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Emergency Management Preparedness

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Introduction

While some disasters are the result of natural events, many more are a result of human error. They usually strike without warning and their effects can be devastating, affecting hundreds, even thousands of lives. For the healthcare environment, disasters are categorized as either internal events that occur within the medical facility or external, which occur outside of the hospital and can be declared by an internal or external authority or can be undeclared.

For those responsible for managing patients, visitors and staff during these events, it is clear that without extensive planning and organization, emergency resources and support services cannot be effectively deployed. Without a good disaster plan in place, time is lost and lives are threatened. A carefully conceived and executed disaster preparedness plan is an institution's most critical defense in an emergency. A plan that is developed according to the daily routine of the staff is the MOST successful plan utilized.

What Constitutes a 'Disaster'?

According to the World Health Organization, a disaster is a 'sudden ecological phenomenon of sufficient magnitude to require external assistance.' The American College of Emergency Physicians describes a disaster a little differently, stating that a disaster has occurred 'when the destructive effects of natural or man-made forces overwhelm the ability of a given area or community to meet the demand for healthcare.' While there may be different definitions, a disaster by any other name is still a disaster.

Nurses and other professionals working in the healthcare environment **MUST** be prepared to handle disasters and other significant events occurring inside or outside their walls.

An external disaster is an event that impacts a facility when demand for services go beyond available resources.

An internal disaster is an event that happens within the facility that poses a threat to interrupt the environment of care.

Disaster events may be categorized according to type and severity:

CLASS A

Natural Disasters *

- Earthquakes
- Floods
- Tornadoes
- Hurricanes
- Blizzards
- Other serious weather conditions

External Disasters / Medical Emergencies *

- Chemical exposure
- Epidemic of disease (biological)
- Explosions
- Fire
- Large-scale poisoning
- Multiple-victim accidents (car, bus, train, plane crashes)
- Nuclear fallout
- Riots and other civil disturbances
- Structural collapse
- Toxic radiation

* Require response by Hospital Disaster Committee

CLASS B

Internal Disasters / Medical Emergencies *

- Disease epidemics
- Large-scale food poisoning
- Large-scale infections

* May require response by Hospital Disaster Committee

CLASS C

Internal Disasters / Non-medical emergencies *

- Explosions
- Fire
- Multi-administrative death
- Terrorist activity
- Bomb threats
- State Board of Health declared emergency
- Strikes
- Union activity
- Malpractice suit or accusation against hospital or physician on staff
- Power failure
- Major mechanical failure
- Internet- or computer-related issues involving patient records

* May require hospital response by Hospital Disaster Committee

In this Module Update, we will focus on events as mandated by the Joint Commission. We will present generalized information from the Hospital Incident Command System (HICS), which was developed specifically for medical institutions.

Emergency Management Preparation

As a healthcare professional, you should know and understand your institution's disaster preparedness plan, as well as rulings set forth by the Joint Commission and the widely accepted HICS guidelines relating to disaster planning.

Joint Commission Standards

It is important for you to familiarize yourself with the latest standards, so you will be prepared in case of disaster.

Research indicates that hospitals who have assigned leadership of emergency management to high-levels of the organization more effectively respond to disaster situations. The Joint Commission recently added new requirements to address those findings. The new elements of performance require the organization to:

- identify a leader to oversee emergency management
- consider input from staff at different levels when evaluating exercises and responses to events
- review the organization's emergency management plan, performance and responses to actual events by the senior hospital leaders to facilitate improvement

According to the Joint Commission, an effective 'emergency management' plan includes four key principles:

- Mitigation - Make plans ahead of time to lessen the severity and impact of an emergency.
- Preparation - Build needed organizational capacities, including supplies and equipment, agreements with vendors, staff orientation and training, planning processes, and organization-wide drills.
- Response - Define actions staff would take when confronted by an emergency, such as reporting to prearranged locations. Plan for a warning and notification process, priority-setting and liaison with other organizations.
- Recovery - Take steps to restore essential services and resume normal operations - plan for staff support and community response

By implementing these four principles, your institution is prepared for any disaster, both man-made and natural.

The HICS (Hospital Incident Command System) Plan

The HICS management plan meets Joint Commission standards and offers simplified, predictable management structure for:

- communications during disasters
- predefined management positions, such as Incident Commander and Section Chiefs
- clarifies the chain of command and reporting channels
- helps to improve communication within the facility, as well as other participating facilities
- provides standardized forms for consistent documentation

Priorities of the Hospital Disaster Committee

When disaster strikes in the healthcare institution, the Hospital Disaster Committee should be activated. Each member is assigned specific management duties during and directly following a disaster, as set forth in the facility's Disaster or Emergency Preparedness Plan.

The HICS plan suggests the following leadership roles.

- Incident Commander - responsible for calling together the Hospital Disaster Committee when a crisis event occurs
- Section Chiefs - responsible for logistics, planning, finance and operations
- Directors - responsible for directing unit leaders in their specific areas - the Director reports to the designated Section Chief
- Unit Leaders - responsible for communications, transportation, materials and supplies, nutritional needs, situational status, the labor pool, medical staff, nursing staff, medical needs (including triage), and more - the Unit Leader reports to a designated Director
- Area Officers - responsible for specified assignments such as Public Information Officer (PIO), Safety / Security Officer, Liaison Officer, Patient Tracking and Information Officer

Whether your institution develops its own plan or follows HICS, the Hospital Disaster Committee should include representatives from the following areas:

- Medical staff (ER physician or trauma surgeon)
- Administration (includes risk manager)
- Operating Room
- Nursing staff
- Emergency department
- Security / Safety
- Communications
- Public relations
- Medical records and admissions
- Engineering / maintenance
- Laboratory
- Radiology
- Respiratory therapy
- Linen services
- Environmental services (housekeeping)

To prepare for internal and external emergencies or disasters, the Committee should consider the following:

1. Determine potential disasters

The Hospital Disaster Committee should be prepared for any type of disaster, however, they **MUST** determine which type has the greatest potential to affect their facility.

2. Assess resources within the institution

The Hospital Disaster Preparedness Committee should initiate an assessment to determine their facility's capabilities, potential problems and other concerns during a disaster. Consider the following questions:

- Is there an emergency water source readily available?
- If a triage area is established outside of the facility, are there adequate power sources in the designated area including an emergency generator?
- Will the air handlers have water if the local water supply is damaged?
- How will water be rationed?
- How will food be provided?
- How will communications be performed, both internally and externally?
- What is the back-up air, oxygen, electrical and emergency generator status throughout the facility?

The Committee should assess:

- whether there are sufficient supplies to maintain the hospital through the first 72 hours, post-disaster
- current staff information regarding phone numbers, addresses, emergency contact numbers. Develop a procedure for staff notification to ensure appropriate utilization of personnel at the time of disaster and post-disaster. It may be beneficial to be aware of the area of the community each staff member resides in. This is useful when a situation involving an earthquake, tornado or flood, since the personnel who live in the affected portions of the community may not be able to work.
- the use of a proper personnel identification device (ID) to ensure the staff will be permitted to cross security / disaster area lines

Different scenarios should be considered to help in identifying shortcomings before an actual situation is experienced. Drills are covered in an upcoming section.

The institution should consider establishing mutual aide or written agreements with other healthcare facilities and vendors in the community as well as adjoining communities to provide assistance during external disasters for the provision of personnel, supplies, equipment, transportation, pharmaceuticals, or whatever else may be needed.

3. Outline Key Elements

The Committee should determine the chain of command during a disaster and the communication process, both internally and externally. They should develop a process for the management of patient triage, patient management and evacuation procedures, equipment management and transfer, patient identification, records management, security issues and public information, and steps to take toward recovery from emergency situations of all kinds.

4. Chain of Command

Most medical facilities have a Safety Director in place at all times. This person is responsible for overseeing the development, implementation and monitoring of the hospital's disaster plan. These responsibilities usually include:

- Implementing plans following a disaster based upon the space, supplies and security of the hospital in case of a bomb threat, natural disaster, fire, chemical spill, hostage situation, power outage or utility failure.
- Establishing policies for notifying proper authorities outside the hospital regarding an emergency.
- Developing protocol for notifying personnel on implementation of the emergency preparedness plans.
- Defining responsibilities of personnel during disaster and emergency situations and assignments to reflect staffing patterns.
- Developing policies for providing emergency communications during disasters and emergencies, and policies for alternative sources of essential utilities.
- Developing policies and procedures for evacuation of the hospital if the hospital cannot continue to support adequate patient care and treatment, and an alternate care site.
- Integrating hospital's role with community emergency preparedness plans.
- Developing policies for identifying available facilities for radioactive or chemical isolation and decontamination.
- Developing policies and procedures for managing patients during disasters or emergencies, including the scheduling, modification, or discontinuation of services, control of patient information, and admission, transfer and discharge of patients.
- Promoting orientation programs and continuing education on emergency preparedness plans for all personnel.
- Implementing emergency preparedness plans semi-annually, in response to an emergency or planned drill.

This person should play a key role as a member of the Hospital Disaster Committee.

5. Communication

In preparation for a disaster, another key position is required. This person may be referred to as the Incident Commander, who is responsible for gathering the Hospital Disaster Committee together at a moment's notice, according to HICS.

As a team, the Committee members then take control of the situation by delegating responsibilities to predetermined Section Chiefs, Directors, Unit Leaders and Area Officers. These people are each responsible for either directing teams or for specific duties. Refer to the beginning of this section for a generalized breakdown of responsibilities.

The Committee **MUST** be able to effectively communicate with one another, with all staff, with the public when necessary, and with other medical facilities in times of disaster.

6. Patient Management

Healthcare delivery has changed over the years. Many patients are living in home healthcare environments instead of a hospital setting. In times of disaster, this can present a challenge. In order for emergency preparedness agencies to properly evacuate patients, the hospital or home health agency should have the ability to provide patients' locations and their specific needs as quickly as possible. You may contact the local emergency preparedness agency in your area for assistance on developing plans for home health situations.

Home health agencies **MUST** have a disaster plan, as required by both the Joint Commission and the Community Health Accreditation Program (CHAP). Many communities have special needs shelters for temporary care until patients can be relocated or moved back into their homes.

7. Patient Transfers

A Transportation Officer should be assigned to make sure patients can be safely transferred either within the facility in cases of internal disaster or to another facility in cases of external disaster.

The following is a general guideline regarding patient transfer during and after an earthquake:

Within your facility:

1. Move all patients to a central area.
2. Issue extra blankets to all patients and keep them warm.
3. Close all drapes in the central area to protect against exposure to broken glass.
4. Close all doors to the central area including outer fire and smoke barrier doors.
5. Avoid using open flame devices.
6. Check for flashlights and extra batteries.
7. Reassure patients that all is well.

To other facilities:

Should transfers of patients to other facilities be necessary, follow the guidelines set forth in your institution's policies and procedures.

8. Evacuation Procedures

If evacuation is necessary following an internal disaster, patients should be evacuated to a secure place within the facility, designated by the search team. Patients and personnel should remain in the secured area until an 'All Clear' has been given.

The use of elevators should be avoided. Department heads, supervisors or other predetermined area officers should assign one staff member in each of their areas to remove patient charts. All such records should be taken to an area designated by the person in charge.

These predetermined personnel are responsible for assuring that exit routes are safe. One person, however, **MUST** remain at the assembly area to assure that everyone remains in the area. No one should be allowed to return to the building until 'All Clear' has been announced.

Once evacuation has occurred, law enforcement should search the premises, creating search teams if necessary. Once the search is completed, or has been terminated by the search commander, all employees participating in the search should leave the premises and return to the assembly areas designated during the evacuation process unless otherwise instructed.

9. Availability of Equipment

During a disaster, the availability of equipment is essential to the survival of patients in an internal event and to the community in an external event. To be prepared, you should know where the following items are located, so they can be gathered in the least amount of time:

1. Keys - Housekeeping personnel may know where all keys are kept.
2. Blankets - Additional blankets may be obtained from the Housekeeping Department.
3. Other items, which may be necessary especially in external disasters - Including bandages, dressings, compresses and suture materials, sterile scrub brushes, normal saline, anti-microbial skin cleanser, waterless hand cleaner and gloves, fracture immobilization, splinting and casting materials, backboard, rigid stretchers, non-rigid transporting devices, oxygen-ventilation-suction devices, and advance life support equipment (i.e., chest tube, airway, major suture trays).
4. Portable Oxygen Tanks - Check the Emergency Room, Stress Room and Respiratory Therapy areas.

5. Carts - Usually are found in the following areas:
    - Ambulatory Care Unit
    - Emergency Room
    - Surgery
    - Radiology
    - Ultrasound
    - EKG / Stress Test Room

10. Patient Identification and Information

One person or Patient Identification / Information Officer should be responsible for patient identification practices during a disaster. In brief, this person is responsible for keeping a list of patients, their location within the facility and their condition.

11. Records

A Records Officer should be assigned to lead an effort to obtain patient records in time of disaster. That way, there is a greater likelihood that medical records and medical equipment can be transferred to another facility if necessary.

If your facility has a computerized charting system, the information can be quickly and easily downloaded onto a disk, while hard copies of charts **MUST** be gathered and carried out.

12. Security

A Safety / Security Officer should be assigned to make sure no unauthorized persons enter the building following an internal disaster. This helps to provide personal security for staff, patients, visitors and property. This officer is also responsible for ensuring that any activity that takes place at the medical facility is done with the maximum amount of safety to all involved.

13. Public Information

Any medical staff answering telephones should not give out any information, unless so authorized, concerning a disaster to any caller. Similarly, publicity should be avoided as much as possible. In the case of a bomb threat, for example, publicity tends to generate additional threats.

Only the Administrator, or their designee, should answer questions of the press, and only on a need-to-know basis.

14. Recovery

Many hospital disaster plans fail to include information regarding the disaster recovery phase. However, recovery is extremely important. And planning for it begins before a disaster ever happens.

In preparation for recovery, experts recommend that hospitals start with a complete inventory of their assets, including buildings and equipment. When new buildings are built, additions are made, major renovations occur within the hospital, or any other addition or improvement occurs to the inventory, photographs or videos should be taken to build a historical file that can be presented to an insurance agent post-disaster.

For insurance claims, pictures present the actual condition prior to any damage. In hurricane zones, the staff has time to run around and photographically document the current condition of the campus prior to the storm's landfall. Tornadoes, fires and earthquakes do not allow that luxury. And remember, do not forget to photograph any damage prior to its removal or clean up.

Communicating the Plan to All Staff

No plan can be an effective one without appropriate and organization-wide communication. Once a Disaster Plan is developed, all staff should be notified. Additionally, their input can be helpful if allowed to be part of the review process.

Conducting Drills

Testing plans before a disaster strikes allows everyone in your organization to learn what to do when the disaster occurs, and helps to reveal potential problems, so they can be corrected before they are ever tested in a real disaster.

All staff should participate in basic emergency preparedness training and drills. This includes how to report and respond to an emergency, how to obtain assistance, how to obtain equipment and how to communicate if the hospital loses normal communication methods. Also, your facility should identify staff who have key roles and responsibilities in the disaster plan and train them as to their responsibilities in these roles. It is also suggested that local assistance agencies be part of the drill when possible.

It is important to note that the Joint Commission mandates hospitals to conduct at least two disaster drills a year. According to the Joint Commission, these drills **MUST** occur a minimum of four months apart.

These drills are further mandated to include all departments and legal agencies that would be involved in a real emergency. And the drills **MUST** include practice treatment and transportation exercises.

Additionally, both staff and the plan **MUST** be evaluated once a year.

Maintaining the Plan

Once the Disaster Plan has been reviewed and finalized, it **MUST** be maintained. One way in which to accomplish this is through periodic drills. Another is to update the plan periodically to allow for changes in the community that may affect putting the plan into practice. Variables include the opening and closings of schools in the area, openings and closings of other hospitals and medical facilities in the area, and community expansion or decline.

The Importance of Area Coordination

In an emergency of any magnitude, you aren't just dealing with your institution and its administrators, but with fire departments, police, emergency disaster services like the Red Cross and Salvation Army, as well as many other community assistance services and agencies. And when it comes to creating, maintaining and practicing a Disaster or Emergency Plan, you need a high level of coordination between your institution and those services and agencies.

Predetermined members of your institution should be charged with staying in touch with community assistance agencies and services, such as the fire department, police department, other hospitals and medical facilities in the area (and beyond), the Red Cross and other agencies that are set up to help in a disaster.

Area coordination is necessary, especially in larger events that affect a wider base of the population both inside and outside your institution's walls. For example, in case of fire, both the fire department and police are usually involved. According to federal guidelines, the fire department **MUST** be notified regardless of the size or type of fire.

These agencies can be helpful in the exchange of information. For example, if communications in your facility go down, the fire and police departments are equipped with portable communications devices. They can provide a necessary link in the flow of information.

Outside agencies can also be helpful in evaluating your institution's Disaster or Emergency Plan when involved in drills. To coordinate effectively, a high amount of continuous communication is necessary.

General Safety Procedures for Common Disasters

Following are general guidelines to follow in cases of the most commonly experienced disasters in the healthcare environment. *These are meant only as general guidelines*. You **MUST** review your institution's Disaster or Emergency Plan for detailed instruction.

Fires

Fire emergencies are one of the most serious situations that can occur in a healthcare environment. Healthcare professionals are exposed to many fire hazards in their workplace that can cause harm to patients, visitors and co-workers if not handled appropriately. Having a plan in place regarding fire can save lives.

Many healthcare institutions use the R.A.C.E. system when fire breaks out. The word 'RACE' provides a convenient way to remember what to do in case of a fire.

R - Rescue Patients and Employees in Immediate Danger

The first step in the R.A.C.E. procedure is to *rescue patients and employees in immediate danger*. 'R' can also stand for *remove all patients and employees in immediate danger*. Every healthcare professional should know the evacuation route in their area, as well as their facility's policies and procedures for evacuating patients.

Follow these procedures quickly and calmly.

A - Activate the Fire Alarm

The second step of the R.A.C.E. procedure is to *activate the fire alarm*. 'A' can also stand for alarm. If you are the first to discover the fire and the fire *alarm* has not been activated, immediately activate the alarm. Follow your facility's policies and procedures for notifying appropriate personnel of the fire.

C - Confine / Contain the Fire

The third step of the R.A.C.E. procedure is to *confine/contain the fire*. The purpose of closing doors and containing the fire is to limit the fire's access to oxygen. Close all doors to patient and storage rooms and make sure that the fire doors have automatically closed. Closing all doors helps prevent the spread of the fire to other areas.

E - Extinguish the Fire

The final step in the R.A.C.E. procedure is to *extinguish the fire*. If the fire is small and contained, you can extinguish it by covering it with non-flammable materials or by using the correct type of fire extinguisher. Use the fire hoses available in your facility only if you have been properly trained to do so. Otherwise, evacuate everyone and wait for the fire department to extinguish the fire.

Earthquakes

While not an everyday event, almost no area of the world is free from earthquakes. In fact, several million earthquakes occur each year globally. They range from barely perceptible quakes to those which are so severe that entire cities and countrysides are destroyed.

During an earthquake, the main concern for healthcare facilities is loss of power, especially those facilities that are geographically isolated. In case of earthquake, the following serves as a general guideline for operational procedures:

During the Quake:

The first rule of thumb is - Don't Panic. If inside, remain inside, where you are the safest. The greatest danger from falling debris is just outside the doorway and near the outer walls. Instruct patients, co-workers and visitors to move into the hallways. If time does not permit, instruct all persons to take cover under beds, tables or against inside walls. Remind them to stay away from windows and glass.

During an earthquake, you should never use an open flame device. This includes candles and matches. Douse all cigarettes and fires. If outside, move away from the building and utility wires. Once in the open, stay there until the shaking stops.

After the Quake:

Here is a checklist of steps you should take once the shaking stops:

1. Check for injuries.
2. Follow treatment procedures as instructed.
3. Don't use open flame devices until the building has been inspected for broken gas lines and has been declared safe.
4. Check utilities, but don't turn them on until the building has been declared safe.
5. If you smell gas, open windows and shut off the main gas valve.
6. Don't use telephones, except for emergencies.
7. If the building, or any portion thereof, has been damaged, don't allow anyone entrance until an 'All Clear' has been issued.

Be mindful of fires caused by earthquakes. They can be more dangerous than the earthquake itself, because much equipment and water lines may be destroyed or become immobilized. During and after an earthquake, be especially watchful for fires, leaking gas lines and the like.

Report such activities immediately. Should a fire occur, procedures **MUST** be followed as outlined in the 'Fire Safety Plan', unless otherwise instructed.

Bomb Threats

According to federal guidelines, should a bomb threat be received by phone, the nurse or other healthcare professional taking the call should immediately institute the following procedures and complete a 'Record of Bomb Threat':

1. Remain calm. Don't panic.
2. Keep the caller on the line as long as possible.
3. Record, as near as possible, every word spoken by the person calling.
4. Listen for any strange or unusual background noises such as music playing, motors running, traffic sounds, etc., which might be helpful in providing clues to determine where the call was made from.
5. Determine whether the voice is male or female, familiar or unfamiliar, and listen for any accents, speech impairments, nervousness, etc.
6. Record as much information as you possibly can. You may not be able to get everything, but do get all you can.

Immediately after the caller hangs up, contact the Switchboard Operator and relay as much information as possible. This person should contact the Police Department and then make the following announcement over the intercom:

ATTENTION PLEASE. CODE 50 IS NOW IN EFFECT.

(The Switchboard Operator will use whichever code is appropriate for your facility. All healthcare employees should be familiar with the code system in their own facility, as they differ, between color, number, letter, name, and combination codes.)

The Switchboard Operator will then contact the following and relay the information received:

- Fire Department
- Hospital Administrator
- Chief Nursing Office and/or Med/Surg Nurse Manager
- Safety Director
- Director of Environmental Services
- Maintenance Supervisor

Only authorized law enforcement officials will remain in the building during the removal of the suspicious object(s) and such agencies will direct the removal as quickly as possible. Once the search has been completed, an "All Clear" should be announced after a confirmation has been obtained from the police department or fire department stating the building has been searched and nothing found.

Riots

Civil disturbances or riots are rare, but planning for their occurrence **MUST** be a part of your preparedness plan. If a civil disturbance breaks out, the first thing you need to do is to secure the hospital entrance nearest the location of the occurrence and notify security. Also, notify your supervisor, who in turn should notify appropriate administrators and law enforcement agencies.

During situations of civil disturbance, the most important things to remember are to:

- Remain calm and get the facts and reason for the demonstration
- Meet and talk with the leader of the demonstration
- Make no promises or concessions without administrative authority

Conclusion

With an Emergency Management Plan in place, a medical facility or hospital can be properly and adequately prepared for any disaster, either internal or external. Without an effective and well thought out preparedness plan, a hospital is setting itself up for confusion, unnecessary chaos and even loss of life.

The key for hospitals to effectively manage and react to a disaster is to practice their preparedness using mock situations and periodic drills, which are requirements of the Joint Commission. Currently, guidelines for dealing with disaster are available through the HICS plan.

Nurses and other healthcare workers are responsible for the safety of their patients. By understanding their role in their institution's disaster plan, they can help to enhance the level of safety for patients, visitors and co-workers.