

Chapter 9

Managing Clinical and Support Activities

The clinical needs of patients during an emergency are of prime importance, and certain clinical activities are so fundamental to safe and effective care that organizations must have clear, reasonable plans in place to address the needs of patients during extreme conditions. For example, organizations should determine how they reschedule or manage clinical needs in rapidly changing situations or in an environment that hardly mirrors the normal, modern conditions of most hospitals or long term care facilities. Because emergencies are by their nature so unpredictable, organizations considering how they provide care in an emergency must think about a variety of situations that could include little or no external support or resources.

This chapter concentrates on the final critical emergency management area, the necessity of having clear and reasonable plans in place to address the needs of patients or residents when an organization's resources are taxed. Sidebar 9-1

(below) details Joint Commission expectations related to managing clinical and support activities.

Managing Clinical Activities

The fundamental goal of emergency management planning is to protect life and prevent disability. This means that organizations must consider how to provide care during dynamic situations. The standard serving as the focus of this chapter, managing clinical and support activities, includes many concepts previously found in emergency management standards, such as triage, scheduling, modifying services, and so forth, as well as a new focus on vulnerable populations, the personal hygiene and sanitation needs of patients, mental health needs, mortuary services, and documenting and tracking clinical information.

The manner in which care is provided could vary depending on the type of emergency, requiring organizations to deter-

Sidebar 9-1.

Applicable Emergency Management Standards

The organization establishes strategies for managing clinical and support activities during emergencies.

This standard requires that the organization plans to manage the following during emergencies:

- The clinical activities required as part of patient scheduling, triage, assessment, treatment, admission, transfer, discharge, and evacuation
- Clinical services for vulnerable populations served by the organization, including patients who are pediatric, geriatric, disabled, or have serious chronic conditions or addictions
- Personal hygiene and sanitation needs of its patients
- The mental health service needs of its patients
- mortuary services

The organization plans for documenting and tracking patients' clinical information.

BE PREPARED TIP

Transferring

It is important that both sending and receiving physicians be involved in transferring care recipients and that all necessary documentation and records accompany the individuals. Remember that just because it is an emergency, the organization is not automatically exempt from COBRA and OBRA regulations.

mine how they will reschedule or manage clinical needs in spite of the challenges that arise during a disaster. The emergency triage process will typically result in patients being quickly treated and discharged, admitted for a longer stay, or transferred to a more appropriate source of care. It is particularly important to identify and triage patients whose clinical needs are outside the usual scope of services of the organization. A catastrophic emergency could result in a decision to keep all patients on the premises in the interest of safety, or, conversely, in the decision to evacuate all patients because the facility is no longer safe. Planning for clinical services must address these situations accordingly.

Triage and Beyond

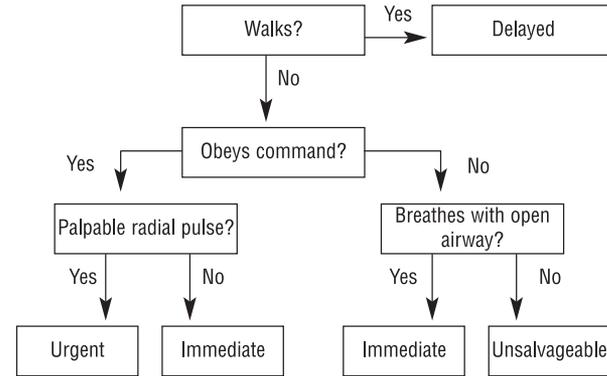
Triage can be one of the most challenging issues associated with managing clinical and support activities. Organizations must adjust normal triage protocols when faced with an influx of individuals seeking treatment during an emergency, with a focus on rapidly identifying the critically injured. The difficulty is to identify those who are critically injured and require immediate care. An example of a triage algorithm that hospitals and long term care organizations can use during emergencies appears in Figure 9-1 at right.

By adjusting triage protocols, organizations can free up space in the facility by delaying the treatment of those who are not critically injured or ill in anticipation of more critically injured or ill victims arriving as a result of the emergency. In a hospital, the head emergency physician or surgeon might serve as a triage gatekeeper. The medical director may fulfill the same role at Medicare-/Medicaid-based long term care organizations. Involving nursing leaders also makes sense.

Organizations will probably see a large number of slightly injured patients who have not been evaluated. This first wave is generally made up of patients who are ambulatory and have

Figure 9-1. Triage Algorithm

This triage algorithm assesses the victim's ability to obey commands, the presence of respirations, and the palpability of the radial pulse.



Source: NRMA CareFlight, Sydney, Australia. Used with permission.

arrived at the facility by their own means. Depending on the location of the emergency, it might be necessary to send a team to provide on-site triage. The triage area must be large enough to accommodate several response vehicles, as well as patients who arrive from the emergency scene by regular vehicles. This area should be protected from the weather as much as possible.

In an internal emergency, the emergency department (ED) is the most logical location for triage in a hospital because the personnel assigned there are experienced with rapidly evaluating and sorting a large number of patients. In the case of an external emergency, the local emergency medical services (EMS) system can provide on-site triage. Most EMS systems use color-coded tags to identify patients by severity of injury. In general, the categories are red, yellow, green, and black, as described in Table 9-1 (page 119). Red is for patients who need immediate intervention, possibly in an operating room. Yellow is for those who are seriously injured but whose care can be delayed in order to treat category-red patients. The “walking wounded” make up the green category, including patients having severe psychological reactions. The black category is reserved for the dead or those who are near death. The triage of dying patients depends on the resources available at the scene. Some systems include another category—white—used for patients with no apparent injury who are transported to a hospital for other reasons. Health care organizations should be familiar with the system used in their community.

Table 9-1. Triage Categories

The following color-coded categories are often used by emergency medical services (EMS) systems.

Red: Immediately life-threatening, could need surgical intervention. Those tagged as red are “golden-hour” trauma patients. Critical interventions have been started at the scene and need to be continued by the emergency department (ED) staff. This category could also include high-profile patients the media will be asking about.

Yellow: Serious and potentially unstable. These patients could deteriorate into category red. They have a potential threat to life or limb and will probably be admitted to the facility or be transferred to a higher-level facility when they are stable.

Green: Slightly injured. These are “walking wounded” patients—usually the majority of emergency victims—and do not have life- or limb-threatening injuries. Their injuries are of the severity commonly seen in “fast-track” areas of the ED or urgent-care centers. Keep in mind that EMS triage protocols place hysterical patients in this category, and so their needs might include pastoral care or other kinds of counseling.

Black: Dead or near death. These are the dead or dying who under ordinary circumstances would need extensive resources to stay alive. In general, out-of-hospital personnel (paramedics and emergency medical technicians) do not perform cardiopulmonary resuscitation during emergency operations.

Source: Joint Commission Resources: *Guide to Emergency Management Planning in Health Care*. Oakbrook Terrace, IL: Joint Commission on Accreditation of Healthcare Organizations, 2002.

Most hospitals then use a second round of triage at the ambulance bay of the ED. From there, medical personnel send patients to different treatment areas in the hospital: the operating room (OR), ED, ambulatory treatment area (usually a cafeteria or auditorium), or morgue. Depending on the nature of the unfolding emergency, it could be necessary to expand the treatment areas into clinics or urgent-care centers.

Studies have shown that when a moderate- to large-scale emergency happens in an urban area, the majority of victims will be treated by one or two hospitals, regardless of the number of facilities available. Often these are the hospitals known for their emergency or trauma care or even their proximity to the emergency. If a hospital under consideration is in an urban area, those in charge should plan to admit and treat patients, even if it is unlikely to be called on. First, the emergency could happen near the hospital. Second, there could be an overflow of patients diverted from other facilities. If the hospital is in a smaller community, the facility might be the only one available to receive patients, and effective preparation would be essential to save lives.

To have enough space to triage and care for emergency victims in hospitals, it might be necessary to clear out inpatient beds and the ED. The emergency operations plan (EOP) should specify how to discharge patients who are able to go home. It should also identify all the open beds in the facility, call for the immediate transfer of patients in the ED who require admis-

sion to inpatient beds with notification to their admitting physician, and outline the procedures for processing the remaining patients and the slightly injured patients who are arriving. Organizations might have to cancel elective surgeries to use OR suites and free up personnel.

In addition to scheduling and triage, along with the assessment that occurs as part of the triage process, organizations must also consider how they will handle admission and discharge. In essence, all of the processes that occur on a routine basis must be considered under emergency conditions. In addition, how will the organization manage clinical needs if an evacuation is necessary?

Emergent and urgent conditions will continue to present in the daily population the hospital or long term care organization services, and so there must be procedures to handle the ongoing flow of individuals to the facility. In addition, a severe emergency can disrupt the local care network. The organization could become the primary care provider for individuals whose primary care physicians are not available because of displacement or injury. Many types of injuries (sprain, puncture wounds, lacerations, falls) occur during emergency recovery phases as people clear debris and rebuild their homes. Due to fuels used for heating and cooking, there can be cases of carbon monoxide exposure. Health care organizations must anticipate and plan for providing an increased amount of primary care both during and following an emergency.

People with Special Needs

People with special needs include not only the vulnerable elderly but also people with disabilities, such as individuals who are physically challenged; people with sensory limitations such as the blind or visually impaired and those who are deaf or severely hard of hearing; people with severe emotional impairments; people with medically related needs, such as those who require dialysis; individuals with seizure disorders; and many others who require unique assistance.¹ The Web site of the National Rehabilitation Information Center (<http://www.naric.com>) provides contact information on a number of organizations composed of people with special needs.

Reference

1. Federal Emergency Management Agency: *Individuals with Special Needs: Preparing and Planning*. <http://www.fema.gov/plan/prepare/specialplans.shtm> (accessed Nov. 28, 2007).

Vulnerable Populations

Properly treating special needs populations during an emergency or disaster requires special planning. One of the new requirements related to the managing clinical and support activities standard is that organizations must plan to manage services for vulnerable populations served, including those who are pediatric, geriatric, disabled, or have serious chronic conditions or addictions. The need to consider special populations was made clear in the aftermath of Hurricane Katrina, which claimed as victims 34 residents of a nursing home located on the outskirts of New Orleans.¹ In addition to those who are already in the hospital or long term care facility when the emergency occurs, this new requirement related to vulnerable populations includes those in the community who might come into contact with the organization as the emergency develops.

Vulnerable populations such as the elderly, the disabled, children, and others with special needs often require special attention or assistance in emergency situations. Organizations should encourage health practitioners to attend training sessions that teach the appropriate management of life-threatening events in the special populations as well as address assessment, appropriate triaging issues, and management of populations with special needs.

Children are included in this Joint Commission requirement because the differences in pediatric patients from the adult population are many and can come into play in an emergency situation. For example, children cannot be decontaminated in decontamination units designed for adults; young people are more vulnerable than adults to chemical agents that are absorbed through the skin or that are inhaled; and young people are more susceptible than adults to dehydration, shock

BE PREPARED TIP

Assess the Population and Identify the Most Vulnerable

Hospitals and long term care organizations seeking to meet the vulnerable populations component of the emergency management standards should consider both physical and cognitive limitations. Cognitive impairments could limit a person's ability to follow directions, and changes in routine could result in anxiety and disruptive behaviors. A physical limitation might require use of a wheelchair, special transportation, or life-sustaining treatments, for example.

from biological agents, and radiation exposure.² EMS and ED staff should have the necessary training to treat these patients with the appropriate interventions in case of an emergency.

In addition, the developmental abilities and cognitive levels of children might impede their ability to escape danger. Children also have unique psychological vulnerabilities, so special management plans are needed in the event of mass casualties and evacuation.²

The American Academy of Pediatrics (AAP) recommends that hospitals incorporate appropriate types and numbers of pediatric-trained staff, equipment, medications, and decontamination equipment, including the ability to handle nonambulatory children, into their EOPs. In addition, the AAP says, hospitals must be prepared to handle situations in which patients will be cared for as a family unit and children will not be able to be separated from adults, such as in a quarantine situation.

BE PREPARED TIP

Gathering Input on Vulnerable Populations

Meeting the needs of vulnerable populations can be more manageable by focusing on the formation of committee made up of the larger community that include elderly persons and those with special needs (and their advocates) to gain direct input concerning priorities, necessary accommodations, and appropriate services for emergency situations. In addition, organizations can help special populations understand their roles in emergency situations. For example, this could include encouraging patients through efforts such as the Joint Commission's Speak Up™ campaign to ask questions and demand answers about emergency planning. Engaging patients in the process can help organizations determine how effectively their message is being received.

This requires hospitals to have the capability to handle children and for children's hospitals to be able to care for adult patients who would stay with their children. To ensure that these pediatric needs are adequately considered, hospitals should be sure to include pediatricians and emergency pediatricians in their emergency management planning, training, and drills.³

In long term care settings, the emphasis on disaster management is on the population served if it is an internal disaster. However, in a community emergency, the organization must also be prepared for walk-ins. Every long term care organization must be prepared to move patients from one facility to another or, in the event of a community disaster, to locations far away. It could also mean that care is provided in austere care environments. This requires a systematic and redundant plan that takes into account individual needs, such as ensuring that patients' medication regimen is not disrupted in an emergency evacuation or that sensory aids such as eyeglasses, hearing aids, and so forth, are accounted for.

Effective emergency management also depends on strong relationships among health care organizations and the community at large. Regional partnerships must be built and maintained to integrate planned responses before an emergency or a disaster occurs. This is particularly important when the emergency involves a special population such as the vulnerable elderly. In the case of a communitywide emergency, all health care organizations might be needed—whether to assist with triage and urgent care of victims, provide nonurgent care to others, shelter community members or patients from other facilities that have been evacuated, or supply specific staff and/or supplies to other organizations.⁴

As discussed in Chapter 7, it is important that organizations include emergency preparedness in new employee orientation programs to ensure that new staff understand the various populations concerned, the identified vulnerabilities, and the system of response in a variety of cases. This applies to both front-line staff and to leadership. Emergency preparation is an ongoing process for staff and patients alike, and training staff to assist those with special needs must include instruction on such issues as transporting, lifting or carrying, and communicating with these individuals. It can also be valuable to include advocates or those with special needs themselves in the training process.⁴

Organizations should also be prepared to address the after-effects of a traumatic event by providing resources on mental health and recovery, as well as educational materials that review how to recognize and monitor the acute and longer-term psychological impact of disaster events. Although children might need special attention after an emergency, organizations should also consider how other vulnerable populations, such as the elderly, disabled, or those with serious chronic conditions or addictions, might need similar help after an emergency.

Finally, addressing the needs of vulnerable populations can go both ways. Hospitals and long term care organizations should encourage independent and community-based individuals with special needs to carry with them information explaining their conditions and special instructions for assistance or treatment; a list of their medications, allergies, sensitivities, and requisite special equipment; and the names and telephone numbers of their physicians and family contacts. Community-based individuals with special needs should be encouraged to have a support network of family or friends who will assist them in an emergency.⁴ Sidebar 9-2 (page 122) provides information on how organizations can help vulnerable populations prepare for emergencies.

Sidebar 9-2.

Strategies for Helping Vulnerable Populations Help Themselves

Organizations can take a number of approaches to help vulnerable populations better weather an emergency. For example, in preparation for hurricane season, one Florida hospital used its case management program. The hospital worked with patients to make sure they registered with the American Red Cross or medical shelters in their neighborhoods, encouraged them to keep enough medications to care for themselves, and provided education about stocking up on supplies such as food, water, and batteries to sustain themselves during an emergency. Case managers would then contact their patients after the storms hit to determine if they had urgent medical needs.¹

To help patients during emergencies, organizations might wish to consider providing the following materials to patients:

- A summary of their care plan, including diagnoses, allergies, medications, and past and current treatments (patients should be encouraged to carry the care plan summaries at all times)
- Copies of important documents, such as pathology reports for cancer patients
- The most recent diagnostic imaging reports

The information should be updated regularly, and patients should be encouraged to keep information in a handy, yet secure location in the event of an emergency.

References

1. Hospital helps chronically ill prepare for disaster. *Hosp Case Manag*, Aug. 1, 2007. <http://0-find.galegroup.com.lrc.cod.edu:80/itx/start.do?prodID=HRCA> (accessed Sep. 18, 2007).

Other Needs

The clinical and support activities standard also calls for hospitals and long term care organizations to plan for the personal hygiene and sanitation needs of patients, as well as for the mental health service needs of patients. These issues are basic to providing adequate care during an emergency, but are now spelled out explicitly in the standards.

Personal hygiene and sanitation needs have become apparent during recent disasters, such as the lack of working toilets for patients and staff during Hurricane Katrina.⁵ To address these concerns, organizations should identify all of the usual activities or items that are considered essential, such as hand washing, showering, or working toilets. Then contingency plans can be made (for example, by securing portable toilets or by the general use of bedpans with specific procedures for appropriate disposal of the waste).

In addition to physical health, organizations facing emergency conditions must also consider the mental health of patients. During the emergency, organizations should consider the immediate mental health needs of those in the hospital or long term care facility. This includes a needs assessment, psychological first aid, crisis intervention, behavioral health care consultation, referrals, and so forth. Organizations can prepare for these needs by engaging in disaster behavioral health care planning and networking, specialized training initiatives for key staff, and community collaboration. During the transition to recovery from the emergency, organizations should plan for supportive counseling needs, screenings and referrals, support groups, and public education.

Mortuary Services

The standard related to managing clinical and support activities also now calls for organizations to plan for mortuary services. This reflects the fact that an emergency might produce

BE PREPARED TIP**Keep a Mortuary List**

Organizations should maintain a current list of mortuaries, morgues, and other facilities that handle the dead, as well as emergency morgues.

unusual numbers of dead patients. Organizations can address this issue by collaborating with local and state coroner's offices, as well as with private mortuaries and EMS, to determine capacity and emergency plans. Community emergency preparedness typically includes plans for mortuary services, including aspects such as transportation, facilities, victim identification, necessary supplies, sanitation, disposal of remains, and other related services. Organizations should know and understand these plans, as well as make appropriate contingency plans if the community is unable to support health care organizations during an emergency. Other issues to consider related to mortuary services include supplies such as body bags, tags, and additional staff who might be necessary to process or transport fatalities.⁶

Documenting and Tracking Clinical Information

Accurate information about a patient's clinical care is the final aspect of this standard. Documenting and tracking clinical information can be particularly challenging during an emergency when, for example, there might be an influx of patients who are rapidly being triaged. Limited resources, disruptions to utilities or communication, and a host of other issues that arise during an emergency add to the complexity. Organizations could address these issues in a number of ways, such as using triage tags to identify the patient, patient condition, assessment, medications, and so forth. Documenting and tracking might also be accomplished by using a paper medical record, or a special abbreviated form of the record that has

Coordinating with the Media

The media can play a role in efforts related to clinical and support activities. For example, keeping the media abreast of an organization's care capabilities during an emergency helps to inform the public about where to seek treatment that will meet their needs. For example, the media can help get the word out about where victims with nonurgent medical needs can receive care. Organizations can also work with the media to get information out to patients who have special needs, such as those with chronic conditions.

been created for emergency situations. Organizations that use wireless handheld devices such as personal digital assistants might also wish to use these (if wireless communication is possible) because of their portability, ease of use, and information-sharing capabilities. Whatever the emergency, documenting and tracking a patient's clinical information is crucial to providing safe care.

When approaching this issue, organizations can consider the following questions⁷:

- Does the organization have a method, along with the paper forms and other supplies, for recording medical information when patient volume or other conditions do not permit the use of computerized systems?
- Are tracking forms and other tools readily available in the ED that permit manual tracking of patients?
- Are tracking forms and other tools readily available in the incident command center that permit manual tracking of patients?
- Does the organization have a plan to record information that was gathered under emergency circumstances into computer systems when conditions permit?

CASE EXAMPLE:

CARING FOR RESIDENTS DURING A CATASTROPHE

Residents of long term care facilities are among the frailest of the frail and the sickest of the sick. In many cases, the long term care facility is their home, and if it must be evacuated in an emergency, most of the residents would have nowhere else to go. In other words, long term care residents are completely dependent on the organization to maintain them in a site where they can be cared for.

Hurricanes and floods in the Gulf Coast and the possibility of pandemic influenza highlight the need for emergency planning in all health care organizations, especially those that focus on long term care. The vulnerability of residents is just one of several ways in which long term care organizations are different from hospitals and other health care organizations during an emergency.

Federal and state regulators require every long term care organization to prepare for emergencies. The Joint Commission's emergency management standards also require organizations to develop detailed plans that take into account different emergencies and contingencies, and organizations must review and revise these plans regularly.

Staffing

In addition to the vulnerability and dependence of their residents, another area in which long term care organizations differ from hospitals in their emergency planning efforts is staffing. According to Janice Zalen, senior director, Special Programs, American Health Care Association (AHCA), the turnover in leadership and staff at long term care organizations is often higher than at other kinds of organizations, with fewer physicians and nurses and many more certified nursing assistants (CNAs). "That can mean a different level of skill and less training for staff," says Zalen. In some cases, that could translate into personnel who might be less prepared to deal with the clinical and environmental challenges of emergency management.

One problem that emerged during the 2005 hurricanes in the Gulf Coast region is that long term care personnel were blocked in their attempts to get to work. Like almost everyone else in that region, they were sidelined by a shortage of gasoline when generators were flooded and there was no power to pump fuel out of underground storage tanks at gas stations. "Hospital personnel could use their [identification] badges to get what little fuel there was," Zalen recalls, "but not our nursing assistants." AHCA recommended that nursing facilities give CNAs a letter to show to gas stations, but some CNAs were still turned away because many of those facility names sound more like gated communities or resorts than nursing homes.

Evacuation and Special Clinical Needs

The process of evacuation when the long term care facility can no longer support adequate care, treatment, and services can be even more challenging than evacuating a hospital. Because of the time and work associated with moving residents of a nursing home, facilities need to start evacuations sooner rather than later, says Zalen. "Many residents have special needs, such as receiving dialysis or being on ventilators. And it can take a long time to get them onto buses and ambulances," she says. But if the facility evacuates its residents and the emergency *doesn't* strike, the federal government won't reimburse the facility for the cost of evacuation. This could cost the facility's management as much as \$150,000.

Zalen cites a case in which a nursing home in the Florida Keys was right in the projected path of a storm. Residents were evacuated north to Orlando. At the last minute, the hurricane turned aside without striking the Keys, but a tornado did strike Orlando.

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Case Example: Caring for Residents During a Catastrophe, *continued***Dementia**

Arguably the chief factor that differentiates residents of long term care organizations from hospital patients is the prevalence of dementia among residents. It is estimated that approximately half of all nursing home residents have Alzheimer's disease or a related disorder.¹ Due to their loss of cognitive ability, residents with dementia will require extra help and consideration when an emergency plan is implemented.

Nursing home residents might not be able to adequately feed or hydrate themselves and will also need special assistance with toileting or other hygiene needs during an emergency and its aftermath. Residents with dementia might not be able to follow or remember instructions about hand washing, wearing a protective face mask, not putting things in their mouths, staying in a particular area, or other matters that involve individual follow-through and accountability.

Residents with dementia could become disoriented and pose a danger to themselves or others if they are not in their usual secure environment. They are susceptible to agitation, frustration, and even catastrophic reactions during a crisis situation, and they have a reduced ability to tolerate changes in their environment.

Another hazard among residents with dementia is wandering, which means aimless or purposeful activity that causes a social problem—getting lost, leaving a safe environment, or intruding in inappropriate places. The risk for wandering increases when residents become upset or agitated or when they face stressful situations.

Residents who have dementia are particularly susceptible to a catastrophic reaction, which can occur when a situation overloads the mental ability of the person with dementia to act rationally. The person then has an exaggerated response to the situation and can strike out, scream, make unreasonable accusations, or become highly agitated or emotional. In the changes and chaos of an emergency or an evacuation, residents are more likely to undergo a catastrophic reaction to a new situation or a changed environment.

These manifestations of dementia become even more difficult for overburdened staff members to cope with during an emergency.

Updating the Plan

Although long term care organizations must test emergency operations plans twice a year, some organizations learn new information through unfortunate real-life experiences. Kaleida Health in Buffalo, New York, has four long term care facilities. A fire in a service area at one of the facilities in 2005 was caught early, before it could threaten any of the 160 residents. The focus was on the residents, but the organization learned about staff safety in the process.

After firefighters left, staff members worked to quickly get things back to normal for residents. Because the staff members worked on the cleanup process without respiratory protection, many staff inhaled soot and later began experiencing problems with their breathing. The organization began reviewing its emergency plan so that it could add provisions that require staff protection in case of a fire or other emergency.

Reference

1. Alzheimer's Association: *2008 Alzheimer's Disease Facts and Figures*. 2008. http://www.alz.org/national/documents/report_alzfactsfigures2008.pdf (accessed Mar. 23, 2006).

Source: Reprinted from Joint Commission Resources: Emergency management in long term care. *Environment of Care News* 9:9, Sep. 2006.

CASE EXAMPLE: PREPARING FOR A PEDIATRIC MASS CASUALTY

When Liberty Hospital in Liberty, Missouri, developed a disaster plan, staff made certain to incorporate steps for dealing with pediatric patients. On May 9, 2005, that plan was put to the test when a school bus lost control while going through an intersection and collided with two passenger vehicles. Minutes after the crash, Liberty got a call describing the events and telling staff to activate the disaster plan. At least 40 to 50 children were injured, and many of them would be brought to Liberty Hospital.

Staff leaped into action:

- The emergency department (ED) clinical director assumed the role of incident commander, and the assistant ED nurse manager became the treatment area's director.
- Two ED nurses were assigned to the two incoming patients that emergency medical services (EMS) had triaged as critical, and another ED nurse stayed at the ambulance entrance to give room assignments to EMS crews bringing in patients.
- The ED had just one pediatric crash cart, so the special procedures and pediatrics unit sent down their carts as well.
- Three critical care rooms with crash carts were set up, and a pharmacist was made available for each one.

In less than 10 minutes, the disaster plan was under way, and the hospital was ready to receive and treat a large volume of pediatric patients. Moments later, the first injured children began to arrive.

Because the children were on a school bus and not with their parents, hospital staff knew that a flood of family members could be expected to arrive soon after the patients. To help with the flow of people, staff placed identification bands on the wrists of those parents who had already been matched up with their children. In addition, the family waiting area was moved a short distance away from the ED, thus relieving some of the congestion in the main ED areas. Liberty also had enough nurses come to the ED from other areas of the hospital that it was able to assign at least one staff person to stay with each child throughout his or her treatment, which eased a lot of the anxiety of the patients and their families.

A total of 29 crash victims—27 children and 2 adults—were treated in the Liberty ED, and 21 of them arrived by ambulance within the first hour. Six of those patients were admitted, 1 went to the operating room, and 5 were transferred to a nearby children's hospital.

Other than a few minor glitches, the disaster plan was implemented as well as Liberty staff could have hoped, and the hospital was commended by the local EMS companies, other facilities, and the community for its successful efforts that day.

Source: Reprinted from Behney A., Breit M., Phillips C.: Pediatric mass casualty: Are you ready? *J Emerg Nurs* 32:341–245, Jun. 2006, with permission from the Emergency Nurses Association.

CASE EXAMPLE:**EMERGENCY PREPARATION FOR PEDIATRIC PATIENTS**

Children are at higher risk than adults in emergency situations. They have smaller blood and fluid reserves than adults, and thus their conditions can deteriorate more rapidly. Their faster breathing patterns and thinner skin put them at increased risk of harm due to exposure to biological or chemical agents. Their immature motor and cognitive skills can slow them in circumstances calling for quick action.

“Because early emergency medical services (EMS) systems were developed in the late 1960s and were based on techniques learned during past war efforts, they tended to focus on adults,” says Mark Cichon, D.O., principal investigator, Emergency Medical Services for Children (EMSC), Loyola University Health System, Maywood, Illinois. “By the 1970s and early 1980s we began to recognize that medical professionals out in the field and even in hospitals were not fully equipped with the necessary tools and training to address the unique medical needs of children. Even though much has been accomplished to better address pediatric emergency care needs, there is still more that can be done.”

The EMSC program is a national initiative dedicated to improving emergency care for pediatric patients. Designed to reduce child and youth disability and death due to severe illness and injury, it is the only federal program that focuses specifically on improving the quality of children’s emergency care. All states, U.S. territories, and the District of Columbia have received federal funding to support EMSC programs. Because each state is different and might have different pediatric needs and priorities, each is encouraged to sketch out its own goals and objectives within a framework defined by the national EMSC program. That framework focuses on programming that improves existing EMS systems as well as develops and evaluates improved procedures and protocols for treating children. Currently, only state governments and accredited schools of medicine are eligible to receive EMSC grants.

The Web site of the national EMSC program, at <http://www.ems-c.org>, provides a list of each state’s EMSC coordinator/contact. In Illinois, EMSC is a collaborative program between the Illinois Department of Public Health and Loyola University Health System. As manager of the Illinois EMSC program, Evelyn Lyons coordinates a collective effort that since 1994 has worked to ensure that health care providers and health care facilities in Illinois are prepared to meet the emergency care needs of children. Beginning in 1998, the Illinois Department of Public Health began formally recognizing Illinois hospitals for their emergency department (ED) pediatric preparedness through the EMSC Pediatric Facility Recognition process. “This is a voluntary process in which hospitals strive to meet specific criteria ensuring that they have appropriately trained personnel and the proper resources and capabilities to effectively treat a critically ill or injured child,” says Lyons.

Supported by a committee made up of representatives from other key state agencies and professional organizations, the Illinois EMSC has established three levels of participation, based on varying levels of criteria. All Illinois hospitals are encouraged to gain recognition as one of the following:

- Standby Emergency Department Approved for Pediatrics (SEDAP)—This level is typically associated with a smaller hospital that has policies, training, and other resources in place to initially manage and stabilize a child. In addition, this level requires the ability to refer patients to more thoroughly equipped pediatric facilities, when appropriate.
- Emergency Department Approved for Pediatrics (EDAP)—A comprehensive facility including 24-hour physician coverage that might admit pediatric patients but might not have pediatric intensive care and other pediatric inpatient services needed in certain circumstances.
- Pediatric Critical Care Center (PCCC)—A facility with a more comprehensive range of pediatric services that goes beyond the ED and includes a pediatric intensive care unit and other pediatric specialty services.

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Case Example: Emergency Preparation for Pediatric Patients, *continued*

EMSC Pediatric Facility Recognition is an initial step in preparing for pediatric disaster and terrorist events. Through consultations, site visits, and resource sharing, the EMSC program assists Illinois health care organizations in achieving these levels of recognition.

Complementing Joint Commission standards on emergency management, the Illinois EMSC has also developed a guideline for hospitals to assist in identifying key pediatric considerations to integrate into their overall disaster plans. Although this is a comprehensive undertaking, there are some tips health care organizations should consider as they approach the steps of this important process.

- **Prepare for unexpected patients.** For health care organizations preparing for the possibility of an emergency intake, the current awareness of terrorist activity should raise new questions about readiness to deal with a heavy volume of admissions. This includes conducting population-specific assessments, according to Lyons. “Conduct an internal assessment of how ‘pediatric prepared’ your facility is. In a mass-casualty incident, it is likely that the resources to assist children will be scarce. Staff inexperience with pediatric critical injury and illness will result in an inadequate surge capacity,” she says. “Organizations must predetermine whether they have an adequate number of staff who are trained in pediatric emergency care. In addition, this assessment must include an evaluation of on-site pediatric-specific equipment, as well as assure that there are mechanisms in place to quickly secure additional pediatric supplies.” In responding to an actual incident, health care facilities should find out as quickly as possible the potential number of pediatric victims they can expect in order to begin preparations to manage the care of children. As facilities work to develop strategies to increase their surge capacity, they need to ensure that these strategies are consistent with their EMS regional disaster plan.
- **Assess your community’s risk.** A health care organization should assess specific threats unique to the physical structure, the campus, and the geographic environment of its facility through a hazard vulnerability analysis (HVA), as required by the standard discussed in Chapter 2. In performing an HVA, a health care organization can identify areas where children regularly convene—such as schools, parks, and summer camps—and determine what types of hazards have a high, medium, or low probability of occurring.
- **Conduct and evaluate pediatric drills.** The EMSC program stresses the importance of including a sufficient proportion of pediatric victims and child-related scenarios in all plans to test the emergency operations plan (as also required by Joint Commission standards) and tabletop exercises, as well as conducting drills that exclusively involve pediatric victims, to test the capacity of an organization’s system to handle pediatric patients. “Ongoing evaluation of your pediatric emergency care capabilities is key,” says Lyons. “In the EMSC Pediatric Facility Recognition process, organizations at all levels of participation are required to have a continuous quality improvement (CQI) liaison, a staff member whose job it is to ensure the pediatric quality improvement process. [He or she] evaluates pediatric care within their emergency department and also works with other hospital CQI liaisons within their EMS region to address pediatric issues more broadly throughout their region.”
- **Reach out to other agencies.** A vital aspect of emergency preparation involves nurturing relationships with local law enforcement agencies, fire departments, children’s hospitals, public health services, and others. Organizations should be aware of and collaborate with local, state, and regional emergency response teams.
- **Prepare staff to be specially equipped.** “EMS is still a relatively young field, and the integration of a pediatrics focus is still evolving, so ongoing staff training and education is essential to an organization’s emergency preparation efforts,” says Lyons.

Source: Adapted from Joint Commission Resources: Emergency preparation for special populations, part 1: Pediatrics. *Environment of Care News* 8:12, Dec. 2005.

For Additional Assistance

- JumpSTART Pediatric MCI Triage Tool: http://www.jumpstarttriage.com/JumpSTART_and_MCI_Triage.php
- New York City Department of Health and Mental Hygiene—Pediatric Disaster Toolkit: Hospital Guidelines for Pediatrics During Disasters: <http://www.nyc.gov/html/doh/html/bhpp/bhpp-focus-ped-toolkit.shtml>
- American Academy of Pediatrics, Children, Terrorism & Disaster Toolkit: <http://www.aap.org/terrorism/index.html>
- Pennsylvania Department of Health: Special Populations Emergency Preparedness Planning: <http://www.dsf.health.state.pa.us/health/cwp/view.asp?a=333&q=233957>
- Disability Preparedness Center: <http://www.disabilitypreparedness.org>
- Substance Abuse and Mental Health Services Administration's Disaster Technical Assistance Center: <http://www.mentalhealth.samhsa.gov/dtac>
- Disaster Mortuary Operational Response Teams: <http://www.dmort.org/>

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