chapter 3

The Varying Faces of Disaster

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GOAL

The goal of this chapter is to provide an overview of organizational responses in a disaster, from preparation to recovery.

OBJECTIVES

At the completion of this chapter, the reader will:

1. Formulate a structure of organizational response in disaster response.
2. Assess organizational vulnerability and mitigation in a disaster.
3. Understand the differences between internal and external vulnerabilities in a disaster.
4. Discriminate between various organizational standards used in organizational disaster planning and response.
5. List key concepts in organizational disaster response.
6. Develop disaster drills for organizations.

Key Terms

- Organizational disaster response
- Vulnerability
- Mitigation
- Internal vulnerability
- External vulnerability
- Organizational disaster standards
- Organizational disaster planning
- Organizational disaster concepts
- Disaster drills and exercises

Organizational Response to Disasters

Healthcare organizations have a responsibility to be engaged in preparation and support of disaster response activities. During a disaster, healthcare organizations must ensure the safety of staff members, volunteers, and patients.

State and federal accreditation standards provide guidance and an additional level of expectation over that of the individual healthcare organization. These standards ensure that healthcare organizations have disaster management plans in place, including plans for assessment and mitigation of known and potential hazards, planning for possible disaster scenarios, training and practice of disaster scenarios, and evaluation of response efforts to real or practice scenarios to ensure continuous quality improvement.

In the next sections, the various parts of the disaster plan will be discussed. Each section will examine how one assesses vulnerability, what should be in the disaster plan, preparing for the different disasters historically known in the agency's geographic location, training and practice, and how to evaluate the plan and all of its components.

Assessment of Vulnerability and Mitigation

Emergency and disaster events may be confined to the facility, involve infrastructure support, or affect the entire community. Organizations must assess individual risk factors to ensure that disaster planning and training includes the most likely disaster scenarios for the agency's geographic location. However, because no one healthcare facility is usually alone in a disaster of any size, assessing the risk factor to the agency must include assessing and working with the entire community.

Disaster planning begins with an assessment of vulnerability based on risk for actual or potential events and includes a thorough evaluation of risk factors for natural and man-made disasters. This is most effective when performed collaboratively with community agencies to identify hazards as well as support available to and from the organization. A careful, thorough, and thoughtful examination of an organization's vulnerabilities should serve as a practical guide for the development of general and specific disaster management planning. An honest appraisal of an organization's incident management system and structure should be included in the assessment of hazards. This assessment enables organizations to determine their vulnerabilities and focus on their resources and planning methods. This assessment is the basis for the development of a flexible emergency response plan, enabling the organization to respond rapidly to anticipated or changing situations. Although most organizations may have similar components in their plans, the response and site-specific plans may vary from agency to agency and understanding how each agency's plan fits within the overall disaster plan for a city, region, or state will save time, energy, and redundancy in the case of an actual disaster.

Assessing Different Vulnerabilities

As described in Chapter 1, there are different types of disasters (i.e., man-made and natural). Each of these types of disasters will have some core similarities in terms of response, and each will have a unique component to the response.

External Vulnerabilities

Natural disasters include events that provide limited or no forewarning of the event as well as events that are anticipated to occur on a more frequent basis. Major earthquakes, landslides, volcanic activity, sudden flooding, or large-scale community fire events may provide limited or no forewarning of imminent disaster. Temperature extremes of heat or cold, tornadoes, blizzards, and hurricanes are relatively common events in many geographical areas, some with warning and others without. Although the event may occur with varying degrees of frequency, assessment must include an organization's risk for such events. Assessment of vulnerability for these events increases the likelihood of effective disaster planning, response, and ability to provide care.

A biological disaster caused by communicable diseases has long been recognized as an area for increasing concern. International travel, gene mutations of disease, interspecies disease transmission, and deliberate bioterrorism with infectious agents have generated increased public attention to this issue. Assessing an organization's ability to recognize, isolate, treat, and decontaminate as indicated are part of the assessment of vulnerability for healthcare organizations that is gaining increasing attention.

The potential for man-made disasters requires additional careful assessment for vulnerability. Structural instability of man-made structures in the area may precipitate disasters or hamper disaster relief efforts, transportation, and communication. Collapse of dams and large bridges may cause loss of life, major injuries, serious damage, and disruption of anticipated evacuation and exit routes. Evaluation of transport routes, including rail and air traffic, may reveal a vulnerability to transportation disasters.

Civil disasters, including riots and large strikes and demonstrations, may disrupt routine working environments and supply delivery in addition to causing injuries and deaths. Warfare and terrorist activities may involve conventional, nuclear, biological, and chemical weapons. All of these man-made events can cause significant physical and psychological injury, impair relief efforts, and further complicate the effects of the disaster.

Internal Vulnerabilities

Vulnerability to internal disasters of the organization also needs to be assessed. Radiology and laboratory biological, chemical, and nuclear materials used in diagnostics and medical treatment are a primary source of potential internal disaster concerns. Disruption, sabotage, and loss of electronic documentation or inability to access electronic medical records can severely disrupt the organization's ability to provide care within the organization or in transferring patients out of a damaged hospital to another healthcare agency.

Included in the assessment of vulnerability for natural and man-made disasters must be an assessment of the organization itself. The physical structure of the facility requires an assessment to determine structurally vulnerable areas, areas

that could be converted to another use during disasters, food and supply storage, and communication ability under various scenarios. A realistic evaluation of the number and types of patients that can be cared for under varying conditions needs to be performed. Patients requiring isolation or decontamination may strain an organization's ability to provide care, as well as protect staff and patients from contamination. Disaster and evacuation plans need to be assessed on a regular basis to ensure that changes in infrastructure construction, conversion of existing areas to new uses, and equipment changes are incorporated into disaster plans.

Mitigation of all possible risk areas is not a realistic possibility. However, sufficient resources must be in place to ensure disruptions are limited. Supplies and equipment must be kept in working order and be accessible for use, and training must be provided on a regular basis for specialty equipment and procedures. Disaster procedures must become part of the culture of the organization and practiced on a frequent and regular basis. Disaster procedures must also be revised as indicated by the evaluation of the training and practice scenarios.

Emergency Preparation Standards for Healthcare Organizations

National guidelines and accreditation standards form the general framework for disaster planning and preparedness assessment within hospitals and healthcare organizations. The National Incident Management System (NIMS) provides specific guidelines for healthcare systems to prepare and respond to disaster situations (Federal Emergency Management Agency [FEMA], 2006b). These guidelines are integrated within Joint Commission accreditation standards for healthcare organizations for emergency management standards (2007). The Health Resources and Services Administration and the National Bioterrorism Preparedness Program also require hospitals to be compliant with the NIMS standards. The development of a unified and comprehensive national approach to disaster management that encompasses standards across multiple agencies, jurisdictions, and disciplines requires standardization in planning, training, communication, and collaboration. Additional regional and state organizational requirements for healthcare organizations may apply to specific situations beyond the scope of discussion for recognized national standards that impact acute care health systems.

NIMS Standards for Healthcare Systems

NIMS standards include 17 key elements for healthcare systems, the foundation of which is the directive to adopt NIMS across the organization within all relevant departments including vendors and suppliers. Using national response guidelines across organizations, agencies, and jurisdictions enhances the response capabilities. The additional NIMS standards include command and management, preparedness

planning, preparedness training, preparedness exercises, resource management, and communication and information management.

Command and Management

Command and management elements of the NIMS standards include use of the Incident Command System (ICS), development of a multiagency coordination system (MAC), and implementation of a public information system. Hospital policies and procedures should reflect the integration of an ICS in the emergency operations plan that reflects the core elements of command staff, operations, planning, logistics, and finance. The ICS should be utilized to manage preplanned drills and special events, as well as emergency incidents that occur internally or externally. Hospital policies and procedures should reflect the integration of an ICS in the emergency operations plan that reflects the core elements of command staff, operations, planning, logistics, and finance. The goal of any healthcare organization ICS must be the provision of safe patient care and continuity of hospital operations despite the constraints of resources during a disaster. (For further details on communications in a disaster, see Chapter 9.)

Multiagency coordination involves the assessment of additional agencies that are integral to the support of organizational plans. Outside sources include the obvious integration with emergency support services such as public health departments, law enforcement, fire departments, and hazardous materials response teams. Additional outside agencies to consider may be medical offices, urgent and ambulatory care centers, and other community health centers including mobile healthcare resources. Organizational plans need to consider the integration and implementation of multiagency capabilities to promote effective use of services, equipment, and safety within disaster policies. Disaster drills need to be conducted that involve multiagency responses to validate expectations and communications across all agencies.

Public information system standards include Joint Information System (JIS) and a Joint Information Center (JIC). It is imperative that the JIS provides accurate, clear, timely, and coordinated information to the public during a disaster. Healthcare organizations assign this role to a public information officer who is the pipeline for media information and inquiry. Typically the person assuming this role has some expertise in public relations and communications. Working relationships with multiple agencies, through collaborative planning and disaster drills prior to a disaster event, enhance the capabilities of the healthcare system spokesperson. The JIC is a physical command area reserved for information professionals from multiple agencies to assess critical emergency information, crisis communications, and public affairs. Depending on the situation, healthcare organizations may be expected to provide physical space and utilities to support these services.

Preparedness Planning

According to the NIMS standards, healthcare system preparedness is focused on the establishment of guidelines, protocols, and standards for planning, training,

exercises, personnel, equipment certification, and publication management. Preparedness planning includes expectations to track NIMS implementation standards within the healthcare system, generate a system to coordinate hospital funding to comply with the NIMS standards throughout the organization, review and revise disaster and emergency operations plans to reflect NIMS standards, and establish mutual aid agreements with public, private, and/or nongovernmental organizations.

Tracking of an organization's compliance with the NIMS standards is essential to continued validation of emergency preparedness at the level expected and required of healthcare systems. Activities must be tracked yearly with the goal of enhancing performance within the facility or organization. The ability to assign a dedicated person to this requirement will vary among organizations depending upon size and resources available. Although this role may be assigned along with other responsibilities within a job description, the expectation remains that the tracking of NIMS compliance will be performed by an individual who possesses at least a working knowledge of emergency management (including the essential phases of preparedness, prevention, mitigation, response, and recovery), hospital daily and emergency operations, and hospital command center operations.

There is an obvious need for adequate funding within healthcare systems to implement and maintain disaster preparedness activities and respond adequately to disaster events. Implementation of the NIMS standards requires the hospital or healthcare system to obtain and effectively allocate funding for disaster preparedness. Implementation of this standard requires healthcare organizations and systems to proactively identify local, regional, state, and federal funding opportunities to meet this standard. Documentation within this standard includes identification of funding received and what has been achieved with the funding. Additional documentation must include how the system met funding commitments. Strong interagency working relationships can enhance this ability to coordinate funding across multiple agencies. Healthcare organizations need to work cooperatively with their state hospital association and emergency management authority that can assist with coordination of funding and distribution.

Every healthcare organization must have emergency operation plans to support disaster activity management. These plans must be reviewed following any incident or at least annually and revised as indicated to meet NIMS and accrediting organization requirements. These plans describe how resources, including personnel and supplies, will be managed for daily operations to support the activities generated by the emergency. These plans need to be fluid and flexible to meet changing situations that impact the original disaster process. The disaster events surrounding Hurricane Katrina in 2005 provided ample proof that disaster teams need to be flexible to respond to new situations that occur. Evacuation of civilians and hospitalized patients; access to supplies and personnel; additional flooding from broken levees; the response of the civilians affected; local, state, and federal officials; and

communication to the public and within responding agencies all significantly impacted previously prepared disaster plans.

Mutual aid agreements are intended as a supplement to existing disaster plans of each organization. It is unrealistic to expect mutual aid agreements to be the sole source of support during a disaster. Mutual aid agreements are voluntary arrangements between organizations and nongovernment or private sectors to provide additional personnel, supplies, services, or facilities in the event of a disaster. Mutual aid agreements are encouraged between health systems, local emergency response teams, supply vendors, and public health departments. Established mutual aid agreements need to be reviewed at least annually, included in the disaster plans, and shared with local emergency management agencies.

Preparedness Training

Personnel training is essential for disaster plan implementation. NIMS standards include completion of standardized coursework to ensure performance standards are understood; provide clear, standardized expectations; and enhance collaboration among agencies and within the organization. Specific courses are required based on expected roles of staff and leadership within the organization during a disaster. Healthcare organizations must identify the appropriate personnel to complete the required courses, and guidance can be found within the individual standards and courses. Documentation of NIMS compliance requires validation of course completion by appropriate personnel. Courses can be completed in a classroom with a qualified instructor or online through the FEMA training Web site http://training.fema.gov/IS/crslist.asp.

Multiple disaster courses are offered by FEMA, but NIMS standards identify several specific courses that must be completed by appropriate personnel based on roles they may be expected to perform during a disaster. These are minimum standards, and additional course completion is encouraged. Course *IS-700 NIMS: An Introduction* should be taken by staff who would be expected to fill a leadership role for emergency preparedness, incident management, or emergency response. *IS-800 800.B: National Response Framework: An Introduction* (formerly titled *IS-800.A NRS: An Introduction*) is for personnel who would be responsible for emergency management within the organization. *IS-100 Introduction to ICS* and *IS-200 ICS for Single Resources and Initial Action Incidents* (or their equivalents) present the foundation for understanding the ICS framework for personnel during a disaster. Similar to expectations for personnel completing *IS-700, IS-100* is especially recommended but not limited to personnel in administrative leadership roles who would be involved in emergency preparedness, incident management, or emergency response. *IS-200* is expected, at a minimum, to include personnel in middle management roles and should also include any staff that would have a role in an emergency operations center. It is important to remember that these identified courses and personnel are minimum requirements, and additional courses and completion by other staff members should be encouraged and tracked with documentation of course completion.

Preparedness Exercises

Actual practice of a healthcare organization's disaster plan is an essential standard for all healthcare organizations. Practice of the disaster plan with varied preparedness exercises will help ensure NIMS standards for training and exercises, all-hazard exercise program, and corrective actions are tested. Healthcare organizations must ensure that NIMS and ICS standards are incorporated into the preparedness exercises that include internal and external local, regional, and state emergency management exercises. Preparedness exercises for all-hazard exercises also need to involve responders from multiple disciplines and agencies. The frequency of these exercises depends on the type of exercise executed. Tabletop exercises, functional, and/or full-scale exercises may be used to meet this requirement. All-hazard drills that involve full-scale exercises are especially valuable as they provide a scenario that allows multiple agencies to test and practice with equipment and collaboration in real-life scenarios.

The goal of any preparedness exercise is to identify strengths and weaknesses within a plan. The standard of corrective actions requires a review of the preparedness exercise and preparedness plans to ensure that corrective actions are incorporated into revised plans. The corrective action standard requires healthcare organizations to identify deficient issues. For each deficiency identified, the corrective action plan must include identified actions to correct the deficiency, who will be responsible for implementing the action, due date for completion, and a revision of the plan to include the new policies or procedures. Essential elements of preparedness planning and exercises will be discussed later in this chapter.

Resource Management

Resource management includes an adequate resource inventory and resource acquisition. These standards include both an on-site inventory of appropriate supplies and mobilization of additional supplies and personnel required to support a disaster event, including communication infrastructure. This expectation must be reviewed and met within all phases of disaster management. As noted earlier, contracts with vendors, mutual aid agreements, and memorandums of understanding between agencies and organizations all supplement existing organization standards but do not substitute for basic essential organizational preparation. Consideration must be given to supplies that would be utilized in excess during a disaster event, and appropriate considerations for both on-site and easily accessible local storage should be evaluated. Many organizations use a just-in-time ordering method for supplies with frequent deliveries. During a disaster this may leave the organization with insufficient supplies to meet a surge in need.

Resource acquisition for communication and data transmission within the organization and among external agencies is considered in the resource elements. Documentation must exist within the plans to ensure communication equipment and data systems are functional with outside agencies. When existing infrastructure is

not operational, alternative sources such as radios, information technology resources, and phone technology may be options to ensure clear and vital communications within the organization as well as outside agencies. Use of runners to carry written communication within a facility may be another option but will translate poorly when interagency communication is needed. Compatibility of these systems as well as their functionality must be assessed in the preparedness exercises that involve multiple agencies.

Communication and Information Management

The final element of the NIMS standards requires the use of standard and consistent terminology among agencies. Clarity in information management requires the use of plain English and avoidance of slang or code phrases that are specific to one agency. This does not prevent a healthcare organization from using established internal codes, but involvement in outside reporting to agencies requires the use of common English to ensure clarity for the event. Interagency and interdisciplinary communication must rely on common English rather than 10-codes or internal organizational codes whose meanings may vary among agencies and local, state, or national responders. (See Chapter 9 for further details on communication.)

Joint Commission Standards for Healthcare Organization Disaster Planning

The Joint Commission has published a set of accreditation standards to address healthcare organization disaster planning. The standards cover five areas defined as critical to disaster operation plans. The Joint Commission has placed a great emphasis on flexible disaster plans that emphasize planning for events that are likely to occur as well as escalating or multiple events. These emergency management standards include standards for communication, resources, and assets; safety and security; staff responsibilities; utilities management; and patient clinical and support activities (Joint Commission, 2007).

Communication

Communication standards include the surveillance, identification, and communication of emergencies to appropriate authorities. Symptoms and diseases that may represent biological emergencies, natural or man-made, must be reported to public health agencies in a timely manner. Chemical contamination must be recognized quickly, isolation and decontamination procedures initiated for patients and exposed healthcare providers, and emergency authorities notified.

Organizations are required to plan for alternative methods of communication within the organization and within the community emergency response infrastructure. Loss of phone lines, fax, and computer access can seriously disrupt an organization's ability to provide care and communicate within the infrastructure.

Batteries for cell phones and radios have limited shelf lives and length of use. Alternative sources such as messengers, amateur radio operators (ham radio), battery-powered and two-way radios must be available for rapid implementation. Staff must be trained and, in some cases, licensed in the use of these devises. Access to volunteer amateur radio operators and their role should be planned and practiced as part of the disaster planning scenarios. Use of standard terms to ensure clear communication between departments and agencies must be coordinated following the National Incident Management System guidelines for use of plain language (FEMA, 2006a). Communication with on- and off-duty staff members needs to be planned and practiced. Procedures for notifying off-duty staff through phone lists, cell phones, pagers, or media announcements need to be planned, evaluated, and adjusted. Communication with vendors for needed supplies and resources may need alternative methods.

Regulations under the Health Insurance Portability and Accountability Act of 1996 (HIPAA) require organizations to maintain access to confidential electronic healthcare records in addition to ensuring access is restricted to protect sensitive information. With the increasing trend to provide electronic documentation of healthcare services, organizations must also ensure that access can be generated quickly in a disaster situation. Failure to maintain access to medical records may negatively impact the health and safety of patients and would be a severe disruption in care.

The review of electronic record safety and accessibility follows the key steps of any disaster plan: assessment of vulnerability and mitigation of effects, planning for potential disaster scenarios, and evaluation of the plan through testing and refinement. Risk assessment for electronic services and documentation needs to include the analysis of current equipment, vendor contracts, built-in resiliency and redundancy, geographic location, and potential hazards. Included in this assessment would be the grading of loss of various services from minor (i.e., relatively minor disruptions of services, rapid repair, and resolution with minimal cost) to critical (i.e., extreme disruptions of services, significant legal or financial effects, or a threat to health and safety). Repair or recovery may be time consuming and expensive in a critical disruption. In addition to the review of services that would impact patient safety, employee human resource and payroll records must be assessed for vulnerability in the event of technology disruption.

Disaster planning for technology service disruption should be part of any facility's disaster plan integration. Included in the plan should be the people and resources available to restore services, escalation procedures, off-site storage and access for critical data, and redundancy of information storage and access in case of widespread disaster effects. Procedures to be followed for loss of electronic technology need to be clearly written and practiced to determine additional areas of vulnerability and ease of plan implementation.

Continuity of documentation provided to individual patients from initial triage to discharge is also required. Although some patients may arrive with numbered

triage tags to facilitate eventual registration and coding for care during the entire hospitalization, many others may arrive by private vehicle. Identification and medical information may be limited by the victim's condition. As a result, healthcare organizations must include documentation as part of a standardized emergency response plan. Several options may be necessary depending upon the extent of the disaster, the extent of damage to internal electronic infrastructure, and resources available. Disaster planning needs to include staff and resources to integrate information and ensure that the correct information is associated with the appropriate victim.

Communication planning must include patients and family members during care and evacuation. Loss of infrastructure to support call lights may produce harm to patients if communication is lost between patients and responding staff members. Transfers of patients within the organization or as part of a larger evacuation plan must include plans to notify family members appropriately and in a timely manner. Additional resources will be required to obtain and provide information to distraught family members searching for missing relatives. Social workers, psychologists, psychiatric nurses, disaster mental health workers, and spiritual care leaders from the hospital and community may provide valuable emotional support to families. On-duty staff who are away from family members may also need to be kept informed of efforts to locate and communicate with missing family or loved ones.

Planning for media access is an essential part of disaster planning. Communication with media representatives must be implemented to maintain patient, family, and staff confidentiality while providing accurate information. Careful consideration to media access should be provided to ensure the emotional welfare of vulnerable staff, patient, and family members is not compromised. FEMA (2007) has issued mandatory guidelines for media coverage of disaster events. These policy guidelines, as part of the national response plan for federal domestic incidents, cover media roles and responsibilities during their participation in disaster coverage with disaster responders and in medical facilities. The guidelines clearly indicate that local officials are the final authority for media access.

Local authorities may need to restrict media access to some areas, and FEMA guidelines help by providing specific procedures and policies for media coverage (FEMA, 2007). Healthcare organizations and staff who are responsible for interacting with media representatives should be fully aware of FEMA's guidelines and confidentiality guidelines that must be maintained during the disaster care. Representatives of the organization who are responsible for media relations should ensure that policies are reviewed with media representatives. Media representatives must provide proof of identification and display their credentials. Media representatives who do not comply with the established guidelines may be denied access and information.

As defined by FEMA policy guidelines (2007), media and facility leadership must maintain a heightened awareness, sensitivity, and confidentiality concerning photographs and information released publicly through the media. Photographs or names

of casualties require permission of state authorities. Since state authorities are responsible for notifying appropriate next of kin, release of names or identifying photographs of casualties is prohibited until verification of notification has been obtained. Photographs or names of casualties require permission of state authorities who are responsible for notifying family members. Photographs, videotapes, or audio recordings of victims must have informed consent from the person in the publication or a legal parent or guardian that clearly indicates the victim understands the photo or comments may be distributed in international media reports. The victim or the organization, acting in the best interest of the victim, may also rescind consent at any time after the photograph or comments have been collected.

Media access to disaster areas and facilities caring for disaster victims may be restricted for physical safety as well as to limit access to confidential information and to protect patient and family privacy and confidentiality. Access to locations and information may also be restricted to protect legal or classified investigations. Medical procedures must take precedence over media access. Access to various areas of the facility is at the discretion of the organization's leader responsible for media relations. Access to areas of the hospital, other than the media control center, must be with the accompaniment of designated facility leaders. Media may not wander independently within the facility. Operating room access during surgical procedures is prohibited.

Resources and Assets

Management of resources and assets during a disaster is critical to be able to provide care and services. This also requires the organization to identify the culture of the organization and its role within the community. Depending upon the scope of the emergency, resources may be strained, unavailable, or unable to reach the organization.

Disaster response plans must include open access to the community for food and shelter. Appropriate budgeting to permit storage of key equipment and additional supplies is necessary. Many organizations utilize a just-in-time ordering method of supplies with frequent deliveries. During a disaster this may leave the organization with insufficient supplies to meet a surge in need. Alternative vendors, access from other community healthcare organizations and organizational affiliates, and state or federal resources may need to be utilized. Some resources may not be available or may be dealing with a disaster themselves, and alternatives and improvisation may be needed.

Disaster management plans need to include methods for maintaining necessary pharmaceutical supplies, medical supplies, and nonmedical supplies such as food, water, and linens for patients and staff. These plans also need to include how to request, share, and offer aid to other healthcare organizations. Budgeting for disaster planning and readiness may need to include infrastructure upgrades, personal protective equipment (PPE) and PPE upgrades, disease surveillance monitoring resources, and decontamination equipment in the event of nuclear, biological, or chemical exposure.

The healthcare organization must also be able to identify when the infrastructure, in whole or part, cannot support care. Written plans for evacuation of patients with medications, supplies, and records within the organization or to another facility entirely are required as part of the resource and asset management plans.

Safety and Security

Healthcare organizations must establish plans to ensure safety and security during a disaster. In establishing plans, the safety and security of staff, patients, and volunteers and the management of resources and supplies all must be considered. The type of the disaster and the evolution of the events during and after the disaster may affect access and movement within the local area.

Security measures may be the responsibility of the organization or involve local, state, or federal agencies at various intervals. The command structure of the disaster response plan must include clear communication within the organizational security infrastructure as well as with outside agencies that need to be involved. Access to the facility and within the facility may need to be controlled for safety and security. Provisions for management, isolation, and decontamination of potential hazardous radioactive, biological, and chemical products need to be defined in the emergency plans.

Staff Responsibilities

During disasters, staff roles and expectations are determined by the emergency needs, report routes, and command infrastructure in place during the disaster. Prior to an actual disaster, staff are expected to take disaster training and disaster practice scenarios seriously to be able to provide effective care under real disaster situations. Staff must receive training for their assigned roles during a disaster although the amount of training required will vary according to the role they are expected to perform.

Basic job action sheets and checklists for jobs may be utilized as part of the flexible training process. Special job action sheets, designed for use in a disaster, should be developed and given to appropriate staff members. Staff roles and identification of care providers must be defined through some means of clear communication (e.g., vest, armband, or badge). Provision for use of volunteers and licensed staff not employed by the facility must be addressed in the emergency management policy.

Utilities Management

The disaster management plan needs to include how healthcare organizations will continue to provide essential utilities to support care. Supplies of water, fuel, electricity, waste disposal, medical gases, ventilation, and vacuum systems must be identified and include an estimate of how long care can be provided with the current resources and what may be needed depending on the type of disaster experienced. Alternative vendor sources, resource sharing, and resource management need to be addressed in the plan.

Patient Clinical and Support Activities

During a disaster, the healthcare organization's focus is to provide emergency services to protect life and to prevent further disability. The nature of the disaster and evolving events during and after the disaster will dictate how patients are managed. Basic sanitation needs must be addressed. Plans must include provision of care for special needs populations, mental health care, and mortuary services. The healthcare organization must have plans to manage patients through all phases of expected assessment, treatment, admission, discharge, transfer, or evacuation.

Key Concepts in Emergency Response Planning

Developing a chain of command and an organized emergency management command response system for use in disasters is a key administrative leadership role within any healthcare organization. Assessing the vulnerabilities of the organization; writing, reviewing, and updating policies that address the disaster response; ensuring appropriate and adequate training; and implementing functional roles within the emergency management command system are roles assumed by administrative and leadership team members. Once the plans are written, organizational leadership is responsible for ensuring that all staff members are informed, prepared, and understand the roles they play during a disaster. Emotional competence, creative thinking, ability to adapt to rapidly changing conditions, effective resource management, identifying improvements needed in the disaster response, and the ability to communicate clearly and collaborate with local, state, and federal agencies are additional key competencies required of organizational leaders. (See Chapter 4 for leadership and management in a disaster.)

Practicing and Evaluating Disaster Drills

Disaster plans provide the framework for disaster response, but, without practice and drills, these disaster plans are worthless. In healthcare organizations, the challenge to provide an effective and functional disaster response framework can be daunting. Coordinating and testing plans with multiple departments, staff who will actually respond, and outside agencies is critical to the success of disaster management. Unfortunately, plans are often created by those who have limited knowledge of clinical services and impact, are poorly distributed within the organization to cover all shifts, are poorly trained, and are reasons paper plans fail when exposed to an actual event. Disaster training should be included in all staff orientation sessions, included in annual competency updates, practiced under real-life circumstances, evaluated for changes, and plans redesigned based on lessons learned during drills to ensure continuous quality improvement.

Disaster drills should include the most expected scenarios as a basis for developing a general disaster plan framework. The more plausible the disaster scenario,

the greater the feeling of urgency that will be felt among staff participating in the drill. Drills are a vital way to test new equipment and to provide additional training to staff members who might be responsible for setting up and maintaining the equipment. Disaster response drills should occur on weekends, holidays, and non-daylight hours, even though the cost of paying overtime may seem a "waste." However, disasters do not conveniently occur during daylight hours on weekdays.

The most effective drills include community agencies in the response to test coordination of care and communication between agencies that would be involved in disaster response efforts. In the most ideal situation, drills are conducted to involve staff members on evening or night shifts when administrative leadership is less accessible and others are expected to assume leadership roles initially. Plans that may work well when large numbers of leadership and senior staff are available may fail to point out deficiencies in manpower to execute the plan or inexperienced staff that are uncertain of their roles.

Staging a disaster drill may point out potential disaster plan failures that require new options to mitigate challenges. Plans that include participation of staff will point out clinical issues with hazardous material protective gear, lack of proper PPE, longer than anticipated time to set up equipment, new equipment that no longer performs in the same manner as old equipment did, construction or closure of areas that were identified in the disaster plan as response points, staffing changes in key roles, and environmental conditions such as wind or rain that interfere with planned responses.

Essential to the drill experiences are evaluators who are able to observe and record positive and negative observations of the drill itself. Evaluators should include members who are both part of and from outside of the healthcare organization. These objective evaluators may identify flaws and strong points in the disaster plan that might go unnoticed by those participating. Debriefing of participants also provides valuable insight into how well the disaster plan worked. It is important to ensure that disaster drill participants are encouraged to share their perspectives and feelings in this debriefing. Being sensitive to feelings of failure, assuring staff that their honest feedback is vital to eventual safe and effective care during a disaster, and being sensitive to emotions that may arise during a disaster drill are important skills for debriefing and follow-up from the drill leaders. If changes are made to the disaster response plan as a result of the drill and debriefing, these changes need to be clearly communicated to staff that would be impacted.

Conclusion

Regardless of the size or scope of service, all healthcare facilities must have clearly defined disaster plans in place. These plans must include the thoughtful evaluation of the most likely disaster events that will occur locally, as well as guidelines to respond quickly to unanticipated or multiple evolving events. A clearly defined chain of command, including collaboration with local community agencies is

essential. The most critical elements in any disaster plan include competent leadership and practice of the proposed plans to ensure staff is competent and able to understand their own roles during a disaster.

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