

Chapter 7

Defining and Managing Staff Roles and Responsibilities

When a disaster or emergency occurs, there is little or no time for staff training. It is also likely that staff responsibilities will change during an emergency. As new risks develop and conditions change, staff members will need to adapt their roles to meet new demands on their ability to care for patients. If staff members cannot anticipate how they might be called on to perform during an emergency, the likelihood increases that the organization will be unable to sustain itself during an emergency.

This chapter describes the importance of identifying the roles and responsibilities of staff members during an emergency. It also focuses on the need for organizations to inform licensed independent practitioners about what they need to do and whom to report to in an emergency. Sidebar 7-1 (below) details the Joint Commission's expectations related to defining and managing staff roles and responsibilities. This chapter also goes beyond the standards to explore the fact that the effects of an emergency are not limited to those who are injured by it, or even to those at the center of the emergency. During an emergency and its aftermath, staff in health care organizations experience

significant disruption. Whether the emergency is intentional, unintentional, or natural, health care staff experience a wide range of emotions. No one who responds to a mass-casualty incident is untouched by it. Training as a caregiver does not provide immunity. It does motivate many to override stress and fatigue with dedication and commitment and to deny the need for rest and recovery time. This takes its toll on individuals and their families. To mitigate the psychological impact of emergencies on staff, organizations should consider the information and strategies contained within this chapter.

The Role of Staff in Emergencies

The emergency management standard discussed in this chapter describes the elements necessary to provide safe and effective patient care during an emergency. Specifically, staff roles must be well defined; staff must be oriented and trained in their assigned responsibilities; and staff must maintain their competencies over time. Staff roles in emergencies are determined largely by the priority emergencies defined in the hazard vulnerability analysis (HVA), and the reporting relationships in the command and control operations of the organization.

Sidebar 7-1.

Applicable Emergency Management Standard

The organization defines and manages staff roles and responsibilities.

This standard requires the following:

- Staff roles and responsibilities are defined in the emergency operations plan for all six critical areas (communication, resources and assets, safety and security, staff responsibilities, utilities management, and patient clinical support activities).
- Staff are trained for their assigned roles during emergencies.
- The organization communicates to licensed independent practitioners their roles in emergency response and to whom they report during an emergency.
- The organization establishes a process for identifying care providers and other personnel (such as identification cards, wrist bands, vests, hats, badges, computer printouts) assigned to particular areas during emergencies.

It is important to ensure that all staff members—including day-to-day staff across all departments and the medical staff—understand their roles in an emergency. Staff must be able and ready to adjust to changes in patient volume or acuity, work procedures or conditions, and response partners within and outside the organization. Organizations should document staff roles and responsibilities in the emergency operations plan (EOP), and can use a variety of formats—job action sheets, checklists, flowcharts, and so forth—to accomplish this task.

When addressing staffing issues in emergencies, organizations should consider the following strategies:

- **Define staff roles and responsibilities.** Consider how staff relate to the organizational capabilities and responses before, during, and after an emergency in the areas of communication, managing resources and assets, managing safety and security, managing utilities, and managing clinical activities.
- **Provide training for staff.** Staff educators, risk managers, clinical staff leaders, department managers and supervisors, or local authorities should educate relevant staff members on the organization's emergency management programs. Provide initial training and periodic refresher courses on areas such as hazard identification, triage, decontamination, infection control/isolation, treatment, and media and crowd control.
- **Create quick reference safety manuals.** Important emergency management information should be readily available in many places throughout the organization.
- **Identify and assign staff members to cover all essential staff functions under emergency conditions.** Determine in advance the availability of staff members on short notice, how quickly they can come to the organization, and how willing they are to work overtime. Include a protocol for alerting off-duty employees to come back to work.
- **Plan to provide adequate housing, food, transportation, and crisis counseling for the staff.** The needs of the families of staff also should be considered. (See Chapter 5 for additional information.)
- **Teach staff members how to manage stress.** Pass out information about coping with stress to all staff members, including how to recognize severe stress symptoms and signs of emotional stress and how to provide immediate psychological support to coworkers.

Defining Roles and Responsibilities

Staff members are crucial to the emergency management process, and this is a concept that organizations are accustomed to as part of emergency management standards. The standards

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Who to Train

Organizations must decide who to train in emergency management. For example, which clinical staff (nurses, physicians, respiratory therapists) and nonclinical staff (administrators, security personnel, laboratory personnel) need training? Which departments should be covered? All staff, though, should understand that the organization has an emergency operations plan and know their role within that plan.

Staffing During Emergencies

Having policies that address the issues related to staffing outlined below enables organizations to have adequate numbers of staff members to respond to emergencies.

- How will adequate staffing during the emergency be ensured?
- Is a protocol in place to contact off-duty staff to report back to work?
- Is a policy in place to cancel scheduled vacations and days off during a disaster?
- Is a policy in place to deny vacations and days off during an emergency?
- Is a policy in place for extending staff shifts or requesting overtime?
- How are licensed independent practitioners included in staffing plans?
- Is the organization aware of state-specific laws and regulations regarding staff overtime or extended shifts?
- Does the organization have a contingency plan for staffing if personnel are either unable or unwilling to report to work?
- Is a plan in place to assist with the care of staff family members, when appropriate?

Source: Adapted from Joint Commission Resources: *Are You Prepared? Hospital Emergency Management Guidebook*. Oakbrook Terrace, IL: Joint Commission on Accreditation of Healthcare Organizations, 2006.

are now more explicit, though, in that the organization needs to consider and plan for how staff fit in with each of the six critical areas of emergency management (communication, resources and assets, safety and security, staff responsibilities, utilities management, and patient clinical support activities). An organization's EOP should provide processes for identifying and assign-

More Personnel

At some point in an emergency, the situation will require more personnel, either to relieve those people who have been on duty for a long time or to supply additional resources to manage the emergency. Identify which personnel are needed to handle the situation. How will staff get to the hospital or long term care facility? Can they bring their families? Where do they stay if they need to spend a protracted amount of time at the organization? Studies have found that people in an emergency work best when they are performing familiar tasks or tasks they have specifically trained for.

Source: Adapted from Joint Commission on Accreditation of Healthcare Organizations (Joint Commission): *Emergency Preparedness in Health Care Organizations*. Oakbrook Terrace, IL, Joint Commission, 1996.

ing staff to cover essential staff functions and each of these six essential functions under emergency conditions.

To cover work shifts, the plan should determine, in advance, the availability of staff members on short notice, how quickly they are able to arrive at the organization, and how willing they are to work overtime. Plans should also specify where staff should report. Because an emergency might affect whether staff are willing or able to report to work, the plan should include a protocol for alerting off-duty employees of the possibility of being called for duty, canceling scheduled vacations and days off for key personnel, or denying vacations and days off until further notice. This might apply to all employees, not just key personnel, depending on the severity of the emergency's effect on the organization.

Most health care organizations struggle daily to maintain adequate staffing. Staffing during an emergency presents a particular challenge. Emergency management planners should consider keeping a roster of part-time employees, former employees, and recent retirees who can be trained in advance and summoned in an emergency. To do so, keep track of where former employees are working.

Staff Training

Orientation and education about potential emergencies and their expected risks and consequences, how to respond to each type of emergency, and how to provide the best possible care to disaster victims should be provided to health care staff before a disaster occurs.

This requirement (actually an element of performance) recognizes that staff education yields the highest “return on investment” in terms of resources expended versus improved response capabilities. An EOP should outline who is responsible for staff education at the hospital or long term care organization. Although the nature and subject of the training will determine

who leads the effort, administrators, risk managers, staff educators, or clinical staff leaders often assume responsibility for overseeing the education program. (See Table 7-1 on page 98.)

Because so many staff members require various levels of education—particularly in a complex hospital setting—department managers and supervisors might be best prepared to provide training in their respective areas. In fact, it is usually unreasonable to expect one individual to provide emergency management training for all new employees. Department managers and supervisors are typically best prepared to provide this orientation, with some oversight from organization leaders to coordinate the program and ensure completion of the program.

An organization typically will have a new employee orientation program that covers the broad environment-of-care processes and plans that apply to all staff, such as the fire plan and hazard communication plan. This is often based on the issues present in the department. Staff should receive initial training and then periodic refresher courses, though, because it is not enough to conduct such training during orientation alone.

Organizations must decide whether such education will be conducted on a quarterly, biannual, or annual basis. To keep the lessons fresh and in the forefront of everyone's minds, some organizations divide training topics into 12 modules that are presented on a monthly basis. No matter how often staff training is provided, it has to be repeated when staff turnover occurs, particularly if the individual leaving has a significant role in emergency management processes.

Formats for training vary almost as much as the individual roles and responsibilities during an emergency. Classroom or seminar settings can range from two-hour lectures to workshops that can last for several days. These can involve satellite broadcasts, videotaped programs, or live lectures. Many organizations employ a “train-the-trainer” model that involves

Staff Training Checklist

- Does the emergency operations plan specify responsibility for the training program?
- Does it include methods for unplanned training for new and altered roles?
- Does it provide ongoing disaster education material to facilitate staff awareness and currency of procedures?
- Does it have interorganization joint training sessions that deal with common aspects of disaster response?
- Does it track who received training and who still needs to be trained?
- Does the organization have ongoing, mandatory disaster training programs?
- Has the organization considered adapting disaster procedures for application when dealing with routine procedures so personnel can become familiar with them?

Source: Adapted from Association for Professionals in Infection Control and Epidemiology, Center for the Study of Bioterrorism and Emerging Infections: *Mass-Casualty Disaster Plan Checklist: A Template for Healthcare Facilities*. <http://bioterrorism.slu.edu/bt/quick/disasterplan.pdf> (accessed Mar. 10, 2008).

training a small group of employees who then train coworkers. Another format option is a self-study program, either computer or manual based, that staff can complete at home or in another setting.

“Just-in-time” training is often used as an adjunct to formal education sessions. This type of training makes concise knowledge available to providers at the time of an event and at the point of care. Many of the just-in-time educational components are Web based.

In-house instructors are not the only option for leading staff training sessions. Other individuals who might be involved include representatives of the state Occupational Safety and Health Administration office, local police or fire departments, emergency medical service or public health representatives, or equipment and pharmaceutical manufacturers.

Emergency management education, which can take place in the facility or off site, should not stop at the in-service level. Staff members must be involved in realistic exercises to test their knowledge. Being involved in disaster exercises enables staff to become more comfortable with, and more skilled at, engaging in emergency procedures. This, in turn, eases staff anxiety over emergency situations and improves their efficiency during actual events. A discussion of testing the EOP and staff-related components can be found in Chapter 10.

Organizations will want to consider staff training related to specific populations served by the organization. For example, a Medicare-/Medicaid-based long term care organization providing services to residents with Alzheimer’s disease or a hospital with a large pediatric unit will want to train the staff responsible

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Verifying Compliance

To verify compliance with the requirements for staff orientation and education, The Joint Commission will not rely on sign-in sheets for the programs, nor on any other type of attendance records. These documents are important for other reasons, and must be maintained, but surveyors will instead talk with staff, usually during the building tour and tracer methodology process, to determine their knowledge of the emergency operations plan and the skills they need in order to fulfill their roles and responsibilities.

for implementing the EOP in how to effectively evacuate such individuals. Transporting confused elderly residents or frightened children requires sensitivity to the issues involved with their specific care needs. The effectiveness of educational efforts might be addressed through ongoing monitoring of staff knowledge and skills and level of staff participation.

Staff members should be educated in the skills required to perform their roles within the organization’s emergency management plan. Educate staff in at least the following areas described:

Hazard Identification

Every staff member should be trained to recognize possible hazardous situations and know how to appropriately respond to them. The type of training will, of course, depend on the staff member’s role and responsibilities during an emergency. For example, clinical staff members should know how to iden-

tify victims who might have come in contact with biological or chemical agents. They should also know how to prevent a patient or resident from potentially contaminating the facility. Some staff members, particularly laboratory, pathology, or infection control staff, can be trained in epidemiological investigation. Security, reception, and administrative personnel should know how to react to a bomb threat. Self-protection from chemical or biological exposure, other toxins, and weapons must be specifically addressed and taught.

Triage

During an emergency, the objective of triage shifts from doing the greatest good for the individual to doing the greatest good for the greatest number of people. Therefore, the clinical staff should be educated in their organization's emergency triage protocol, which will differ from the usual triage protocol. Staff should know how to respond quickly and effectively to help a large influx of patients at one time.

Decontamination

The U.S. Occupational Safety and Health Administration mandates training for all staff involved in decontamination. In brief, First Responder Operations Level training is required for staff who would decontaminate victims or handle victims who have not yet been thoroughly decontaminated. This includes decontamination victim inspectors, clinicians who triage and/or stabilize victims prior to decontamination, security staff, setup crew, and patient tracking clerks. This level of training provides personnel with an understanding of how to recognize a potential hazardous materials problem and to respond accordingly. A briefing at the time of the incident, which provides instruction in donning appropriate personal protective equipment, information regarding the chemical hazards involved, and instructions on the duties that are to be performed, is required for staff members whose roles in the decontamination area could not be anticipated before the incident; for example, a medical specialist or a tradesperson, such as an electrician. First Responder Awareness Level training is required for emergency department (ED) clinicians, clerks, triage staff, and personnel who might identify unannounced contaminated victims and then notify the proper authority. This training is also required for security personnel, setup crew, and patient tracking clerks who are working near, but outside, a hospital decontamination zone. Some hazard communication training is recommended for ED staff and other employees who work in the ED but are not expected to encounter contaminated patients. Retraining must be provided on an annual basis.

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Centers for Disease Control and Prevention Guidelines

The Centers for Disease Control and Prevention provides guidelines that offer a framework for responding to various infectious disease outbreaks on its Web site at http://www.cdc.gov/ncidod/dhqp/gl_isolation.htm.

Infection Control/Isolation

Staff should be educated about the range of possible contamination, as well as the appropriate infection control precautions that should be taken when treated individuals with suspected or confirmed bioterrorism-related illnesses. These would include standard precautions and sometimes airborne or droplet precautions. Health care workers should also be trained in proper sanitation measures to contain the spread of infection.

Treatment

Staff members should be educated about treating illnesses and injuries they might not see on a regular basis or might have never seen. As a result of a terrorist attack, infectious diseases that were almost eradicated or are very rare, such as smallpox or the plague, could resurface. In addition, staff could be treating mass casualties or triaging an influx of infectious patients. Treatment protocols should be clear for all the aforementioned instances. In addition to treating the actual victims of an emergency, staff should be educated on how to provide this treatment without compromising the care of others in the organization.

The emergency management standards and other environment of care standards do not state a required frequency for ongoing staff education programs. Some regulatory agencies do have frequency requirements, and those must be followed. Often, other agencies require an annual retraining for compliance with their requirements. The Joint Commission is therefore

BE PREPARED TIP

Staff Assignments During Emergencies

When possible, staff should be assigned tasks that mirror what they ordinarily do at the organization. Studies have found that people in an emergency work best when they are performing familiar tasks or tasks for which they have been specifically trained.

not concerned with training frequencies unless they are specified in the health care organization's policies and procedures. The Joint Commission expects staff to possess the competence (defined as the knowledge, skills, ability, and behavior that a person possesses in order to perform tasks correctly and skillfully) to fulfill their functions in the environment of care. Annual training is certainly one way to accomplish this. As shown in Sidebar 7-2 (page 97) and Sidebar 7-3 (page 97), the issues of training for contract workers and competency-based education are two important issues to consider when addressing staff education needs.

Licensed Independent Practitioners

Licensed independent practitioners play a critical role in emergency management, making care decisions for those patients already in the organization and for those who arrive as a result of an emergency. It is therefore important that they understand their roles in emergency management in order to fulfill their responsibilities and meet organization needs.

The staff roles and responsibilities standard specifically requires organizations to communicate to licensed independent practitioners their roles in emergency response and to whom they report during an emergency. Organizations should work with their medical staff leadership to communicate expectations and outline roles and responsibilities of licensed independent practitioners during an emergency. The organization and medical staff should collaborate on this process as with other processes.

Identifying Care Providers

During an emergency situation, a health care organization might be dealing with a chaotic environment—damaged facilities, an influx of patients and visitors, extraordinary time pressures, and many other factors. These circumstances make it important to identify care providers and other personnel assigned to particular areas during emergencies. Organizations can meet this requirement in a variety of ways, such as by using identification cards, wrist bands, vests, hats, badges, or computer printouts.

Managing Stress

Because a disaster could be affecting the surrounding community, staff experience the emergency's immediate impact in much the same way as all other community members. They might or might not be able to get to work. They might or might not have lost their homes. Staff might have been injured or killed; their colleagues and families might be injured, missing, or dead.

To address the immediate impact of a disaster on staff, the organization's emergency management plan must address both of the following, as required by the standard described in Chapter 5:

- Staff support activities, such as housing, transportation, and incident stress debriefing
- Family support activities

Family support activities are likely to be of foremost and immediate concern to staff. Family support concerns include communication between staff and family and day care for children and adults. Leaders should consider how to facilitate the provision of both. They should also consider staff support issues related to housing and transportation. Organizations might also wish to address the issue of financial assistance. Staff might need financial assistance during the initial and ongoing phases of responding to a disaster. The organization should consider making provisions for this and offering convenience services such as check cashing so that staff members have easy access to cash. Sidebar 7-4 (page 98) details some of the concerns that impact the willingness of health care emergency workers to respond to a disaster.

Physical and Psychological Effects

Staff well-being is key to an effective emergency response and ongoing organizational effectiveness. Health care workers could experience shock, fear, grief, anger, and anxiety, as is common to other people involved in such an event. Their physical reactions could include tension, fatigue, edginess, difficulty sleeping, bodily aches or pains, startling easily, racing heartbeat, and nausea.¹ But they have the added stress associated with caring for victims during a time of crisis. Health care workers who respond to natural or man-made disasters are at high risk for secondary contamination, but an even higher risk for emotional distress.²

Rescue workers typically experience mild to moderate stress reactions during the crisis and in the early post-impact phases of a disaster. Some health care workers experience acute stress disorder, which is characterized by post-traumatic stress disorder symptoms that last anywhere from two days to one month following the trauma. It is estimated that as many as one out of every three rescue workers experience severe stress symptoms.¹

Other longer-term psychological problems that can result from exposure to disasters include alcohol or substance abuse, anxiety, somatization, domestic violence, and difficulties in daily functioning. Another condition that can result from health care work-

Sidebar 7-2.

Training Contract Workers

Organizations often raise questions about required orientation and education for contract workers—individuals who work in the health care organization's building but who are employed by another entity. Examples of contract workers include agency nurses, contract tradespeople, or medical equipment service organization employees. The Joint Commission views these individuals as the contracting organization's employees, and, therefore, they must undergo some sort of orientation and education process.

Remembering that the training is role-specific (one size does not fit all), the contract staff does not have to undergo the same orientation and education as regular staff employees. The training does not even have to be done by someone in the organization; often the contract includes language stating that the contractor is responsible for orientation and education to the organization's specifications. Still, the health care organization ultimately holds the responsibility, and someone in the organization must ensure that the emergency management and other required training occurs.

Sidebar 7-3.

Emergency Preparedness and Staff Competency

Competency-based education for emergency preparedness is a relatively recent development in health care. One approach is to employ seven “cross-cutting” competencies that address the following¹:

- Recognize a potential critical event and implement initial actions.
- Apply the principles of critical event management.
- Demonstrate critical event safety principles.
- Understand the institutional emergency operations plan.
- Demonstrate effective critical event communications.
- Understand the incident command system and your role in it.
- Demonstrate the knowledge and skills needed to fulfill your role during a critical event.

An approach to core competencies specific to nurses includes the following²:

- Describe the organization's role in responding to a range of emergencies that might arise.
- Describe the chain of command in emergency response.
- Identify and locate the organization's emergency response plan (or the pertinent portion of it).

- Describe emergency response functions or roles and demonstrate them in regularly performed drills.
- Demonstrate the use of equipment (including personal protective equipment) and the skills required in emergency response during regular drills.
- Demonstrate the correct operation of all equipment used for emergency communication.
- Identify the limits of your own knowledge, skills, and authority, and identify key system resources for referring matters that exceed these limits.
- Apply creative problem-solving skills and flexible thinking to the situation, within the confines of your role, and evaluate the effectiveness of all actions taken.
- Recognize deviations from the norm that might indicate an emergency and describe appropriate action.
- Participate in continuing education to maintain up-to-date knowledge in relevant areas.
- Participate in evaluating every drill or response and identify necessary changes to the plan.

References

1. Hsu E.B., et al.: Healthcare worker competencies for disaster training. *BMC Med Educ* 6(19):1–8, 2006.
2. Gebbie K.M., Qureshi K.: Emergency and disaster preparedness: Core competencies for nurses. *Am J Nurs* 102(1):46–51, 2002.

Table 7-1. Training for Disasters

When a disaster plan is in place, staff must be trained in how to respond to a disaster situation. An Agency for Healthcare Research and Quality review of current research found that training should include a combination of the following:

- Traditional educational methods, including lectures, discussions, audiovisuals, and written materials
- Teleconferencing, which can reach a large audience
- “Smart” patients or mock victims, which are helpful for one-on-one training but less practical for training large numbers
- Theoretical, “paper” drills, which do not require physical movement of patients, personnel, or equipment but usually focus on the roles and responsibilities and system integration components
- Computer simulations, which can potentially replace expensive drills and identify weaknesses in disaster planning
- Physical drills, which can improve knowledge of the disaster plan and highlight weaknesses

Source: Agency for Healthcare Research and Quality (AHRQ): *Bioterrorism and Health System Preparedness: Disaster Planning Drills and Readiness Assessment*. Rockville, MD: AHRQ, Jan. 2004.

Sidebar 7-4.

Willingness to Respond

Although many health care emergency workers are quite selfless in their efforts to care for others, their own personal safety as well as that of their families will also be on their minds during a disaster, particularly during a large-scale event.

One study found that emergency medical technicians were far more willing to respond to disasters in which they were at less personal risk, such as in a large fire with a high number of victims, than in a smallpox outbreak or bioterrorism incident. This information could reflect a response to the number of rescue workers who were killed in the September 11, 2001, attacks on the World Trade Center. Sense of responsibility (83.3%) and ability to provide care (77.3%) were most commonly given as the reasons by those who said they would be willing to respond; concern for family (44.4%) was the most common reason respondents said that they would not be willing to respond. (See Chapter 5 for more information about support activities to meet the needs of staff and their families.)

Source: DiMaggio C., et al.: The willingness of U.S. emergency medical technicians to respond to terrorist incidents. *Biosecur Bioterror* 3:331–337, 2005.

ers responding to an emergency is known as critical incident stress.³ Symptoms include deterioration in one’s sense of well-being, exhaustion, depression, hostility, lost tolerance for victims, dread of new encounters, guilt, helplessness, or isolation. This syndrome lowers group morale, increases absenteeism, interferes with mutual support, and adversely affects home life.

Staying Healthy

Disaster and response workers face unique stressors, which is why it is so important for health care organizations to educate staff on how to manage the stress that will naturally arise in an emergency situation. Strategies to manage stress during an emergency that can be passed on to staff members include the following⁴:

- Developing a “buddy” system so that staff members can monitor one another’s stress levels
- Encouraging and supporting their coworkers

- Limiting shifts to no more than 12 hours per day
- Taking a break when they feel their stamina, coordination, or tolerance for irritation is diminishing
- Defusing briefly when they experience troubling incidents and after each work shift
- Making work rotations from high-stress to lower-stress functions and from the scene to routine assignments, as possible
- Talking about their emotions to process what they have seen and done
- Using available counseling assistance programs
- Participating in memorials, rituals, and use of symbols as a means to express feelings
- Taking care of themselves by eating small quantities of food and drinking water frequently
- Staying in touch with family and friends

Sidebar 7-5.

Leadership Strategies

Leaders can use the following strategies, provided by the National Mental Health Association, after an emergency to help their workforce cope and continue to work effectively¹:

- Speak to the entire organizations as soon as possible. Leaders should meet with staff at all levels to express shared grief, as well as to promote available counseling services and other resources. Encouraging employees to take care of themselves is also important.
- Educate supervisors and managers. It is important for supervisors and managers to recognize the signs of emotional distress and to know about available treatment resources; encourage them or their staff to seek treatment when necessary.
- Provide educational resources for treatment resources.
- Facilitate communication among employees. Support among colleagues can help employees work through difficulties.
- Consider bringing a professional counselor/facilitator on site. Group meetings and individual counseling can identify those who need help and ensure that they receive the help, thus reducing the need for services down the road.
- Revamp your leave policy temporarily. Allow people time off beyond the norm for donating blood, community activity, and personal needs. Employees will benefit from feeling that they are able to take positive action and make a difference.
- Let business resume. Returning to productive work, while acknowledging that things have changed, will help with individual and organizational healing.
- Reconsider current travel needs. Consider postponing or canceling conferences or other meetings that require travel, recognizing that recent events might make people hesitant to make business trips for some time.
- Hold a memorial service. Such a service can honor the losses of employees' loved ones, as well as all the victims.
- Organize community action. Holding a blood drive, starting a voluntary collection fund for relief efforts, or similar actions demonstrate to employees that the organization is committed to helping those both within and outside the organization.
- Plan for future emergencies. Review the emergency operations plan to address any problems that arose with the recent disaster, and make sure to involve all segments of the staff in the planning.

Reference

1. National Mental Health Association: *Helping Your Workforce Cope and Return to Work*. <http://www1.nmha.org/reassurance/workforce.cfm> (accessed Nov. 16, 2007).

The need for immediate expert crisis counseling and spiritual support for all staff during a disaster should not be underestimated. Organizations should arrange for a skilled team of counselors and pastoral workers to be on hand during a disaster to help staff members work through their emotions and provide counseling.

Incident stress debriefing, in a variety of formats, is commonly offered to health care workers following an unusually stressful or traumatic incident. It helps them to process the associated emotions so that they can appropriately return to duty. Health care organizations should offer debriefing services to employees and should encourage or require employees to attend. This is vital not only for health care providers involved in disaster response, but also for those who stand ready to assist. Many organizations have some form of incident stress

debriefing already in place and will only have to pull the reference into the EOP. Sidebar 7-5 (above) offers ideas for how leaders in a health care organization can help staff facing a stressful emergency situation.

Impact on the Organization

In addition to the stress on staff, the impact of emergencies on the operations of health care organizations is immense. The disruption to the organization's normal systems and processes is spread throughout the organization, from accounting operations to pharmacy services. Supplies must be provided as vendors struggle to meet a new level of demand. Information systems must function in what is often a less-than-optimal environment. The organizations' finances are strained as revenue declines and expenses mount. If the organization is itself the victim of a disaster and has to evacuate patients and shut down

for a time, such as during a power failure resulting from hurricane-force winds or floods or a contagious bioterrorist-related death, financial losses accrue rapidly. The direct costs of treating patients immediately following an emergency and lost revenue resulting from the drop-off in business while the organization is attending to the disaster also can be significant.

For example, preliminary estimates from the Greater New York Hospital Association, issued less than a month after the September 11, 2001, attacks on the World Trade Center, indicate a loss of \$340 million by New York City hospitals.⁵ The losses were due to the combination of incremental emergency expenses, unreimbursed standby costs, and continuing fiscal impacts. The estimate did not include the significant cost increases that were required to meet new security and emergency management requirements. Following the hurricanes of 2004, the Florida Hospital Association reported that hospitals had more than \$200 million in unexpected costs related to storm damage, lost revenues, staff overtime, and facility modifications to reduce potential damage during future storms.⁶

Common Reactions to Disasters

Though reactions to disasters can vary from one individual to another, there are common responses that are normal reactions to the abnormal events. Sometimes these stress reactions appear immediately following the disaster; in some cases, they are delayed for a few hours, a few days, weeks, or even months. Although the reactions detailed below might be normal, persons providing disaster behavioral health care services should refer an individual for services of a behavioral health care professional. These stress reactions can be categorized as physiological, cognitive/intellectual, emotional, and behavioral symptoms and can include the following^{7,8}:

Physiological Symptoms: fatigue, nausea, headaches, vomiting, chills, ticks, teeth grinding, muscle aches, dizziness, profuse sweating, fine motor tremors

Cognitive/Intellectual Symptoms: memory loss, concentration problems, distractibility, reduced attention span, decision-making and problem-solving difficulties, calculation difficulties, and difficulty communicating thoughts, remembering instructions

Emotional Symptoms: anxiety, feeling overwhelmed, grief, identification with victims, depression, anticipation of harm to self or others, irritability, frustration

Behavioral Symptoms: disorientation, confusion, insomnia, being uncharacteristically argumentative, unnecessarily taking risks, crying easily, substance abuse, gallows humor, gait change, ritualistic behavior, hypervigilance, unwillingness to leave the scene

Coordinating with the Media

Patients will not be the only ones arriving at health care organizations in the wake of an emergency. The media also will frequently be on site, seeking information. Add to the mix volunteers wanting to help and concerned family members. Staff should be educated on strategies to handle an influx of people during an emergency. For example, staff should be trained to refer the media to the individual designated to provide them with information and direct them to an area away from patient or resident care areas as well as areas where concerned family members might be gathered.

CASE EXAMPLE:**FLORIDA'S QUADRUPLE STRIKE OF HURRICANES GENERATES SOLID RESPONSE STRATEGIES**

During a six-week period in August through September 2004, four major hurricanes tracked through coastal and central Florida, resulting in significant loss of life and numerous injuries and causing an unprecedented amount of damage to the area's critical infrastructure, property, and environment. Every health care organization in the region was, in a sense, a storm center, coping with a sudden influx of disaster victims, facility damage, staff shortages, and a myriad of other consequences.

For lessons learned from these devastating hurricanes, staff in two organizations that sustained heavy damages and faced enormous challenges were interviewed: (1) DeSoto Memorial Hospital (DeSoto), a facility with 49 beds located in rural Arcadia, and (2) Health First, an integrated delivery system with three acute care hospitals—Holmes Regional Medical Center, a 514-bed Level II trauma facility in Melbourne; the 150-bed Cape Canaveral Hospital; and the 60-bed Palm Bay Community Hospital.

Elizabeth Jordan, R.N., Ph.D., vice president of patient care services and chief nursing officer of DeSoto; Robin Bledsoe, R.N., nursing supervisor of DeSoto; and James C. Kendig, vice president of safety, security, parking, and clinical transportation of Health First, offered the following seven strategies for preparing for and responding to hurricanes and other types of emergencies.

Learn the Language and Players

At night of the day Hurricane Charley hit, DeSoto received a call through the area's emergency management system, inquiring whether the hospital needed a disaster medical assistance team (DMAT). "We thought we had to specify the types of personnel we needed, rather than just responding, 'Yes,' resulting in the delayed dispatch of needed DMAT personnel and supplies," says Jordan. In another incident, a team from Disaster Aid Services to Hospitals was turned away at the county border because officials were not familiar with that agency. "We were talking with dozens of federal, state, and local agencies, all of whom have their own language, some of which we didn't understand. I would advise colleagues to ask probing questions if they don't understand an agency's emergency response language." Participation in communitywide emergency management planning of key preparedness and response partners, including local government, fire safety, law enforcement, emergency medical services, public health, utilities, and health facilities would prevent such problems.

Participate in Communitywide Planning

Following Charley, Brevard County's Emergency Operations Center (EOC) provided a seat for a hospital representative at the ESF#8 table (Emergency Support Functions: public health and medical services). The representative met twice daily with hospital CEOs in the region to obtain information on bed, building, and operations status by organization, to learn of any issues that needed to be resolved, and to communicate communitywide information of importance to the hospitals. "This worked phenomenally well because the hospital rep could resolve hospital issues at the EOC by simply walking over to the appropriate ESF desk (for example, law enforcement, public works, transportation) to request needed resources or other help, and then report back to the hospitals at the next briefing session," says Kendig, whose organization provided the representative during Hurricane Frances. Bledsoe advises smaller organizations as follows: "Know your community's emergency management system and its planned response. Make sure you have a representative at the community's emergency management planning table, are involved in drills, and communicate frequently with potential response partners."

(continued)

Case Example: Florida's Quadruple Strike of Hurricanes Generates Solid Response Strategies, *continued*

Prepare Staff

Staff absences following hurricanes several years earlier had taught First Health the importance of conducting annual education programs to prepare all staff members for their roles and responsibilities during hurricanes. Based on a study's conclusion that stated, "It is not sufficient for a few key officials and planners to know their roles and responsibilities during a disaster, but that the roles of everyone involved must be clearly understood,"¹ Health First developed a hurricane preparedness program. It starts in January of each year, with meetings attended by representatives from all organization levels and chaired by Kendig. May is "Hurricane Preparedness Month," when each staff member receives education and a handbook covering information on staff responsibilities in pre-storm, storm, and post-storm periods; storm communication; safety; sheltering; preparation of work areas; what to bring when reporting to work; policies regarding pets; assistance available after the storm; and other topics.

Anticipate Power and Water Problems

Emergency preparedness planning identifies problems that might occur during disasters and develops strategies to prevent such problems or mitigate their impact. Loss of electrical power and water supply are common occurrences during hurricanes. "Because Charley took a different-than-expected path, Desoto had less than 45 minutes of warning for the storm. However, during this period, one of our maintenance supervisors had the foresight to turn on our emergency generator and activate our well," says Jordan. The community lost its water and power supply for weeks, but the hospital was able to provide basic life-sustaining services. "Most hospitals don't have their own wells, but they need to consider what they will do if they can't rely on tankers of water being brought to them, the backup cited in so many emergency plans. Backup to backup plans was critical for us because we were totally cut off from all supplies," comments Jordan.

Coping with the loss of nonpotable water was more of a problem in many of the affected hospitals than the loss of potable water, which was more easily brought in from the outside. To meet critical nonpotable water needs, including equipment cooling and sanitary/sewer operations, organizations might wish to consider developing a "plug-and-play" type of capability that would connect nonpotable water lines to alternative water supply from tanker trucks, existing wells, or other sources.

Both Jordan and Kendig urge organizations to "beef up" as much emergency electrical power as possible, thereby providing redundancy that could be critical. Emergency generator capabilities at DeSoto exceed those defined by *Life Safety Code*^{®*} requirements, and Health First is adding more generators at its smaller hospitals. Based on the number of stories in a building and the amount of traffic any one elevator can reasonably handle, hospitals should consider the adequacy of elevators running on generator power. To effectively continue operations with one or a limited number of functioning elevators, hospitals must address how to control elevator traffic through such strategies as limiting visitors and "staffing" the elevators.

Lack of emergency power to ventilation systems and rain that entered through louvers caused temperature and humidity levels to soar at numerous Florida hospitals, including Health First facilities, resulting in damaged sterile supplies and mold and mildew problems that extended recovery efforts. Portable emergency generators that can be brought in quickly by trailer or truck and connected to normal power branches should be considered.

(continued)

* *Life Safety Code* is a registered trademark of the National Fire Protection Association, Quincy, MA.

Case Example: Florida's Quadruple Strike of Hurricanes Generates Solid Response Strategies, *continued***Address Care Challenges**

Small, isolated DeSoto faced the challenge of providing care to 35 then-current patients and more than 300 victims who arrived within three hours in a mostly roofless and totally windowless facility. “Evacuation was not an option because there was nowhere to go,” says Jordan. Staff moved inpatients down numerous flights of stairs to the center of the building’s first floor, tucking each patient’s medical record under his or her arm. “Our mantra was, ‘Babies with their mothers, and charts with their patients,’” says Jordan. Bledsoe had already developed a plan to provide medical management from a remote site, so she put the plan into action. Runners brought medication orders to the third-floor pharmacy supply area, where the pharmacist supplied medications, and returned them back downstairs to be administered to patients. In the first hours of the storm, all internal and communication systems were severely affected, and external communication systems were knocked out, so the hospital used runners widely to communicate critical information. Bledsoe encourages health care organizations to consider numerous methods for meeting internal communication needs in the event of total communication system failure.

Approximately 10 patients who arrived at DeSoto during the hurricane in critical condition were stabilized and flown out the first evening by helicopter—the only way to access the hospital. Staffing shortages were acute for many months. Health First hospitals, which had greater available resources during the hurricanes, reduced census as low as possible prior to the storms and supported their special needs shelters for area residents who had nonurgent medical care needs. Kendig urges organizations to develop plans for the evacuation of not only patients but also ancillary support supplies. “Consider issues such as surgical supplies, blood products, and pharmaceuticals that could be damaged or rendered useless by moisture or the lack of refrigeration,” says Kendig.

Meet Staff and Security Needs

Shortages are particularly challenging for staff during emergencies. “If relief staff cannot reach the facility, organizations need to consider how to meet staff respite needs. Our staff had to sleep on floors in two- to three-hour shifts for many nights,” says Jordan. “Physician staff checked in and out of respite areas with a member of the medical staff office so we were aware at all times of the number and type of specialists available in our hospitals,” says Kendig. Respite areas can be preplanned, but alternatives must be available in case the emergency damages intended locations.

Staff and family support needs must be addressed. “Charley severely stretched all coping skills of Arcadia residents; the sequence of three hurricanes following Charley was catastrophic. Approximately 80% of hospital employees either lost homes or had severely damaged homes; 1 in 10 staff members left the area,” says Jordan. Bledsoe encourages organizations to provide staff with critical incident stress management training or to partner in the provision of such training with another hospital. “Post-traumatic stress disorder was widespread in Florida. Mental health services, in short supply nationwide, was one of the last resources we received, she says. Health First and DeSoto provided staff with such services as day care, cash advances, food and shelter, tarps for the roofs of and assistance in repairing their damaged homes, and counseling. These efforts helped to retain staff during and following the emergency.

Staff, family, and patient security issues also must be addressed. Health First controlled facility access by setting up check-in stations; requiring staff, volunteers, and families entering the building to wear predistributed wristbands; and regularly updating the inventory of building occupants.

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Case Example: Florida's Quadruple Strike of Hurricanes Generates Solid Response Strategies, *continued*

Practice, Practice, and Learn

"Drills are very good things," says Bledsoe. "So is drawing on staff's collective disaster planning and response experience while in the midst of an emergency," comments Jordan. "No one particular preparation activity met all the needs we faced, but pieces of each of them became part of the knowledge base from which we drew," says Jordan. She encourages organizations to do all they can to make drills and preparation activities "second nature." "The hurricanes presented a disaster of unbelievable magnitude for DeSoto. The staff of this small, rural hospital rose to a level of heroism that is almost impossible to describe, and the staff is still dealing with the emergency's aftermath without missing a beat," she concludes.

Reference

1. French E.D., Sole L.M., Byers J.F.: A comparison of nurses' needs/concerns and hospital disaster plans following Florida's Hurricane Floyd. *J Emerg Nurs* 28:111–117, Apr. 2002.

Source: Adapted from Joint Commission Resources: Lessons learned from Hurricanes Charley, Frances, Ivan, and Jeanne. *Environment of Care News* 8:10, Oct. 2005.

References

1. National Center for PTSD: *Disaster Rescue and Response Workers*. <http://www.ncptsd.org> (accessed Nov. 19, 2007).
2. Stein B.D., et al.: Emotional and behavioral consequences of bioterrorism: Planning a public health response. *Milbank Q* 82(3):413–455, 2004.
3. Landesman L.Y.: *Public Health Management of Disasters: The Practice Guide*. Washington, DC: American Public Health Association, 2001.
4. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration: *Tips for Managing and Preventing Stress: A Guide for Emergency and Disaster Response Workers*. <http://www.mentalhealth.samhsa.gov/publications/allpubs/KEN-01-0098/> (accessed Nov. 19, 2007).
5. Greater New York Hospital Association: *GNHYHA Estimates \$340 Million Loss to Hospitals Stemming from World Trade Center Attacks*. Oct. 15, 2001. <http://gnyha.org/2361/Default.aspx> (accessed Mar. 10, 2008).
6. Florida Hospital Association: *Eye of the Storm: Impact of the 2004 Hurricane Season on Florida Hospitals*. May 2005. <http://www.fha.org/hurricanesurveyexec.pdf> (accessed Feb. 12, 2008).
7. New York Office of Mental Health: *Crisis Counseling Guide to Children and Families in Disasters*. <http://www.eird.org/herramientas/eng/documents/emergency/education/crisisguide.pdf> (accessed Mar. 25, 2008).
8. The Center for Mental Health Services, Department of Health and Human Services: *Self-Care Tips for Emergency and Disaster Response Workers*. <http://mentalhealth.samhsa.gov/publications/allpubs/KEN-01-0098/default.asp> (accessed Mar. 10, 2008).

Additional Resources

Some organizations might decide to send staff to seminars offered by various health care associations. For example, the American College of Emergency Physicians has a training program for mass-casualty preparedness. The Society of Critical Care Medicine offers a course titled “Hospital Mass-Casualty Disaster Management” that addresses basic and essential disaster medical knowledge for critical care professionals. The federal Agency for Healthcare Research and Quality offers a course on emergency and disaster preparedness, as well as a free series of five Web-assisted audioconferences on bioterrorism and health system preparedness. For nurses, the American Red Cross and Sigma Theta Tau International sponsor a free two-hour online program, “Disaster Preparedness and Response for Nurses.” The American Medical Association and the National Disaster Life Support Foundation also have jointly fielded a family of courses that offer instruction related to minimal to advanced disaster knowledge.

Information related to decontamination training is also available from a number of sources, such as the following:

- OSHA offers a complete list of best practices for hospital-based first receivers through its Web site, http://www.osha.gov/dts/osta/bestpractices/html/hospital_firstreceivers.html.
- The Agency for Toxic Substances and Disease Registry’s Medical Management Guidelines for Acute Chemical Exposure are available on the agency’s Web site at <http://www.atsdr.cdc.gov/mmg.html#bookmark03>.
- Organizations developing a decontamination curriculum can also look to the HazMat for Healthcare Web site (<http://www.hazmatforhealthcare.org>), which offers four four-hour training modules intended to help hospitals improve hazardous materials emergency response programs both for internal spills and for managing contaminated patients.
- The Environmental Protection Agency provides a four-hour decontamination program that can be offered without cost. For more information, visit the agency’s Web site at <http://www.epa.gov>.

For information about the Centers for Disease Control and Prevention’s (CDC) recommendations on how to clean and disinfect environmental surfaces, environmental

sampling, laundry and bedding, and regulated medical waste, visit its Web site at <http://www.cdc.gov>. In addition, the Society for Healthcare Epidemiology of America, in conjunction with the CDC, offers many courses in health care epidemiology; *see* <http://apic.org>.

Professional organizations and state and federal agencies can provide information on organizations and individuals equipped to help staff cope with the emotional effects of trauma following a disaster.

The following organizations provide information on the psychological consequences of disasters. This list is in no way comprehensive, but is intended as a starting point for obtaining information on this subject.

- American Academy of Child and Adolescent Psychiatry: <http://www.aacap.org/>
- American Academy of Experts in Traumatic Stress: <http://www.aets.org/>
- American Psychiatric Association: <http://www.psych.org>
- American Psychological Association: <http://apa.org>
- American Red Cross: <http://www.redcross.org>
- The Center for Mental Health Services: <http://mentalhealth.samhsa.gov/cmhs/>
- Depression and Bipolar Support Alliance: <http://www.dbsalliance.org>
- Disaster Mental Health Institute at the University of South Dakota: <http://www.usd.edu/dmhi/>
- Disaster Technical Assistance Center: <http://mentalhealth.samhsa.gov/dtac/>
- Federal Emergency Management Agency: <http://www.fema.gov/>
- International Critical Incident Stress Foundation, Inc.: <http://www.icisf.org/>
- National Alliance for the Mentally Ill: <http://www.nami.org/>
- National Association of Social Workers: <http://www.socialworkers.org/>
- National Center for Posttraumatic Stress Disorder: <http://www.ncptsd.va.gov/ncmain/index.jsp>
- National Institute of Mental Health: <http://www.nimh.nih.gov/>
- National Mental Health Association: <http://www.nmha.org/>

