

AMERICAN ACADEMY OF PEDIATRICS

PEDIATRIC DISASTER PREPAREDNESS AND RESPONSE

TOPICAL COLLECTION

**CHAPTER 3: PREPAREDNESS PLANNING IN SPECIFIC
PRACTICE SETTINGS**

2022

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American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



Published by the American Academy of Pediatrics
345 Park Boulevard
Itasca, IL 60143

Telephone: 630-626-6000

Facsimile: 847-434-8000

www.aap.org

www.healthychildren.org

www.aap.org/disaster/manual

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CHAPTER THREE: PREPAREDNESS PLANNING IN SPECIFIC PRACTICE SETTINGS

PLANNING

Historically, planning for disasters, terrorist incidents, and public health crises has focused on hospitals and emergency departments. In recent years, there has been a growing realization that preparedness needs to reflect the whole community, and public health preparedness needs to address the entire continuum of health care delivery. Office-based pediatricians are recognized as having a vital role in planning for and responding to disasters. In the immediate aftermath of a catastrophic event, complications of baseline chronic medical needs are one of the primary reasons for people seeking medical care. As response transitions to recovery, disaster-related screening, support and intervention, and follow-up increasingly falls to the medical home and other ambulatory settings.

All pediatricians should be engaged in disaster planning. This includes personal/family preparedness and encouraging patients to prepare. Pediatricians should attend to the continuity of practice operations to provide services in time of need and stay abreast of disaster and public health developments to be active participants in community planning efforts. Many health care professionals will find this challenging to achieve. Pediatricians may not know where to find preparedness resources, what activities to start first, or how to engage with public health and other disaster response organizations. Conversely, existing response organizations may not know how to reach and engage community pediatricians, or how to utilize their expertise. Efforts need to be bidirectional, and one party should not wait for the other to make the first step. As the saying goes, “a disaster is not the time to start exchanging business cards”—connections and collaboration are best established well in advance of a crisis event. Simple “getting to know you” introductions over coffee, for example, are one way to establish professional relationships, whereby the pediatrician and the community or public health representative learn each other’s potential roles, responsibilities, resources, challenges, and interests.

The ideal disaster response starts with the vision of the community meeting all needs of all children. If the community accepts this goal, it will quickly realize that a broad coalition of many medical, mental health, social service, and educational providers is required. This has been reflected in the changing role of the HHS ASPR Hospital Preparedness Program (HPP). As the name implies, the program initially awarded funding to hospitals to improve their ability to respond to disasters and public health emergencies. The HPP has since evolved with a current focus on community-based health care coalitions (www.phe.gov/preparedness/planning/hpp/pages/default.aspx).

Many pediatricians work in small to mid-size group practices, and they will need to collaborate with their competitors to achieve preparedness planning and work with physicians in other pediatric subspecialties. Nonpediatric physicians and care providers also should be engaged in disaster planning discussions, because a mass casualty event involving children will likely require their assistance. Pediatricians will need to be steadfast advocates for the needs of children in the face of other competing priorities.

Community partners who care for children can and should participate in the preparedness effort (eg, schools, child care facilities, after-school programs, camps, and scouting programs). A list of the various agencies and groups that may be relevant or could have resources include:

Local Resources

- AAP District and State Chapter offices
- Behavioral health services and organizations
- Camps (eg, before-/after-school programs, specialty)
- Child care programs
- Community-based organizations
- Emergency management organizations
- Emergency medical services
- Faith-based groups (eg, churches, mosques, synagogues)
- Fire department
- Head Start programs
- Health care coalitions
- Health care facilities
- Infrastructure companies (eg, communications, sanitation, utilities)
- Law enforcement
- Local government
- Medical Reserve Corps/other community volunteer groups
- Nongovernmental organizations (eg, amateur radio operators, American Red Cross Chapter, voluntary organizations)
- Public health agencies
- Public recreation (eg, amusement parks, parks, sports stadiums, museums, YMCA, zoos)
- Schools (colleges/universities, private, public)
- Service groups (eg, Kiwanis, parent-teacher associations/organizations, Rotary, Salvation Army)
- Shelters
- Social works services
- State hospital associations
- Support service providers
 - Blood banks
 - Clinical laboratories
 - Pharmacies
 - Poison Control
 - Radiology

National Resources

- American Academy of Pediatrics
- American Academy of Urgent Care Medicine
- American Red Cross
- US Department of Education
- US Department of Health and Human Services
 - Centers for Disease Control and Prevention

- Centers for Medicare and Medicaid Services
- Health Resources and Services Administration
- Office of the Assistant Secretary for Preparedness and Response
- US Department of Homeland Security/FEMA
- US Department of Transportation
- US Department of Veterans Affairs Medical Centers
- US Occupational Safety Health Administration
- Urgent Care Association of America

It is recognized that this list of partners is lengthy; no one expects any one individual or entity to connect with all of these groups. Pediatricians should remember to view the community as a resource. Because governmental emergency response capabilities are limited, community resources play an important role in a community's response to and recovery from disasters. For example, in previous disaster situations, members of a community have joined together to help in search and rescue efforts and deliver first aid to victims. Community programs that provide disaster response training have the potential to assist government efforts in many ways, including:

- Improving response time and effectiveness
- Providing culturally sensitive information
- Promoting the medical home
- Connecting with key community leaders
- Improving recovery and promoting resiliency

CONSIDERATIONS IN VARIOUS PRACTICE SETTINGS

Disaster planning involves an all-hazards approach, and when planning for the office practice (practice) response, this method should also be followed. But all-hazards planning does not mean that every practice preparedness plan is identical. Although basic planning frameworks can and should be shared, each practice is unique, requiring special thought and considerations when developing the plan, and this is most obvious when considering the different practice settings in which pediatricians work. Pediatricians provide care in a wide variety of settings, including:

- Primary care practices
- Multispecialty groups
- Federally qualified health centers
- Freestanding ambulatory centers
- Hospital-based ambulatory centers
- Urgent care centers
- Hospital emergency departments
- Hospital inpatient units, neonatal intensive care units, and regular/term nurseries

The setting obviously has a tremendous effect on how preparations should be made. For example, finding an alternate practice facility for a solo or small practice will be much different than for a hospital-owned practice that is off-site from the main campus. These differences in practice settings will be discussed in more detail as different planning areas are covered.

OFFICE OR PRACTICE-BASED PEDIATRICIANS

According to the AAP policy statement “Ensuring the Health of Children in Disasters,” all pediatricians, including primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists, have key roles to play in preparing and treating families in cases of disasters. Pediatricians are the experts in providing developmentally and physiologically appropriate care to children. In the chaos of a disaster and its aftermath, it is important for pediatricians to ensure that their patient’s medical needs are appropriately met. A majority of the medical care that children receive occurs in the outpatient setting, and this does not change during a disaster. There are ways that office- or practice-based pediatricians can maintain the continuity of their practices in times of disasters and in the often-overlooked recovery stage that may last for months. Having a written office preparedness plan is critical. Integrating the office’s response within the federal, state, regional, and community response is essential.

Internal Operations of the Practice: Office Readiness

The underlying principle of pediatric disaster preparedness is to ensure that the medical and psychological needs of children are met during and after disaster events. Proper planning can help a practice provide the necessary care to their patients. Pediatric providers are the experts in managing children’s health. Maintaining outpatient capabilities will offer children and families access to their typical sources of pediatric care and will help to reduce surges in demand for emergency care, allowing hospital emergency departments to focus resources on what they do best, taking care of the seriously ill and injured. In addition, recovery after a disaster can take months if not years. Maintaining a functioning outpatient practice facility helps restore stability and access to the medical home for needed preventative services. The AAP has captured relevant information in its Preparedness Checklist for Pediatric Practices (www.aap.org/disasters/checklist).

Basic Office Readiness

All disaster plans start with a hazard vulnerability assessment. This assessment identifies and prioritizes potential disasters and risks that could occur to a health care facility or the community. Conducting an office hazard vulnerability assessment should be one of the first steps in writing an office-based disaster preparedness plan. Geography, climate, population size and makeup, and surrounding industry all will factor into the assessment. The likelihood of certain disasters will affect the offices’ preparations. For example, if the office is more likely to experience a flood, then important equipment and records will need to be stored in higher levels of the facility, whereas if a tornado is more likely, then basement storage may be a better option.

Facilities

Disasters can occur suddenly with little or no warning, or they may be anticipated for days in advance. In either case, during a disaster proper facility planning can mitigate, and in some cases, prevent damage to the building structure. Facility management during a disaster will be greatly affected by the type of facility in which the practice is housed and who owns the property. A solo or small practice housed in a single-occupancy structure may have primary responsibility for mitigation efforts. In a larger building, facility management may be the responsibility of a maintenance group or team. Even in these larger facilities, the staff of an office-based practice may be able to assist in mitigation efforts. Communicating with the

building manager and coordinating these efforts can mean the difference in whether a practice continues its operations or not.

Whether a large multistory structure or single-occupancy building, there are a few general considerations that every practice needs to consider and include in their facility plans.

Preparedness: Facility Considerations	
POWER	What is the power source? Is there a generator available? Where are circuit breakers located? Where is the gas shutoff?
WATER	Where are water shutoff valves? What are sources of water?
FIRE	Where are fire extinguishers located? Is there a sprinkler system? What is the plan for evacuation?
HEATING/COOLING	How will the temperature be controlled?
VACCINE STORAGE	What is the vaccine storage plan? Vaccines in refrigerated storage areas need special monitoring and attention to protect these supplies during disasters.

When developing mitigation planning, one should always remember that mitigation is secondary to the safety of patients and staff. It is the responsibility of all practices to have a facility evacuation plan in place. There should be periodic drills to review and practice these plans.

Damage to the facility, parking lot, or roads may make access to or use of the practice’s building impossible for an indeterminate amount of time. Office practices should prepare to relocate in these instances. Practice type will make a difference in planning for being unable to access the office. Hospital-owned practices and larger multisite practices may have alternate locations available in which to move the office practice immediately. Electronic health records can be maintained with minimal, if any, disruption in these cases. For the solo or small practice, relocation may be much more difficult. Options include sharing or renting space with another local practice, area hospital, county health department, or other health clinics. There may be rental office space available in the community. There are mobile medical units that can be rented or purchased. Remember that if the disaster is widespread, other businesses will be vying for office space also. Considering these options in advance of a disaster is essential.

Equipment

Most of the equipment in a pediatric office is relatively inexpensive, however, some equipment can be costly to replace. The office preparedness plan should make a notation of any such equipment and make preparations to store it in the safest location possible should there be sufficient warning of an impending disaster. The most important equipment for continuity of the practice can be kept in an office disaster kit. Having an office disaster kit located both on-site and off-site will help ensure that the practice will be able to continue operations as quickly as

possible. The core contents of this kit are listed below. A more extensive list is included in the AAP Preparedness Checklist for Pediatric Practices.

Items to Include in Office Disaster Kit
Stethoscope
Otoscope/ophthalmoscope (with specula)
Tongue depressors
Blood pressure cuffs
Tape measure
Gloves
Disposable personal and protective equipment (PPE) gowns
Masks
Thermometer/covers
Small scale
Prescription pads/clinic note pads

Consider what other equipment may be required to provide services at another location. These could include items such as portable suction, mobile generators, batteries, chargers, two-way radios, medications, nebulizers, bag-valve-masks, and suture kits. You may want to include these supplies in additional kits to which you have access.

Records

Copies of important records, including patient medical records and additional patient information, need to be stored off-site. The advent of electronic health record systems and the use of the cloud and Web-based storage sites has made such storage much easier for providers. For smaller or independent practices, any information or records that would assist the practice in continuing to function should be maintained off-site. These include financial and other information, such as bank statements, loan documents, tax returns, and corporation documents. Insurance and malpractice insurance information, hospital identification badge(s), lease agreements, state medical licenses, Drug Enforcement Administration documents, and related contact numbers are also important and need to be readily available. Keeping lists of repair service numbers along with vendor contact information will accelerate the recovery process. Although these may not be as important to larger multisite and hospital-affiliated practices, pediatricians and their staff still need to be aware of what their larger institutions have planned and how they can access the information they need.

Communication Systems

Having reliable communication during and immediately after a disaster is paramount for saving lives. Reliable communication shares knowledge and provides information to first responders, support systems, medical services, and the public. Unfortunately, one of the first breakdowns during a disaster is the communications infrastructure. The success of an office's business continuity plan will center on the communications protocols that have been set in place. These protocols should include a chain of command, contact information for the staff, and specific responsibilities of each staff member.

Chain of Command

As mentioned, the Incident Command System and the chain of command is a key feature of effective disaster response. The office preparedness plan should institute a similar organizational structure. Knowing who is in charge and specific delineation of duties for staff members will result in a more reliable response. This information should be reviewed with staff members on a routine basis. This is especially important as office personnel may change frequently. Practices that are within larger organizational structures will need to coordinate the chain of command with the organization's broader preparedness plan.

Contact List

The office preparedness plan should include methods to notify staff and provide accurate information on the situation. A confidential list of contact information for the staff should be kept in a number of secure locations accessible by members in the chain of command. This information should include telephone numbers, text messaging information, and Web-based contact details (e-mail addresses or social media accounts). During a disaster, telephone communication is usually disrupted. However, text messages can often be made even in these conditions. The Internet is another source of communication that may still function during disasters. Satellite telephones and radios are other, although somewhat limited, options to consider. A "calling tree" can be used to provide rapid notification and ensure that everyone is accounted for and receives important information.

Staff Responsibilities

The office staff have professional responsibilities of which they need to be aware. Availability during disasters is one of these duties. Unfortunately, these professional responsibilities may conflict with responsibilities that these staff members have for their own families. Each staff member should be encouraged to prepare and share his or her own family preparedness plan. Frank discussion of expectations with the staff prior to an event is important to alleviate concerns and to anticipate problems. This will also prevent any misunderstandings about staff roles and responsibilities. Duties for consideration include mitigation activities to the structure, evacuation and safety of patients, notifying fire or police officials, rescheduling patient appointments, communication to patients and the public, and proper maintenance and storage of vaccines. Periodic exercises can ensure that staff members know their responsibilities and also become familiar with those of other staff members.

Vaccines

Vaccines are fragile biological products that are very sensitive to light and temperature. If vaccines are not carefully stored and protected from these elements, then they can lose potency. Vaccines are also very expensive to purchase or replace. Office practices can have thousands of dollars in vaccine inventory. Proper storage and monitoring of vaccines requires special refrigerator and freezer units to maintain specific temperatures. These units require power to maintain the appropriate conditions. Power outages must be addressed immediately to maintain the cold chain and prevent spoilage of the vaccines. In disasters, power outages do occur, and therefore a plan to maintain vaccine storage and handling needs to be in place.

Every office preparedness plan should emphasize that once an outage occurs, the doors to the units where the vaccines are stored must be kept closed. This will buy some time (approximately 2 hours) while the vaccine recovery plan is instituted. Primary and secondary persons with 24-hour access responsible for instituting the vaccine recovery plan should be determined. The office may consider having a generator to use in the case of power outages, but this is not a guarantee that vaccines will be safely maintained. A person needs to be sure that the generator is functioning properly and that the temperatures in the refrigerators are maintained at an appropriate level. If the office has no generator and the outage is anticipated to last more than 2 hours, consideration should be given to transporting the vaccines to another facility. Transfer of vaccines must be made to a facility with proper storage equipment and back-up power. These arrangements should be made with a facility in advance of any power outage or disaster. These plans need to be revisited frequently to prevent misunderstandings and to ensure acceptance of the vaccines. Once the decision is made to transfer the vaccines, the receiving facility needs to be contacted. Vaccines must be transferred with proper coolers, packing, and monitoring of temperatures. The AAP offers updated information on vaccine storage and handling (www.aap.org/vaccinestorage). More specific information on the transport of vaccines during emergencies is available from the CDC (www.cdc.gov/vaccines/recs/storage/downloads/emergency-transport.pdf).

Infectious Disease and Other Surveillance

Public health surveillance is a key function of the office-based pediatrician during times of epidemics or acts of bioterrorism. Community-based pediatricians may be the first point of contact for a victim of a biological, chemical, or radiological incident or an emerging infection or outbreak. Pediatricians should have a general knowledge of bioterrorism agents. Early identification will significantly mitigate the impact of these agents to the community. Referral procedures including required information to report to public health agencies should be part of the preparedness plan. In addition, the office preparedness plan must include proper protocols for isolation and infection control in the office. Correct use of PPE and waste management and patient transfer protocols are topics to be addressed in the plan. Community pediatricians can improve disaster response by recognizing that referring patients to emergency departments can increase the burden on an already overwhelmed setting, so they should do whatever is reasonable to treat patients in their practice setting. State Departments of Health (www.cdc.gov/mmwr/international/relres.html) along with the CDC can be excellent sources of information. Anyone can call or e-mail the CDC via CDC-INFO (www.cdc.gov/cdc-info/). Physicians should identify themselves as such. Anyone with a question about a child should also clarify this when contacting the CDC.

Triage, Screening, and Prioritization

Emergency personnel generally have little experience in managing the health care of children, especially infants and toddlers. Pediatricians are the experts in caring for children of all ages. As such, office-based pediatricians can serve important roles in their communities by stepping outside of their role in the office and assisting hospitals and emergency services in planning to care for children. Community pediatricians can help with triage, screening, and prioritization of children who are injured or become ill in an emergency. Appropriate triage and prioritization is especially important when resources are scarce, such as in the periods during and immediately following a disaster. In the aftermath of disasters, large numbers of patients may seek care at

primary care medical offices, so triage skills will be needed to determine whether these patients need hospital care or can be managed in the office setting. Pediatricians and others (including child life specialists) can help hospitals and other entities develop plans to care for children who have been separated from their parents. (See the AAP Family Separation and Reunification in Disasters resources www.aap.org/disasters/reunification.) Also, all disasters result in psychological stress. Pediatricians should be familiar with the normal developmental responses to stress and be able to screen for more serious problems and provide effective support for the vast majority of children. Having an appropriate referral system of mental health providers who can manage children in these special situations can be part of the preparedness plan.

Practice Readiness and Staff Development

Staff education and exercises are important to allow the office to function efficiently in a disaster. Staff education programs can be developed by the office staff or through connections with another organization. Besides the information that is included in the office preparedness plan, these programs should include basic information on the incident command system, community response, and the role of the practice in this response.

Insurance

After a disaster, it can take some time before the office practice or the community is able to return to business as usual. Insurance coverage is vital to maintain your business and ensure continuity of the practice. In major disasters, prepare for income to be significantly diminished for an extended period of time. Business interruption insurance policies can help, but to prepare effectively, the practice needs to determine how much revenue it can afford to lose and establish a line of credit with a bank. Also, staff should look very closely at the details of any insurance policy. Many standard policies may not cover certain disaster situations such as flooding. Inventory documentation will be required. Digital images or a video of the office contents is quick and useful for this documentation. Remember to update these recordings frequently. Separate vaccine insurance should be considered, because vaccines are likely the most expensive inventory in an office. Finally, an annual review of all policies should be performed.

External Operations: Communications and Coordination with Other Agencies

Communication Systems: Communication and coordination among community agencies is essential to provide efficient and consistent care to the community during disasters. Unfortunately, in many communities, the schools, hospitals, medical agencies, and businesses may all have separate preparedness plans but little coordination or communication during the planning process. The local Office of Emergency Management can serve as a conduit for coordination of various local, state, and federal agencies. The office-based pediatrician is a resource to the community that is often overlooked. One of the challenges to the office-based pediatrician is becoming integrated into these community-wide plans. A good place to start is by contacting local and state departments of health and local hospitals. Pediatricians in larger health systems can contact their system's preparedness director or team. Office-based pediatricians should also coordinate their planning with local school districts. Once it is known there is an interest, these groups may readily incorporate the pediatrician and the office practice into their response plans. The office-based pediatrician can become involved with community partners either actively or by offering to help with the education of its volunteers.

The office-based pediatrician plays a central role in providing accurate, timely information to patients and their families prior to, during, and after disasters. Pediatricians are considered trusted sources of information by patients and families, and they are expected to be knowledgeable in the areas of their concern.

Anticipatory Guidance: Family preparedness should be part of the anticipatory guidance provided during well-child care visits. The AAP offers a Family Readiness Kit (www.aap.org/disasters/kit) and a comprehensive Web site for families (www.healthychildren.org). HealthyChildren.org provides valuable information concerning not only family disaster plans, but also tips about discussing disasters with children and ways to reduce the fear and anxiety associated with the event (www.healthychildren.org/English/safety-prevention/at-home/Pages/Getting-Your-Family-Prepared-for-a-Disaster.aspx).

Communicating With Patients During Events: As mentioned, communication systems, especially telephone lines, are likely to be disrupted during disaster situations. Not only does this affect communications with office staff, but it also affects the practice's ability to provide accurate and timely information to the families of patients. Web sites and social media sites can be used to notify patients and families of transportation disruptions, contact information, and changes in office location and operation times. These communication avenues can be used to provide information about health concerns and relief efforts to the public, during the disaster and the immediate aftermath. The office preparedness plan should include details on which methods of communication will be used and how staff will respond to general questions and also provide responses to questions concerning individual patients. During these events, families may receive both good and bad information from a number of sources that can include the Internet, the media, and even public officials. The practice must make sure that it is providing accurate information and should strive to align its communications with messaging from other sources. Misinformation can result in panic, overreaction, and misuse of community resources and emergency services. One member of the office staff should be responsible for ensuring disseminated information is correct, and that all members of the staff are giving consistent messages. It is also important that the practice relays information that is consistent with the messages the public receives from state and local public health agencies and emergency management personnel. Contact information for these organizations' informational/public relations services should be included in the office preparedness plan.

HOSPITAL-BASED PEDIATRICIANS

In mass-casualty incidents (including those involving chemical and biological agents), casualties among children and adults could be significant. Because children are likely to become victims in many disaster events, pediatricians should assist in preparedness planning to ensure the coordinated responses of local hospitals. In addition to patients, health care facilities may be overwhelmed by massive numbers of anxious individuals and families. Whether or not a hospital routinely cares for children, all hospitals must be prepared to care for children in a disaster. Pediatricians working in or supporting hospitals can play a vital role in ensuring appropriate care of the pediatric disaster victim by participating in all levels of disaster preparedness planning.

Emergency Department Readiness

The AAP offers several critical policy statements and resources specific to EMS and hospital preparedness and pediatric emergency medicine (www.aap.org/en-us/Documents/Current_COPEM_Policy_Statements_2018.pdf). Pediatricians should review these policy statements, with a priority of becoming familiar with the “Joint Policy Statement—Pediatric Readiness in the Emergency Department” (<http://pediatrics.aappublications.org/content/142/5/e20182459>) and the National Pediatric Readiness Project (<https://emscimprovement.center/projects/pediatricreadiness/about/what-is-the-national-pediatric-readiness-project/>) before proceeding to take steps to improve preparedness.

The prehospital disaster system is designed to triage victims in the field and carefully distribute them among available facilities to match patient needs with resources and keep a single facility from being overwhelmed. However, in many crisis situations, facilities are vulnerable to inundation with patients who arrive in large numbers without EMS transport and before entry triage. Often, these are the first patients to arrive at hospitals after mass-casualty events. Pediatricians working in or supporting hospitals should interact with hospital emergency management leaders to ensure adequate training and preparation of supplies and treatment areas in the emergency department. Pediatricians in hospitals can be key facilitators between emergency department services, critical care services, and regular inpatient services. Institutions should be ready to triage large numbers of pediatric patients, however, limited pediatric resources may necessitate pediatric triage even when adult needs can be adequately met. Hospitals and emergency departments should establish pediatric transfer and transport protocols with other facilities. Coordination with the local community should involve primary/prehospital/infrastructure response (with liaison planning to state and federal agencies) and community/citizen response.

Inpatient Service Readiness

Anticipating surge capacity for inpatient care is vital in preparedness planning. A tiered approach to pediatric care in disasters may be most efficient. This type of approach concentrates care for the most critically ill or injured children at hospitals with greater pediatric capabilities, and it uses nonpediatric care areas to provide care to children who are less ill.

Consider:

- Increasing surge capacity within hospitals that normally provide services for children (eg, by instituting rapid discharge protocols, using areas that are not typically part of intensive care units [ICUs] to increase ICU capacity [eg, postanesthesia care unit, procedure areas]). This process can also increase inpatient capacity and leverage available staff.
- Increasing pediatric capabilities at hospitals that do not normally provide services to children (implement recommendations within the “Joint Policy Statement—Guidelines for Care of Children in the Emergency Department”).
- Increasing the number of inpatient beds within a community. This can be accomplished by converting available space into ward units (eg, cafeterias, meeting spaces) or making arrangements to use space in nearby hospitals. Areas such as local hotels or school gymnasiums can be converted into low-acuity medical facilities with some planning.
- Preparing in advance for emergency mass critical care for both neonatal and pediatric ICUs.

- Contingency plans for acquiring or maintaining essential services, such as water, electricity, portable oxygen, garbage/trash removal, Internet, medical records, etc.
- Planning for stockpiling or readily acquiring medical supplies such as antibiotics, antitoxins, and vaccines (in dosages and formulations appropriate for pediatric patients). In addition, pediatric-specific supplies and equipment in a full range of sizes to accommodate pediatric patients should be available.
- Networking with community resources to have plans in place for supervision of or caregiving for orphaned and unaccompanied children.

Hospital Infrastructure Needs

Emergency Operations Plans: Hospital emergency operations plans need to include plans for caring for children, even in hospitals that primarily care for adults. In addition, the plans must be sufficiently thorough and detailed to provide meaningful guidance in an emergency.

Pediatricians can work with hospital emergency preparedness leaders to ensure that these plans contain guidance for:

- Age-appropriate decontamination of children
- Moving between conventional, contingency, and crisis responses to a surge of pediatric patients
- Rapidly increasing pediatric critical care capacity by 20% above baseline capacity in a conventional response, by 100% in a contingency response, and by 200% in a crisis response
- Stabilizing and caring for critically ill or injured children in nonpediatric hospitals when access to pediatric hospitals is limited
- Accessing pediatric experts (including experts in burn care, critical care, infectious diseases, and toxicology) to support hospitals that do not employ or have experts on active staff
- Limiting spread of infection to patients, staff, and family members through robust infection-control practices
- Consideration of parental presence protocols
- Reunification planning (which includes tracking and identifying pediatric patients, caring for unaccompanied minors in pediatric safe areas, and reuniting separated families)
- Providing appropriate psychosocial support to children and families
- Developing a consistent approach to patient triage in situations with limited resources
- Ensuring that guidelines for crisis care incorporate children and are ethically sound
- Encouraging health care personal to have personal preparedness plans so that expectations are clear for times when health care workers provide services versus when they tend to personal needs
- Using pediatric interfacility transfer agreements to appropriately transfer children to higher or more specialized levels of care when needed

Exercises and Drills: Hospital and community-wide exercises are essential to preparedness planning. These drills need to be detailed enough to test emergency plans, and scenarios and goals should align with the hospitals' hazard vulnerability analyses and test areas where there are gaps, areas of concern, or unknown preparedness (eg, the ability to evacuate a neonatal ICU during a power outage). Drills should include not only initial triage and decontamination but also continuing care in inpatient areas, including ICUs. Every disaster drill should include pediatric patients; this is especially important for hospitals that do not normally provide care to children. See additional information in the Pediatric Preparedness Exercises section.

Staff Training: Staff training should, at a minimum, include:

- Decontamination of younger children, including the use of warm water and chaperones
- Emergency stabilization of children in nonpediatric emergency departments
- Provision of critical care to children in nonpediatric ICUs
- Appropriate infection control practices, specific to the care of children and their families
- Personal emergency preparedness
- Orientation to the Incident Command System for those who will staff or interact with the hospital's EOC
- Understanding of "Access and Functional Needs" or the mechanism by which FEMA addresses at-risk individuals who might need additional assistance in a disaster (www.phe.gov/Preparedness/planning/abc/Pages/afn-guidance.aspx)
- Strategies for coping with family demands, developmental concerns, behavioral health, and provider self-care

PEDIATRICIANS IN AMBULATORY OR URGENT CARE SETTINGS

Community-based (nonhospital) health centers with capabilities in pediatric urgent care can play an important role in a disaster. Urgent care, including pediatric urgent care, is a rapidly evolving presence in the community and, with the necessary resources and training, could serve as sites to care for certain ill or injured children in a disaster. Pediatric urgent care centers are prepared to efficiently care for children with higher acuity injuries and illness when hospital emergency departments are unable to handle surge capacity. These centers can evaluate and reassure families that become concerned in the aftermath of a disaster (ie, the "worried well"), and are prepared to evaluate and treat a more severely ill or injured child. Many sites have laboratory and imaging services available as well as the ability to splint, suture, provide intravenous fluids, and perform minor procedures. In this capacity, many urgent care centers can offload patients from the emergency department, allowing the emergency department to more effectively care for the most critically ill or injured children. However, limitations must also be considered as capabilities will likely vary from site to site. Most recommendations for office practices (see above) apply to these settings.

Communication

Effective communication in a disaster is crucial and plans must be established prior to an event. This includes both internal communication (within an urgent care center or among multiple sites within an urgent care system) and communication with external community resources and organizations.

Establishing relationships in advance and understanding the capabilities and expectations of outside resources and vice versa is critical to a successful effort. A written memorandum of understanding with these outside agencies will clearly define roles and expectations in advance of a disaster. Communication should be ongoing and bidirectional throughout an event.

Multiple means of communication and a backup plan may be necessary given risk for power outages and overwhelmed systems (such as telephone service). In the event of a power failure, cellular telephone communication may still be possible, but communication via e-mail systems

would likely not be accessible right away. Portable cellular telephone chargers should be available.

The following options for communication should be considered:

- Telephone landlines
- Cellular telephones (voice calls and text messaging)
- Internet (facility Web site and social media)
- Two-way radio
- Satellite telephones
- Runners
- Posting of written notices in places where constituents might see these

Both electronic and paper lists of all key contacts should be readily accessible to staff members. A designated person within the urgent care center or system should know how to access and disseminate information from the local public health departments and the CDC, particularly when and Health Alert Network (HAN) messaging occurs.

Internal communication is also important for both activation of an emergency plan and ongoing communication during a disaster. Group e-mails or texts are efficient means of conveying information regarding plans and updates and are simple ways to receive a response. Intranet, if available, is also an easy way to communicate. Direct telephone landline communication is not as efficient as sending group messages but is still an option for one-on-one communication, although telephone landlines may be the first means of communication to break down. Group conference calls for daily updates can work well, once connectivity is available. Electronic (cellular telephone, hard drive, USB flash drive) and paper lists with staff contact information (telephone numbers, e-mail addresses, emergency contacts) should be available for all staff members and updated on a regular basis. Staff members should know key contacts in advance as well as their preferred means of communication.

Ongoing information to the community regarding hours of operation (extended hours or early closing) can be communicated via social media, telephone voice message, Web site postings, e-mail blasts, and posting of printed materials. Communication with primary care providers in the community may facilitate referral of their patients if their offices are inoperable or if higher level of care is needed. Again, these relationships are best established before a disaster occurs. Larger facilities may have a department responsible for regular and crisis communications.

Resources are available to assist businesses with many of these functions (www.ready.gov/business).

All-Hazards Approach

An all-hazards approach is most effective when creating a disaster management plan for an urgent care center. The disaster plan should account for response to both natural and manmade disasters, including those caused by chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) events. Additionally, all possible hazards that could affect the region including natural disasters (weather-related or environmental), man-made disasters

(transportation events, fires, structural collapse, terrorist attacks, weapons of mass destruction) and epidemics/pandemics should be considered and planned for accordingly.

Urgent care centers will vary in their ability to respond to injuries and illnesses caused by a disaster but should be aware of the potential for presentation of victims from a variety of disaster situations. An urgent care center may be the first place a victim presents, and early identification is critical to mitigate damage. For example, a person contaminated with a chemical or ill with a highly infective agent may present to an urgent care center unknowingly, and the etiology must be rapidly identified. Screening for potential infectious diseases by assessing symptoms and travel history early in the visit is helpful. Each facility should assess capabilities, understand limitations, screen patients, and have a plan in place for avoiding contamination or rapidly transferring patients who require care beyond the capabilities of the urgent care center.

Leadership

Leadership during an event should follow the National Incident Management System (NIMS) guidelines (www.fema.gov/national-incident-management-system), allowing for consistency across multiple organizations. The Incident Command System [ICS] (www.fema.gov/incident-command-system-resources) is an important component of any disaster response, and ICS staff should include an incident commander along with a public information officer, safety officer, and liaison officer. In a smaller urgent care setting, a single person may be responsible for multiple roles. Sections include operations (doers), planning (thinkers), logistics (getters), finance and administration (payers). Leadership will be responsible for distributing job action sheets to staff with instructions allowing for just-in-time preparation.

Logistics and Operations

Assessing the operational capabilities of an urgent care center and recognizing the necessary supplies for an incident prior to the event is critical. Urgent care centers will likely have varying capabilities for handling pediatric patients with pediatric urgent care centers being most capable of caring for acutely ill or injured pediatric patients. With proper planning and practice, however, most facilities should be able to provide initial care and stabilization of urgent needs in pediatric patients and have a plan in place to transfer patients to the facility where they are most likely to receive the care they need. A pediatric urgent care center may need to anticipate ramping up the level of care provided as hospital emergency departments reach surge capacity. For example, patients with burns or fractures that might normally be transferred out might need to remain in the urgent care center for treatment. Transportation options and resources may be limited. Again, potential capabilities should be determined prior to an event along with establishment of clinical guidelines for managing these patients.

Rapid triage assessment using medical personnel trained in recognizing acutely ill or injured children should be in place. Triage space should be near the entrance to the facility to allow for screening for potentially contagious infectious diseases by asking key questions about symptoms and travel. Urgent care centers may not have the capacity for decontamination. However, patients needing decontamination may present to the facility, and therefore, there should be protocols for handling these situations. Patients who might require decontamination need to wait outside the facility in a designated area so as not to contaminate others. The agency responsible for decontamination should be notified. A written plan for staff protocols should be in place.

The number of patients that might arrive at an urgent care center in a disaster can be difficult to predict. It is important to determine surge capacity for the facility. Can patient treatment areas be expanded by using chairs or cots? Can hours of operation be extended? Can staffing be increased? How can patients be moved through the facility most efficiently (one-way flow is often most efficient)?

Staffing during a disaster is likely to be difficult to manage. Of utmost consideration is staff safety and well-being. Additional staffing will be needed to accommodate extended hours and surge capacity. However, staff may be ill or injured or unable to travel safely to work. Staff members may also have ill or injured family members that need care at home or children that cannot be left alone. These issues provide additional stress for staff making it more difficult for them to perform their job effectively and efficiently. Having someone available to care for staff dependents at the urgent care center could relieve this burden and allow staff to come to work.

Consider using staff from other facilities within the organization. Another location may have staff willing to travel to the affected site. For staff working long hours, food, water, and a place for rest should be available. Providing staff with necessary support and rest time is critical for keeping the team functioning optimally. All of these issues, including plans for paying staff (ie, amounts, overtime) for their work should be discussed in advance. It is also important to predetermine the policy for paying staff if they are unable to get to work or if the facility needs to shut down. A sick leave or paid time off policy should be considered.

The most effective way to prepare staff for a disaster is to have exercises and simulations at regular intervals. Staff should know where to find procedures and plans for an event, have readily accessible contact information, be able to rapidly locate equipment, and understand expected roles.

Supplies and Medical Records

Supplies necessary to handle surge capacity and higher acuity of ill or injured children need to be maintained. Supplies should also be readily accessible, clearly labeled, checked on a regular basis, rotated, and checked for expiration dates. Supplies and equipment should be kept in a safe area free from possible damage yet readily accessible. Relationships should be established in advance with vendors who can rapidly replenish supplies in an ongoing disaster. In addition to medical supplies, food and water should be available for sheltering in place for up to 72 to 96 hours. A pediatric crash cart with airway equipment, emergency medications, and intravenous (IV)/intraosseous access should also be maintained. Readily available supplies include the following:

- Alcohol wipes
- Bandages, gauze, elastic wrap bandages
- Batteries
- Calculator
- Cold packs
- Exam equipment (stethoscope, otoscope/ophthalmoscope, tongue depressors, thermometer, blood pressure cuff, etc)
- Flashlight

- Hand sanitizer
- Medications/fluids (eg, acetaminophen, ibuprofen, albuterol, oral/intramuscular/topical antibiotics, ondansetron, diphenhydramine, steroids, epinephrine 1:1000, 1% lidocaine)
- Nebulizers (including battery operated), metered-dose inhalers and spacers
- Needles, syringes
- Oral rehydration solution (liquid and powder)
- Oxygen tanks
- Personal protective equipment (including masks, gowns, gloves, face shields)
- Radio
- Reference book
- Splinting material
- Suture material
- Trauma scissors

Keeping an urgent care disaster kit on hand that can be grabbed quickly to assist with emergencies outside the facility or taken to another center if the urgent care center cannot remain open because of structural damage or power failure is also part of an emergency preparation plan. The kit should be stocked with most of the items noted above. Be aware of what supplies require refrigeration in case of a power outage. Some urgent care centers may have access to a power generator that would allow for the facility to remain operational.

Because most facilities have electronic health records, loss of electricity or computer/Internet access can present a real problem. Flow for downtime should be determined in advance and paper forms for registration, evaluation, and discharge should be readily available. Knowing the downtime flow for registration, charting, and tracking patients will allow for minimal interruption in patient care. The downtime recovery process should include a procedure for billing and integrating paper charts into the electronic medical record.

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US Government Publishing Office. Pandemic and All-Hazards Preparedness Reauthorization
Act. 42 USC Chapter 6A § 201 et seq (2013)