, formula, dextrose in water, bottles, nipples, and distraction devices (e.g. toys, books, board games, art supplies, bubbles, and dolls).

Below are examples of general care items that are useful in managing the needs of children.

Nutrition, Hygiene and Sleeping Supplies[37]			
Nutrition	Nutrition Supplies	Hygiene	Sleeping Supplies
Baby formula Baby food/cereal Oral electrolyte solutions, age appropriate	Baby bottles & nipples for bottles Plastic bowls Sippy cups Toddler feeding spoons/forks Manual breast pumps with bottles Small towels for spit up Pacifiers	Hand sanitizer Wash cloths/towels Diapers (size 1-6) Pull ups (size 4T-5T) Diaper wipes Container for soiled diapers Diaper rash ointment Disposable changing pads Toddler toilet seat (potty chairs) Cloth diapers Infant wash (soap) Infant bathing bins Baby laundry detergent (e.g. dye and fragrance free)	Portable cribs, bassinettes, play pens Laundry baskets (can be used for infant bed; use minimal bedding) Bed sheets Lightweight hypoallergenic blankets

Age Appropriate Toys/Distraction Devices			
For safety and infection control reasons, only stock toys for children that are washable, nontoxic, difficult to break, and without small pieces (NOTE: Toys with small parts may present a potential choking hazard). Consider including some toys/objects that could be given to the child to keep (small new stuffed animals, cars, stickers, coloring books/crayons, etc.).			
Infants/Toddlers	*Preschool/School Age*	*Adolescents*	*General*
Musical/light toys Pop-up toys Mirrors Shape sorters Stacking rings Activity blocks Teething rings Board books Beginner toy cars	Plastic animals, action figures, cars Building blocks Books Dolls Elementary school rated games Foam balls	Teen rated games Video/electronic games Journal and writing supplies Books and magazines Activity sets Music	Bubbles Balls Coloring books and supplies Arts and craft supplies Music Stickers Sculpting clay

Excerpt taken from **Illinois Emergency Medical Services for Children. (2013). Caring for non-injured and non-ill children in a disaster**

NOTE: *Review the equipment and supplies storage areas with respect to real time accessibility. Evaluate access to the storage areas with respect to on-unit location, off-unit, off-site, and proximity to fire doors or areas of contamination. Example: ensure equipment is not stored in a potentially unsafe area such as beyond a fire door that precludes access.*

Guidelines for the Care of Children

Guidelines should be in place that outline how responders can meet the unique needs of children, newborns, and pregnant women. These guidelines will be particularly assistive for those responders who do not typically care for children on a daily basis. Recommended guidelines should include the management of medical and mental health needs of children impacted by a disaster. Access to tips on how to talk with children based on their age/developmental level can also be a useful resource.

Note: "The Illinois Department of Public Health (IDPH) is the lead agency for all public health and medical response operations in Illinois. IDPH is responsible for coordinating regional, state, and federal health and medical disaster response resources and assets to local operations. As a result, an IDPH state

response plan has been developed titled the IDPH Emergency Support Function (ESF) 8 Plan. To address the needs of specialty populations, annexes have been developed to the IDPH ESF-8 Plan."[38]

- **Pediatric and Neonatal Surge Annex:** this annex includes multiple patient care guidelines addressing the medical care management of newborns, children, and pregnant/obstetrical women during a disaster.[38] These patient care guidelines address: obstetrical care, newborn care, respiratory, shock, trauma/blast injuries, and inpatient treatment/monitoring intervention.[38]
- **Burn Surge Annex:** this annex includes burn guidelines for both pediatric and adult patients during a burn mass casualty incident (MCI).[38]

Additional resources to aid hospitals in the development of patient care guidelines may be found on the Illinois EMSC website. For example, the **Pediatric and Neonatal Disaster/Surge Pocket guide** was designed to address the medical needs of children during a disaster.[39] This pediatric resource includes information related to normal childhood values (vital signs, weight, growth/development), triage and assessment tools, treatments/medications, equipment, decontamination, mental health, and security. [39]

NOTE: *Share patient care guidelines within the hospital with those departments that will assist with the pediatric population during a disaster. In addition, non-clinical personnel may be involved in various disaster roles, depending on the type and scope of the incident. For example, public safety personnel may be trained to assist with decontamination processes. Their training should include the unique needs of children during decontamination.*

Mass Casualty Triage: START/JumpSTART©

Triage processes used by emergency departments on a daily basis such as the Emergency Severity Index (ESI) triage system, are not appropriate for use during a MCI. Standardized MCI triage systems guide and assist healthcare personnel and first responders in making rapid triage decisions based on objective criteria that otherwise may be influenced by emotion, especially when triaging children.[40] In Illinois, the two approved MCI triage systems are START for the adult population and JumpSTART© for the pediatric population. Both START and JumpSTART© assess the respiratory, circulatory and neurological status of patients to determine the triage level of each patient and both use the same 4 color coded triage categories.[40, 41] JumpSTART© Pediatric Multiple Casualty Incident Triage[25] is an objective MCI triage system that takes into consideration the physiologic differences of children. The goal is to complete MCI triage of a victim in less than 30 seconds.[40] Ongoing MCI triage training is essential, and use of MCI triage should be incorporated into disaster drills/exercises.

NOTE: *The **JumpSTART© algorithm and training materials** are available on the Illinois EMSC website.[40]*

Decontamination

Special considerations need to be made during decontamination procedures for infants, children of all ages, the unaccompanied child, the non-ambulatory child, and the CSHCN/CFAN population. Decontaminating children will require more time, resources, and personnel as compared to the decontamination of adults, so decontamination plans should take the following into consideration:

- Children may be frightened during decontamination and may scream or resist.
- Most children will need assistance with decontamination. Young unaccompanied children, such as infants and toddlers, will definitely need assistance from hospital personnel.

- Clothing can assist in the identification of a child separated from parents/caregivers. However, identification of children after decontamination will be more challenging when they are no longer wearing their own clothing or jewelry. Incorporate identification processes that address clothing removal during decontamination, and the documentation of clothing items.
- Additional staff will be needed to guide and transport children from the Hot Zone to the Cold Zone, and into the treatment areas. Also, anticipate the needs of those who are blind, deaf, Non-English speaking, or use mobility devices. (Per the CDC, the Hot Zone should be considered a contaminated area with high-risk of exposure to an offending agent.[42] The Cold Zone poses the lowest risk for exposure and minimal contaminating agents are in this area.)[42]
- Plan for how contaminated infants, young children, and CSHCN/CFAN will be managed in the decontamination area. Whenever possible, shower decontamination systems must accommodate an adult (parent/caregiver) as well as the child so the family unit can proceed together through the decontamination process. If this is not possible, then decontaminate the child and send him/her to a designated holding area. Identify how children will be reunited with family members after the decontamination process.
- Take into consideration that when infants and children are wet, they will be slippery. They <u>should never be carried</u> by staff or the parent/guardian through the shower. Avoid potential injury by utilizing a system such as a plastic basket or other device instead of carrying the infant/child. Note: containers used to move infants and young children through the decontamination process should have drainage holes to allow water to flow through.
- Assure that the shower system provides high volume and low water pressure. Also, during the decontamination process use soft bristle brushes with children to avoid skin irritation.
- Since children lose their body heat quickly, ensure access to warm shower water temperature (98˚ F-110˚ F/36.6˚C-43.3 ˚C). Also assure processes are in place to monitor the water temperature before and during decontamination. Immediate access to drying and warming equipment and supplies is essential after decontamination. The facility should consider having access to several of the following items to ensure the child/infant remains normothermic during and after the decontamination process:
  - Appropriate sized gowns
  - Warming blankets
  - Forced-air warming therapy
  - Overhead heat lamps
  - Isolette/radiant warmers
  - Fluid/blood warmer
  - Chemical warming pads

The systematic process for decontamination should be tested minimally once a year by staff who are expected to perform these duties during a disaster. The Agency for Healthcare Research and Quality (AHRQ) has developed an educational video entitled "**The Decontamination of Children**." The video addresses best practices in decontaminating children, and can be used for hospital decontamination trainings.[43] NOTE that this video does depict the carrying of infants/children through the decontamination showering process, which **IS NOT** endorsed or encouraged by Illinois EMSC.

Reunification/Patient Identification

Reunifying children with their parent/caregiver is a critical component of the recovery process. Response agencies need to ensure that their disaster plans include a mechanism(s) to reunify unaccompanied minors. Key considerations include:

- Establish a Pediatric Safe Area/Child Safe Area
  - The Illinois EMSC **Pediatric and Neonatal Disaster/Surge Pocket Guide**[39] offers some basic recommendations on how to set-up a Pediatric Safe Area/Child Safe Area.
  - The **Pediatric and Obstetrical Emergency Preparedness** Toolkit[44] is a guideline for hospitals that was developed by the New York Department of Health. It includes a checklist and coordinator job action sheet for a Pediatric Safe Area/Child Safe Area.
- Take a picture of each child upon arrival to the hospital to facilitate identification. If the child can provide his/her name, write it on the back of the photo. Include a description of the child (e.g., child is a female with blonde hair, wearing a blue coat, black shoes, and carrying a pink backpack).
  - The **Patient Identification Tracking Form**[35] is a tool within the Illinois ESF-8 Plan (State Medical Disaster Plan) for tracking, identifying, and/or reuniting children that have been affected by a disaster. Pertinent information that should be included on this form include: child's physical description and photograph, who accompanied the child, medical history and treatment, and disposition/discharge.[35]
- Utilize existing tracking systems and/or databases to assist with reunification. Electronic tracking systems and databases may be available to help gather and share information on unaccompanied children.[45] Organizations that may be able to assist include:
  - National Center for Missing and Exploited Children®: This organization coordinates the National *Emergency Child Locator* through a toll-free hotline and website.[46] Additionally, the *Unaccompanied Minors Registry* (UMR) helps to collect, store, and report information related to missing or lost children during a disaster.[47]
  - Law Enforcement: Local and state law enforcement agencies may have child identification programs that allow parents to have their child's picture and fingerprints pre-entered into a database to assist with identification and reunification during disasters and other emergencies.
  - Department of Children and Family Services (DCFS): This agency may be able to assist with verifying guardianship of unaccompanied children who need reunification.
- Verify guardianship before releasing children to a parent/caregiver. Although the child may recognize their parent/caregiver, there may be times when the presenting parent/caregiver does not have legal custody of the child. Partner with the social services department if available. Below are recommended processes/documents that can assist with verifying the child's identity and parent/caregiver guardianship:
  - Interview the child
  - School/personnel records
  - Child identification card issued by a law enforcement agency
  - Legal documents (e.g., birth records, child support documents)
  - Government issued identification card of parent/caregiver
  - Photo of the child with parent/caregiver prior to disaster
  - Questions to consider when verifying guardianship:
    - Was this the person the child was living with prior to the incident?
    - Is this the person who is the usual guardian of the child?

- Does this person have proof of guardianship?
- Does this person describe the child accurately to staff?
- Does this person pick the child accurately from a group of pictures?

Prior to releasing the child to the guardian, it is essential to gather information, including: take a picture of the guardian; obtain a copy of the guardian's identification; document the guardian's permanent address and current/temporary address; take a picture of the guardian's vehicle including license plate number, and verify the guardian's current phone number.

Security

Children are at high risk for abuse, abduction, and trafficking during a disaster, especially when separated from their parents/caregivers. Therefore, the utmost attention must be taken to protect their overall safety and well-being. Contact law enforcement and other agencies such as the Department of Children and Family Services and the National Center for Missing and Exploited Children® for assistance with reunifying unaccompanied minors. Key strategies to help ensure the safety of children include:

- Make all reasonable efforts to keep the family together during all phases of care. This includes during evacuation, decontamination, and sheltering.
- As available, utilize banding/tagging processes to assist with identifying each family unit.
- Designate family areas that are separate from the general population in order to keep families together and help ensure a safe and secure environment for children.
- Establish safe areas (Pediatric Safe Areas/Child Safe Areas) for unaccompanied children that are monitored, separate from the general population and have designated staff member(s) to supervise the children. General staffing guidelines for these child-safe areas are as follows:
  - 1 adult to 4 infants
  - 1 adult to 10 preschool children
  - 1 adult to 20 school-aged children
  - Detailed staffing guidelines can be accessed in Section 407.190 of the Illinois Licensing Standards for Daycare Center Rules. [48]

NOTE: *Include infant/child abduction procedures within the organization's EOP/disaster plan and conduct tests/drills of these procedures at least once a year.*

Legal Issues

Working proactively with the hospital legal department as the hospital disaster plan/EOP is developed and undergoes ongoing review is strongly encouraged, since there are potential legal issues that may be encountered when caring for children during disasters. Examples include:

- Children separated from their parents/caregivers
- Reunification of unaccompanied minors
- Consent for care (medical and mental health)
- Accommodations for CSHCN/CFAN in shelters

Evacuation

Evacuation of a hospital is a daunting task, and the evacuation of newborns, infants, or children is considered a high-risk activity. Some infants and children may be very ill and have numerous medical equipment items that need to be evacuated with them. In addition, some children, especially neonates, may be too unstable to move. Recognizing if an evacuation needs to be performed *immediately* (e.g., fire on the unit) versus *planned* (e.g., a hurricane weather watch emergency) should help guide the necessary actions to take in order to keep pediatric patients safe from harm.

The Illinois EMSC ***Neonatal Intensive Care Unit (NICU) Evacuation Guidelines*** can assist hospitals with planning for an evacuation of high risk, medically fragile neonatal patients.[49] These guidelines may be useful for other pediatric patient populations as well. In addition, the following are some general concepts that hospitals can consider when planning for the evacuation of children:

- *Evacuation equipment* - Have equipment available to assist in the evacuation of infants and children. Using commercial evacuation equipment is typically a safer option than carrying infants/children down stairs. This equipment should be stored in a location that is easily accessible to staff during a disaster.
- *Resuscitation equipment/supplies* - Identify the availability of pediatric resuscitation equipment during the evacuation process. For example, hospitals can plan to have "jump bags" with basic resuscitation equipment deployed to the staging areas or backpacks that staff can carry during the evacuation process to assist with this process. Assigning pre-designated staging areas is ideal. Identify how the staging areas will be secured.
- *Safety and security* - Consider the safety and security of children when planning for an evacuation. Consider assigning extra security staff or ensure that every child is paired with a staff member during the evacuation and until they are safely in a new location. These are just two examples of how hospitals can ensure the safety of children during the evacuation process.

Incorporate the above components into the hospital evacuation plan. Also, ensure routine training is conducted on the use of evacuation equipment as well as conduct annual drills/exercises so that each hospital unit/department that cares for pediatric patients has opportunities to practice their evacuation processes.

Sheltering

During a disaster, providing emergency sheltering for victims is often needed. When establishing an emergency shelter, consider the following:

- Identify a child-friendly area within the shelter.
- Provide appropriate supervision for unaccompanied children. *Refer to the Security section* of this document for general staffing guidelines.
- Address nutritional needs by providing age appropriate food. For example, assure the availability of formula for infants, small bite-sized food for younger children as well as table food for older children. The potential for food allergies should also be considered.
- Provide age appropriate sleeping supplies as well as distraction devices. *Refer to the Equipment/Supplies section* of this document.[37]

- Accommodate the needs of CSHCN/CFAN by providing access to supplies and space that are safe and tailored to their needs. For example, electrical outlets may be needed for children with medical devices or a quiet space is preferred for a child with autism.

Resources that are available to assist with establishing an emergency shelter and addressing the needs of children include:

- **FEMA: *Guidance on Planning for Integration of Functional Needs Support Services in General Population Shelters*[50]**
- **United States Department of Homeland Security: Supplemental Resource: Children in Disasters Guidance[51]**
- Private sector partners: Consider their assistance in providing physical space for sheltering as well as resources to care for children (e.g. faith-based organizations, schools, childcare facilities)

Pharmaceutical Preparedness

Children require different medications, routes, and dosages than adults due to their anatomic and physiologic differences. In addition, certain drugs and biological agents may have different effects on children.[15] Note: Since the correct medication dose for a child is based on his/her weight, ensure access to an accurate method for correct weight-based kilogram dosing (the dosing method should not be dependent on electrical power in the event of a power outage).

- Consider using weight estimation tools, especially if the weight of the child is not known. There are several tools currently available (e.g., Broselow-Luten™ Pediatric Emergency Tape[52], Handtevy Method™[53], and SmartSquad System©[54]). NOTE that there are limitations to every system; for instance, it is important to verify that the medication concentration stocked for use by your organization during a disaster is the same medication concentration listed on the drug-dosing tool, to avoid a potential dosing error. Collaborate with hospital pharmacy staff and conduct hands-on drills/exercises with staff (e.g., pediatric mock code resuscitative exercises) using the hospital defined drug-dosing tool.
- It is highly recommended that every facility create pre-printed emergency drug dosing forms/tools that encompass weights from 3kg to 50 kg based on the drug concentrations specific to the facility. This will help to avoid medication calculation errors. This tool should be used during day-to-day pediatric emergencies to increase staff familiarity.
- Access medication and medical management guidelines for biological, chemical, and nuclear events from the CDC.[55] These guidelines assist clinicians in recognizing various biological, chemical, and nuclear agents, their incubation periods, signs/symptoms, laboratory and diagnostic testing, and their treatment.

Medications, such as amoxicillin, ciprofloxacin, doxycycline, and oseltamivir (Tamiflu®) can be used either for prophylaxis or treatment after exposure to certain agents such as anthrax or during a pandemic flu outbreak. These medications are typically included in hospital, regional, state, and federal stockpiles. However, it is anticipated that there will be a shortage of liquid concentrations of each of these medications, which are needed for infants, young children, or others who are unable to swallow pills. Therefore, hospitals should include a process in their pharmaceutical plan on how to convert medication tablets into liquid form. In addition, hospitals should outline the provision of instructions to parents/guardians on how pills can be converted to liquid form at home. IDPH has developed

instructional brochures for amoxicillin, ciprofloxacin, doxycycline, and oseltamivir (Tamiflu®) that can assist with this process.[56, 57, 58, 59]

Since access to external supplies may be difficult during the initial hours/days of a disaster, develop a plan to stock 96 hours of medications, food and water for staff, patients, families, and projected surge capacity. This stockpile should include pediatric and neonatal supplies as well. Keep in mind that a process for securing these supply items and checking expiration dates/rotating stock will need to be developed. A list of medications that are recommended to stock in the hospital for pediatric use can be found in the Facility Recognition equipment requirements on the Illinois EMSC website.[2]

NOTE: *Staff should also maintain a 96 hour supply of their own personal medication in lockers or other secure areas.*

Recovery

Recovery involves rebuilding the community so individuals, families, businesses, hospitals, and governments can function again on their own, return to normal life, and protect against future hazards. Recovery can take weeks, months, or even years to complete. Note that the Recovery phase has some overlap with actions performed in the response phase. Below are some recovery process considerations for children:

- Returning the child to their normal routine can greatly aid in the recovery process. Enrolling children into school will provide a sense of normalcy. Temporary accommodations for school may be needed if the physical structure of their existing school is damaged and unsuitable for use or if a family has been displaced out of their community.
- Children often release their emotions through play. The inclusion of play is crucial in helping children cope with the stress of the incident. It is recommended to have adequate space for play and support at school, in a shelter, and at home.
- After a disaster, families may be displaced and need alternate living situations and accommodations. Children may also become separated from their families necessitating assistance with reunification. The basic principles of reunification identified previously in this document apply during the recovery phase as well. *Refer to the Reunification section.*
- It is important to ensure children and their families have access to medical care. Use resources such as local health departments to assist with establishing medical care. CSHCN/CFAN may require additional medical resources and linkage with either their primary healthcare provider or a new practitioner depending on the situation.

Mental Health

Children typically react to a disaster based on their age and developmental level. However, children may regress during traumatic experiences such as disasters. Note: It is particularly important to understand the baseline developmental level of the CSHCN/CFAN child in order to anticipate how they may respond during an incident. The next page contains a table that outlines common reactions that children may exhibit during and after a disaster based on common age groupings.[37]

Common Reactions in Children During and After a Disaster[37]

Age Group	Emotional Reaction	Physical/Behavioral Reaction
Newborn/ Infant	• Anxiety when separated from primary caregiver(s) • Fear of separation	• Exaggerated startle reflex • Crying/fussiness • Irritability • Feeding problems • Sleeping problems
Toddler	• Fear of separation • Worry • Anxiety • Sadness • Missing people/things	• Clinging to caregivers • Crying/fussiness • Irritability • Regression • Feeding problems • Sleeping problems/nightmares • Aggression • Hyperactivity • Tantrums
Pre-school	• Fear of separation • Fear of being alone • Helplessness • Powerlessness • Passivity • Magical thinking - feel that they caused the event or it occurred to punish them	• Aches and pains • Confusion - not understanding that the immediate danger is over • Sensitivity to noise • Regression • Clinging to care givers • Eating problems • Sleeping problems • Crying • Not talking • Reenact incident repeatedly
School age	• Withdrawal • Fearfulness • Sadness • Guilt - feels responsible • Anger • Concrete thinkers • Increased interest in details about death due to limited understanding and comprehension of the finality of death.	• Aches and pains • Confusion • Poor concentration • Eating problems • Sleeping problems • Attention seeking • Regression • School avoidance • Aggression • Fixated on the event • Irritability
Adolescent	• Withdrawal • Fearfulness • Sadness • Hopelessness • Detached • Shame/guilt • Overwhelmed	• Aches and pains • Poor concentration • Sleep changes • Acting out • Irritability • Substance abuse • Isolation • Avoidance • Abrupt social and attitude changes • Dangerous or risk-taking behavior

It is imperative that the mental health needs of children are addressed during disasters and throughout the recovery phase. Psychological First Aid, or PFA, is a post-disaster intervention technique that addresses survivors' basic needs, their safety, their ability to calm themselves or others, and their disrupted social connections following a disaster.[60] The use of PFA can provide immediate as well as long-term benefits. Although PFA is especially helpful for children, it can also benefit adults and other family members.

Examples of PFA interventions[60] include:

- Reassure children that parents and officials are working to keep everyone safe.
- Encourage children to ask questions, and share thoughts, feelings, and worries.
- Do not force children to talk about the event if they are reluctant to do so. Instead, encourage them to participate in other activities such as drawing pictures or writing a story.
- Offer verbal reassurance. For example, preschool aged children may feel that they caused the event and would benefit from being reassured that the event is not their fault.
- Validate children's fears, anxieties, or feelings of injustice, no matter how trivial they may seem.
- Provide safe outlets to express anger (e.g., yelling into a pillow, physical exercise).
- Return to everyday routines as soon as possible.
- Keep in mind that members of the same family can react in different ways to a disaster.
- Be patient and supportive of children; be clear that unacceptable behavior will not be tolerated.
- Check in with the child over time through observation and by encouraging children to express thoughts, feelings, and concerns.
- Take time to deal with the parents' own feelings and needs.

It is common for children to have behavioral changes at any time after a disaster which reinforces the need to implement PFA interventions to prevent long term consequences. The **PsySTART triage system** helps guide response activities by identifying those who have the greatest need or are at the greatest risk and allows responders to match the available mental health resources to those individuals.[61] PsySTART, a scalable and flexible system, can be used on child and adult victims as well as responders in disasters.[61] It performs rapid triage for an individual as well as for the population affected by the disaster in near real time. To obtain additional information on these interventions and appropriate strategies for addressing the mental health needs of children, consider the following resources:

- **National Child Traumatic Stress Network and the National Center for PTSD: *Psychological First Aid Manual*[60]**
- **PsySTART Triage[61]**
- **Illinois EMS for Children: *Disaster Mental Health Response for Children* education module[62]**

Training and Education

General disaster principles related to the needs of children should be incorporated into training and education for all responders. There are many courses available, both online and in person, to better prepare disaster planners and responders. On the following page are a few examples of available

courses that provide core ICS principles as well as other trainings specific to the needs of the pediatric population:

- FEMA Independent Study Program Courses[63]
  - An Introduction to the National Incident Management System
  - ICS for Single Resources and Initial Action Incidents
  - Introduction to the Incident Command System
  - Planning for the Needs of Children in Disasters
- **Illinois EMS for Children: Disaster Mental Health Response for Children online module**[62]
- National Disaster Life Support Foundation: Basic Disaster Life Support (BDLS) and Advanced Disaster Life Support (ADLS)[64]
- Texas A&M Engineering Extension Service (TEEX): Pediatric Disaster Response and Emergency Preparedness[65]

Disaster Exercises/Drills

Drilling and practicing disaster response in the hospital and pre-hospital settings are the best way to help assure the response in an actual incident runs as smoothly and safely as possible. Below are considerations for addressing the needs of children in drills/exercises:

- Ensure the inclusion of child victims of all ages and CSHCN/CFAN in all drills/exercises.
- Regularly conduct pediatric evacuation, surge, decontamination, and infant/child abduction drills/exercises.
- Incorporate testing of patient identification and family reunification plans into training and exercises, since identification and reunification are high risk activities. Access to correct patient identification can assist in identifying specific medical concerns (e.g., pre-existing medical conditions and allergies), and assist with the safe reunification of children to the correct caregiver(s).
  - Small infants and young children (due to their developmental levels) will likely have limited or no verbal skills making them poor historians during a disaster. This creates unique challenges, especially when trying to identify young children and reunite them with their families.
  - Patient identification tools should include detailed physical and medical specifics. The tools should also include a process for differentiating between children who are the same age, have similar hair and eye color, and are wearing nearly identical clothing (e.g., school uniforms, organizational group t-shirts, etc.).
- Since children represent approximately 25% of the population,[15] Illinois EMSC recommends at least 25% of the patients in drills/exercises include children within the following age/need groups.
  - Infants (< 1 year old)
  - Toddlers (1-3 years old)
  - Pre-school (4-6 years old)
  - School age (7-12 years old)
  - Adolescent (≥ 13 years old)
  - CSHCN/CFAN: Children who have physical, sensory, mental health, cognitive and/ or intellectual disabilities affecting their ability to function independently without assistance

- Using actual children in exercises is considered ideal in order to provide a realistic experience, however there are many associated challenges and limitations. Other options include the use of simulated victims. Incorporate child victims into exercises by accessing:
  - Employees' children during a "Bring your Child to Work Day"
  - Local girl scout or boy scout troop participation
  - Local schools (especially those with fine arts/acting groups)
  - Dolls or mannequins
  - Paper cut out victims (e.g. Flat Stanley's/Flat Stella's)[66]
- Participation of children in drills/exercises not only enhances the capabilities of responders, but also provides the opportunity for children to learn about disasters. The benefits that children gain by participating in drills/exercises includes the following:
  - Engages them in preparedness initiatives
  - Helps them to understand what may occur during a disaster
  - Teaches them how to respond (e.g. "Drop, Cover and Hold On" during an earthquake)
  - Decreases fear during an actual response
  - Improves overall family preparedness when children share lessons learned with their family.

NOTE: *Keep drills that include actual children short, safe, and fun. Listed below are some potential ideas to consider.*

- Invite community members/partners (e.g., first responders).
- Have employees bring their own children.
  - Let the employees/parents have visual contact at all times to ensure overall safety and comfort.
  - Allow employees/parents to share feedback after the drill.
- Utilize real children for testing of identification and reunification processes.
- Consider using a few children and substituting mannequins, dolls, or paper-cutouts for the remaining disaster patients.
- Ask the hospital Volunteer Department if a pet therapy dog can participate in order to test some unique situations that a service dog or guide dog may encounter.
- Engage staff members and/or their family members who may have CSHCN/CFAN to elicit their direct feedback with the disaster preparedness process (e.g., hazmat, medical care areas, identification, and reunification). A focus group of parents who have CSHCN/CFAN may be particularly helpful in identifying potential red flags impeding the safety of their children.
- Assess the directions being given to patients as they proceed through different areas (i.e. flow from Hot Zones to Cold Zones) to determine if they are appropriate and will accommodate at-risk patients, such as those who are non-English speaking or who are deaf.
- Videotape a disaster drill to facilitate capturing portions of the exercise that went well and those areas where improvement is warranted.

NOTE: *Often, CSHCN/CFAN are not included in drills/exercises. This lack of inclusion can leave responders and organizations/agencies unprepared****. By making it a standard practice to include CSHCN/CFAN in every drill and exercise, then an organization/agency can adequately test the capacity of the system to handle this population.***

Disaster Critique

After each disaster event (actual or simulated), the response should be critiqued to identify strengths and any opportunities for improvement through an After-Action Report (AAR). Throughout this process, it is critical to assess if the needs of children were adequately met which may involve consulting pediatric experts. Lessons learned during these disaster exercises/drills should be communicated back to the team (e.g., medical providers, ancillary staff, public safety officers, and leadership). After revisions to the plans are completed, an exercise/drill should be conducted to test any newly developed processes. For more information about disaster critiques, development of AARs, and action/improvement plans, please visit FEMA's Homeland Security Exercise and Evaluation Program (HSEEP) website.[67]

NOTE: *Consider sharing lessons learned with other organizations as well as sharing successful strategies taken for resolving identified gaps or needs.*

Conclusion

Children have unique characteristics that make them more vulnerable during disasters. This document was created to promote awareness of children's unique vulnerabilities in a disaster and to guide hospitals and healthcare organizations in better integrating the needs of children in their disaster plans. Many of the concepts in this document are also applicable or can be easily adapted by other agencies, and entities involved in disaster response (e.g., schools, local health departments, prehospital agencies, and emergency management agencies). These entities also need to incorporate the needs of children into their plans and response procedures. Implementing these recommendations is only an initial step in improving emergency and disaster preparedness for children. A collaborative effort by healthcare providers, communities, families, and individuals is needed to assure ongoing preparedness for children in every stage of the planning process.

Appendices

Appendix A

Acronyms

AAP	American Academy of Pediatrics
AAR	After Action Report
ADLS	Advanced Disaster Life Support
AHRQ	Agency for Healthcare Research and Quality
ARC	American Red Cross
BDLS	Basic Disaster Life Support
C	Celsius
CDC	Centers for Disease Control and Prevention
CFAN	Children with Functional and Access Needs
CSHCN	Children with Special Health Care Needs
DCFS	Department of Children and Family Services
EIF	Emergency Information Form
EMS	Emergency Medical Services
EMSC	Emergency Medical Services for Children
EOP	Emergency Operations Plan
ESF	Emergency Support Function
ESI	Emergency Severity Index
F	Fahrenheit
FAN	Functional and Access Needs
FEMA	Federal Emergency Management Agency
HPP	Hospital Preparedness Program
HSEEP	Homeland Security Exercise and Evaluation Program
HVA	Hazard Vulnerability Assessment
ICS	Incident Command System
IDPH	Illinois Department of Public Health
IL	Illinois
IL EMSC	Illinois Emergency Services for Children
JAS	Job Action Sheet
JumpSTART©	Pediatric mass casualty triage algorithm
Kgs	Kilograms
MCI	Mass Casualty Incident
MOU	Memorandum of Understanding
NCMEC	National Center for Missing and Exploited Children
NICU	Neonatal Intensive Care Unit
NIMS	National Incident Management System
OB	Obstetrical
PFA	Psychological First Aid
PHEP	Public Health Emergency Preparedness
PPE	Personal Protective Equipment
PsySTART	Disaster mental health triage system
PTSD	Post-traumatic Stress Disorder
START	Adult mass casualty triage algorithm
TEEX	Texas A&M Engineering Extension Service
THIRA	Threat and Hazard Identification Risk Assessment
URM	Unaccompanied Minors Registry

Appendix B

Hospital Pediatric Preparedness Checklist

HOSPITAL PEDIATRIC PREPAREDNESS CHECKLIST

September 2018

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

ILLINOIS EMSC
Emergency Medical Services for Children
www.luriechildrens.org/emsc

How to Use This Checklist

All hospitals need to assure that they are prepared to handle the unique needs of children in a disaster event. As hospitals develop and test their emergency operations plans and other disaster related plans/policies, Illinois EMSC recommends the inclusion of pediatric components in several key areas. The Hospital Pediatric Preparedness Checklist was designed to help hospitals identify their current level of pediatric preparedness and recognize additional opportunities for improvement.

The Hospital Pediatric Preparedness Checklist is also used during EMSC Pediatric Facility Recognition Site Surveys to evaluate the inclusion of pediatric preparedness components within hospitals' disaster plans/policies and identify the types of technical assistance and resources that may be needed. After the conclusion of these site surveys, hospitals receive a follow-up letter that may request an improvement plan to address any opportunities for improvement identified during the survey. This improvement plan may need to be a multi-year plan.

To assist all hospitals with addressing opportunities for improvement identified after completing this checklist and/or undergoing a Pediatric Facility Recognition Site Survey, a template improvement plan is also included in this document. In addition, resources are provided at the end of this document to aid hospitals in further developing their emergency operations plans to incorporate each of the components outlined in this checklist.

This checklist was developed under the direction and guidance of Illinois Emergency Medical Services for Children, the Pediatric Preparedness Workgroup, the Facility Recognition Committee, and the EMSC Advisory Board.

Table of Contents

HOSPITAL PEDIATRIC PREPAREDNESS CHECKLIST

Hospital: _____ **City**: _____ **EMS Region:** _____

Date: _____ **Pediatric Recognition Level**: _____ **NONE** _____ **SEDP** _____ **EDAP** _____ **PCCC**

Person Completing Checklist _____ **Title** _____

EMERGENCY OPERATIONS PLANNING	Yes	No	In Progress	Comments	List page #'s where documented in your policy/plan
Are pediatric components integrated into the hospital EOP (either directly or referenced to an Annex)?					
If yes, are pediatric components separate considerations or included under "at risk" population categories? ***(This is only a recommendation and not a required consideration).***					
Were staff with pediatric focus consulted in writing and updating the hospital EOP?					
Has the hospital conducted a recent HVA or THIRA?					
If yes, did the process of completing your hospital's HVA/THIRA include conducting a population assessment of children in your surrounding community (e.g. schools, museums, child care centers, recreational parks?					
Was the information obtained in the population assessment incorporated into the hospital's HVA/THIRA?					
Does staff with pediatric focus regularly attend emergency preparedness committee meetings and contribute to overall hospital preparedness?					
Are staff with pediatric focus encouraged to take courses such as FEMA IS 100, 200, & 700 to become more familiar with the incident command system? ***(This is only a recommendation and not a required consideration).***					
Are staff with pediatric focus integrated into the hospital's incident command system as indicated by the type of event?					
Does the disaster preparedness coordinator regularly attend and/or participate in the regional healthcare coalition meetings?					
Describe planning challenges for EOP.					

SURGE CAPACITY		Yes	No	In Progress	Comments	List page #'s where documented in your policy/plan
Are cribs/beds/isolettes/space identified for use in the event of a pediatric surge?						
If yes, identify how many of the following types are on-site.	Isolettes					
	Cribs					
	Beds					
Does the hospital EOP or other disaster related plans/policies identify specific inpatient units or areas to care for pediatric patients during a mass casualty or surge event?						
If yes, list the identified areas.						
Does the hospital have access to pediatric equipment and supplies (including pediatric isolation equipment, pediatric face masks, additional cribs, isolettes, and beds) either through their own stockpile or an up to date MOU with an outside facility/vendor?						
Does the hospital EOP or other disaster related plans/policies, have processes in place to address the needs of pregnant women and newborns in disasters, especially those hospitals without OB services (e.g. equipment, surge areas, care guidelines)?						
Does the hospital EOP or other disaster related plans/policies, include a process to provide age appropriate food (including formula) and potable water to an influx of infants/ children and children with special health care needs (e.g. stockpile, MOU with external facility/vendor)?						
If yes, how many hours of stockpile are onsite?						
Does the hospital EOP or other disaster related plans/policies, include a process for managing the personal hygiene and sanitation needs of children and children with special health care needs/children with functional and access needs?						
Within the hospital's alternate treatment site, is a specific location/area designated for children?						
Is there a specific plan or process for accessing extra staff in the event of a mass casualty or surge event?						

If yes, does the staffing plan include accessing mental health professionals specializing in the needs of children? (e.g. child life specialists, psychologists, social workers)						
Is there a specific plan or process to assist staff with their dependents in the event of a mass casualty or surge event?						
If yes, does the plan include:	Child care					
	Elder dependent care					
	Pet care					
Has the hospital tested pediatric surge capacity within the last 24 months?						
Describe planning challenges for SURGE CAPACITY.						
DECONTAMINATION		**Yes**	**No**	**In Progress**	**Comments**	**List page #'s where documented in your policy/plan**
Are pediatric components included in your hospital decontamination plan?						
Does the decontamination water system provide low pressure/high volume water?						
Is the water source for decontamination warmed (between 98°F - 110°F or 36.6° C - 43.3° C)?						
If yes, describe how the temperature will be monitored before & during decontamination?						
Does the plan include a method(s) to safely mobilize infants/ children and children with special health care needs/children with functional and access needs through the showers?						
If yes, describe method(s).						
Has the hospital conducted a decontamination exercise/drill/ training within the last 12 months that has included pediatrics and the method described above?						
Does the plan include stockpiling appropriate supplies for warming infants/children? (e.g. warming devices, towels, blankets, pediatric gowns, etc.)						

Describe planning challenges for DECONTAMINATION.					
REUNIFICATION/PATIENT TRACKING	**Yes**	**No**	**In Progress**	**Comments**	**List page #'s where documented in your policy/plan**
Does the hospital EOP or other disaster related plans/policies, identify methods for patient identification and tracking? (e.g. triage tags, surgical marking pens or waterproof markers, transparent derma tape, wrist/ankle bands)					
If yes, describe method(s).					
Does the hospital EOP or other disaster related plans/policies, identify processes for reuniting unaccompanied or displaced infants/children and children with special health care needs/children with functional and access needs with legal caregivers?					
If yes, describe methods(s)					
Does the hospital EOP or other disaster related plans/policies, identify processes for verifying guardianship before releasing an unaccompanied or displaced infant, child or child with special health care needs/child with functional and access needs?					
If yes, describe method(s).					
Does the hospital incorporate community partners such as the American Red Cross in assisting unaccompanied or displaced children?					
Does the hospital EOP or other disaster related plans/policies, identify a plan/process to photograph unaccompanied children?					
If yes, does the hospital have a readily available camera and the ability to print the photograph?					
Is there a plan/process to work with social services or law enforcement regarding disposition of unaccompanied or displaced children and children with special health care needs/ child with functional and access needs?					
Has the hospital conducted an exercise/drill/training within the last 12 months that has tested the reunification process described above?					
Describe planning challenges for REUNIFICATION/ PATIENT TRACKING.					

SECURITY	Yes	No	In Progress	Comments	List page #'s where documented in your policy/plan
Does the hospital EOP or other disaster related plans/policies, incorporate lock down or secure access procedures when an infant/child is missing?					
Does the hospital EOP or other disaster related plans/policies, incorporate child abduction procedures? (e.g. Code Pink)					
Has the hospital tested their infant/child abduction procedures within the last 12 months? How often are they tested?					
Does the hospital EOP or other disaster related plans/policies, designate a pediatric safe area?					
If yes, what security measures are in place?					
Describe planning challenges for SECURITY.					
EVACUATION	**Yes**	**No**	**In Progress**	**Comments**	**List page #'s where documented in your policy/plan**
Are Emergency Department, pediatric and nursery staff familiar with evacuation procedures and designated/ alternate routes?					
If yes, how often are these procedures reviewed?					
Do the Emergency Department, nursery and pediatric units have adequate supplies and equipment for evacuation?					
If yes, what type of equipment is available?					
Does the hospital EOP or other disaster related plans/policies, address planned vs. immediate evacuations?					
Have evacuation staging areas with secured access been pre-designated in the hospital plan?					
If yes, are staging areas stockpiled or have ready access to appropriate resuscitation supplies?					

Have unit specific evacuation plans been prepared for the following units (as applicable)?	Pediatric Unit				
	PICU				
	Newborn Nursery				
	NICU				
Have unit specific evacuation exercises/drills/training been conducted within the last 12 months?					
Describe planning challenges for EVACUATION.					

MASS CASUALTY TRIAGE: START/JUMPSTART		**Yes**	**No**	**In Progress**	**Comments**
Has the following staff received training in mass casualty triage using JumpSTART?	Emergency Department Staff				
	Pediatric Inpatient Staff				
	Other				
If yes, how often are these procedures reviewed?					
Did the hospital purchase the IL customized SMART bags? (includes START/JumpSTART algorithm cards and no pediatric tape)					
Has the JumpSTART algorithm been used in an exercise/drill/training within the last 12 months?					
Describe planning challenges for MASS CASUALTY TRIAGE: START/JUMPSTART.					

CHILDREN WITH SPECIAL HEALTH CARE NEEDS (CSHCN)/CHILDREN WITH FUNCTIONAL AND ACCESS NEEDS (CFAN)	**Yes**	**No**	**In Progress**	**Comments**	**List page #'s where documented in your policy/plan**
Does the hospital routinely provide treatment to any CSHCN/CFAN and their families?					
If yes, does the hospital provide and encourage families to use and regularly update an Emergency Information Form (EIF)?					

Are there systems in place to handle CSHCN/CFAN during a disaster, especially for hospitals that typically transfer these children to pediatric specialty centers (e.g. MOUs to obtain extra medication, ventilators; care guidelines, etc.),					
Describe planning challenges for CSHCN/CFAN.					
PHARMACEUTICAL PREPAREDNESS	**Yes**	**No**	**In Progress**	**Comments**	**List page #'s where documented in your policy/plan**
Does the hospital EOP include a medication distribution plan or process?					
If yes, is there a process outlined within the plan for converting pills to liquid formula for children for Amoxicillin, Ciprofloxacin, Doxycycline, and Oseltamivir?					
If yes, does hospital staff have ready access to instructions specific to children for Amoxicillin, Ciprofloxacin, Doxycycline, and Oseltamivir?					
Describe planning challenges for PHARMACEUTICAL PREPAREDNESS.					
RECOVERY	**Yes**	**No**	**In Progress**	**Comments**	**List page #'s where documented in your policy/plan**
Does the hospital EOP or other related plans/policies, outline the process to work with primary providers, social services, community partners, public health or other health services to provide services including screening, primary prevention and treatment for mental health needs of children and children with special health care needs?					
If yes, describe the plan.					
Does the hospital EOP or other related plans/policies address providing parent information resources (e.g. *CDC's Helping Parents Cope* document) on addressing the health needs of children after a disaster?					

Does the hospital EOP or other related plans/policies address the process to assist staff with their self-care/mental health needs following a disaster?					
If yes, describe the plan.					
Describe planning challenges for RECOVERY.					

EXERCISES/DRILLS/TRAININGS	Yes	Live or Simulated	No	In Progress	Type of Exercise (Surge, Evacuation, Decon, Infant/Child Abduction, Other)	Comments	Provide AARs for review during the Site Survey
Has the hospital included the following groups in exercises/drills/trainings within the past 12 months?							
Infants (≤ 1 year old)							
Toddlers (1-3 years old)							
School age children (4-12 years old)							
Adolescents (≥ 13 years old)							
Children with Special Health Care Needs/Children with Functional and Access Needs							
Did the hospital prepare a hospital specific After Action Report for drills or exercises conducted in the past 12 months?		N/A					
If yes, were lessons learned/opportunities incorporated into the overall EOP?		N/A					
Did the hospital prepare a hospital specific After Action Report for any real event that has occurred in the past 12 months?		N/A					
If yes, were lessons learned/opportunities incorporated into the overall EOP?		N/A					
Describe planning challenges for EXERCISES/ DRILLS/TRAININGS.							

Appendix A:

IMPROVEMENT PLAN TEMPLATE

The template improvement plan below can be utilized by hospitals to outline a plan that will address opportunities for improvement in pediatric disaster preparedness components identified when utilizing the above checklist and/or undergoing the Pediatric Facility Recognition Site Survey. The table below contains an example.

Planning Section	Identified Gap	Improvement Plan Description	Primary Responsible Person and/or Department	Anticipated Start Date	Anticipated Completion Date
Surge (example)	Incorporate pediatric components into alternate care site (ACS) plans (example)	EP Committee will meet to work on developing ACS plans. Pediatricians will be consulted to identify areas within the ACS that can be utilized to care for children(example)	Emergency Preparedness Coordinator(example)	1/1/2016 (example)	6/1/2016 (example)

Appendix B:
Hospital Preparedness Checklist
References and Resources

Emergency Operations Planning

Federal Emergency Management Agency (FEMA)

Comprehensive Preparedness Guide 201: Threat and Hazard Identification and Risk Assessment Guide Supplement 1: Toolkit

This toolkit provides resources and information, data sources, and templates to support the conduction of a THIRA as described in the Comprehensive Preparedness Guide 201: Threat and Hazard Identification and Risk Assessment Guide.

Comprehensive Preparedness Guide (CPG) 201: Threat and Hazard Identification and Risk Assessment Guide

This guide provides communities with a five-step process for conducting a Threat and Hazard Identification and Risk Assessment (THIRA). The first edition (April 2012) described a standard process for identifying community-specific threats and hazards and setting capability targets for each core capability identified in the National Preparedness Goal as required in the Presidential Policy Directive (PPD) 8: National Preparedness. This edition expands the THIRA process to include estimation of resources needed to meet the capability targets.

Illinois Emergency Medical Services for Children (EMSC)

Pediatric Disaster Preparedness Guidelines

These guidelines were developed as a resource to assist hospitals and healthcare entities in addressing the needs of children during disaster planning. Hospitals should strive to incorporate pediatric components into their organization's emergency operation's plan. This document outlines the specific needs of children during and after a disaster event, as well as strategies for addressing those needs.

Surge Capacity

Agency for Healthcare Research and Quality (AHRQ)

Pediatric Hospital Surge Capacity in Public Health Emergencies

This document consists of guidelines to assist pediatric hospitals in converting from standard operating capacity to surge capacity and help community hospital emergency departments provide care for large numbers of critically ill children. The tool addresses needs such as communications, staff responsibilities, triaging, stress management, and security concerns when handling large numbers of children with either communicable respiratory diseases or communicable foodborne or waterborne illnesses.

Surge Capacity: Facilities and Equipment

This document examines the need for facilities and equipment as a critical component in planning for surge capacity.

Federal Emergency Management Agency (FEMA)

Helping Children Cope with Disaster

This document offers parents, caregivers, and other providers information on how to prepare before a disaster occurs and how to help children cope following a disaster.

Illinois Emergency Medical Services for Children (EMSC)

Pediatric and Neonatal Disaster/Surge Pocket Guide

This guide is a resource to assist health care providers with addressing the medical needs of children during a disaster. The medical information provided in this guide should not be considered an exclusive course for treatment and is meant to be utilized during times of disasters and mass casualty incidents that result in a surge of pediatric and neonatal patients. Care considerations incorporated into this document include: normal values, triage and assessment tools, treatments and medications, equipment, decontamination, mental health, and security.

Decontamination

Illinois Emergency Medical Services for Children (EMSC)
Pediatric Disaster Preparedness Guidelines—Decontamination

Pediatric Decontamination Checklist
This checklist is designed to assist with decontamination planning and response to ensure the needs of children are met prior to, during, and after undergoing decontamination.

Reunification/Patient Tracking

Federal Emergency Management Agency (FEMA)
Post Disaster Reunification of Children—A Nationwide Approach
This document outlines a baseline for reunifying children separated as a result of a disaster and aims to assist local, state, tribal, territorial, and area governments and those responsible for the temporary care of children with incorporating reunification elements into existing emergency preparedness plans.

Illinois Emergency Medical Services for Children (EMSC)
Pediatric Disaster Preparedness Guidelines—Reunification
Unaccompanied Minor Reunification Checklist
Patient Identification Tracking Form

Security

Illinois Emergency Medical Services for Children (EMSC)
Pediatric Disaster Preparedness Guidelines—Security

Evacuation

Federal Emergency Management Agency (FEMA)
Evacuating Yourself and Your Family

Florida Department of Health
Hospital Emergency Evacuation Toolkit

Illinois Emergency Medical Services for Children (EMSC)
Pediatric Disaster Preparedness Guidelines—Evacuation
Neonatal Intensive Care Unit (NICU) Evacuation Guidelines
Evacuation of an NICU is a high risk activity and requires a carefully planned approach due to the fragile medical condition of these infants, the various medical technology/devices they depend upon for survival, and the overall surge capacity/transfer pattern in managing an increase in NICU patients. These guidelines were developed through the Illinois EMSC program to assist in ensuring a statewide consistent approach to this process.

Mass Casualty Triage: START/JumpSTART

The JumpSTART Pediatric MCI Triage Tool
JumpSTART is an objective tool for the triage of children in the multi-casualty/disaster incidents. JumpSTART Triage parallels the structure of the START system, which is the adult MCI triage tool most commonly used in the United States and in many countries around the world. It was developed by Lou Romig, MD, former medical director for the South Florida Regional Disaster Medical Assistance Team.

Illinois Emergency Medical Services for Children (EMSC)
EMSC JumpSTART Training Program and Materials
EMSC Pediatric Disaster Triage: Utilizing the JumpSTART Method Online Education Module

Children with Special Healthcare Needs (CSHCN)/Children with Functional and Access Needs (CFAN)

American Academy of Pediatrics/American College of Emergency Physicians
Emergency Information Form for Children with Special Needs
Emergency Information Form for Children with Autism

Illinois Emergency Medical Services for Children (EMSC)
Pediatric Disaster Preparedness Guidelines—CSHCN/CFAN

Children with Special Healthcare Needs Reference Guide
In a disaster event, typical interfacility transfer patterns to pediatric tertiary care centers may be disrupted. Children with chronic conditions may need to be cared for at community hospitals. This one page resource provides healthcare providers with quick reference information on troubleshooting assistive devices that may be seen in children with chronic conditions (e.g. tracheostomy, PICC line, CSF shunt, gastrostomy, colostomy, ureterostomy).

Recovery

Illinois Emergency Medical Services for Children (EMSC)
Disaster Mental Health Response for Children (3rd edition)
The purpose of this educational module is to provide education and resources that can be used as just-in-time training to prepare providers to identify the needs of pediatric survivors so that they may provide support in a way that helps these children return to pre-disaster levels of functioning.

National Emergency Medical Services for Children (EMSC)
After the Emergency Is Over: Post-Traumatic Stress Disorder in Children and Youth
This fact sheet is available to download from this site, and is a valuable resource in identifying children at risk for PTSD and the need for further mental health assistance and referral.

Exercises/Drills/Trainings

Children's Hospital of Los Angeles
Pediatric Disaster Resource and Training Center

Illinois Medical Services for Children (EMSC)
Addressing the Needs of Children in Disaster Preparedness Exercises
This resource is for all agencies/organizations as they plan and conduct disaster drills and exercises. Inclusion of infants and children in disaster drills and exercises is an essential component in preparedness efforts and can assist in preparing agencies/organizations to meet the needs of children during an actual disaster or mass casualty incident. This second edition has expanded the target audience to all response agencies, which prompted retitling of this edition from *Disaster Preparedness Exercises Addressing the Pediatric Population* (2006), to reflect the broader scope of the document.

NICU/Nursery Evacuation Tabletop Exercise Toolkit
This toolkit utilizes information from the Illinois EMSC NICU Evacuation Guidelines as well as several NICU/Nursery Evacuation Tabletop exercises conducted by Illinois EMSC. These exercises focused on resource allocation and other key coordination components as medically fragile and technologically dependent infants needed to be mobilized and evacuated during various disaster scenarios. The toolkit provides hospitals with guidance on planning, conducting and evaluating tabletop exercises that address the NICU/Nursery population, and includes excerpts from key exercise documents such as the Situation Manual (SitMan), Master Scenario Exercise List (MSEL), Exercise Evaluation Guide (EEG) and After Action Report (AAR). Note that the concepts outlined in this toolkit are applicable in exercises that address other pediatric patient populations.

Appendix C

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