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Los Angeles, CA 90067

Phone: (310) 284-3194 Fax: (310) 284-3195

Email:

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INCIDENT MANAGEMENT SYSTEM

To direct, control, and coordinate response and recovery operations, an incident management system should be implemented.

Specific organizational roles, titles, and responsibilities shall be identified for each function as shown in the following Incident Command System (ICS).

ICS Position Descriptions

Introduction

The ICS organization develops around five major functions that are required on any incident whether it is large or small. For some incidents, and in some applications, only a few of the organization's functional elements may be required. However, if there is a need to expand the organization, additional positions exist within the ICS framework to meet virtually any need. establishes lines of supervisory authority and formal reporting relationships. There is complete unity of command as each position and person within the system has a designated supervisor. Direction and supervision follows established organizational lines at all times. The following are the major responsibilities and duties of all ICS positions. Individual agencies may have additional responsibilities and more detailed lists of duties.

Incident Commander

The Incident Commander's responsibility is the overall management of the incident. On most incidents the command activity is carried out by a single Incident Commander. The Incident Commander is selected by qualifications and experience. The Incident Commander may have a Deputy I.C., who may be from the same agency, or from an assisting agency. Deputy positions may also be used at section and branch levels of the ICS organization. Deputy positions must have the same qualifications as the person for whom they work as they must be ready to take over that position at any time.

Responsibilities:

- Assess the situation and/or obtain a briefing from the prior Incident Commander.
- Determine Incident Objectives and strategy.
- Establish the immediate priorities.
- Establish an Incident Command Post.
- Establish an appropriate organization.
- Ensure planning meetings are scheduled as required.
- Approve and authorize the implementation of an Incident Action Plan.
- Ensure that adequate safety measures are in place.
- Coordinate activity for all Command and General Staff.
- Coordinate with activated DOCs and EOCs as required.

- Coordinate with key people and officials.
- Approve requests for additional resources or for the release of resources.
- Keep agency administrator informed of incident status.
- Approve the use of trainees, volunteers, and auxiliary personnel.
- Authorize release of information to the news media.
- Order the demobilization of the incident when appropriate.

Information Officer

The Information Officer is responsible for developing and releasing information about the incident to the news media, to incident personnel and to other appropriate agencies and organizations. Only one Information Officer will be assigned for each incident, including incidents operating under Unified Command and multi-jurisdiction incidents.

The Information Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions.

Responsibilities:

Agencies have different policies and procedures relative to the handling of public information.

- Determine from the Incident Commander if there are any limits on information release.
- Develop material for use in media briefings.
- Coordinate and validate information with Information Officer's at agency DOCs and EOCs when activated, to ensure consistency.
- Obtain Incident Commander's approval of media releases.
- Inform media and conduct media briefings.
- Arrange for tours and other interviews or briefings that may be required.
- Obtain media information that may be useful to incident planning.
- Maintain current information summaries and/or displays on the incident and provide information on status of incident to assigned personnel.
- Maintain Unit Log.

Liaison Officer

Incidents that are multi-jurisdictional, or have several agencies involved, may require the establishment of the Liaison Officer position on the Command Staff. The Liaison Officer is the contact for the personnel assigned to the incident by assisting or cooperating agencies. These are personnel other than those on direct tactical assignments or those involved in a Unified Command.

Responsibilities and Duties:

- Be a contact point for Agency Representatives .
- Maintain a list of assisting and cooperating agencies and Agency Representatives .
- Assist in establishing and coordinating inter-agency contacts.
- Keep agencies supporting the incident aware of incident status.
- Monitor incident operations to identify current or potential inter-organizational problems.
- Participate in planning meetings, providing current resource status, including limitations and capability of assisting agency resources.
- Maintain Unit Log.

Agency Representatives

In many multi-jurisdiction incidents, an agency or jurisdiction will send a representative to assist in coordination efforts. An Agency Representative is an individual assigned to an incident from an assisting or cooperating agency who has been delegated authority to make decisions on matters affecting that agency's participation at the incident. Agency Representatives report to the Liaison Officer, or to the Incident Commander in the absence of a Liaison Officer.

Responsibilities:

- Ensure that all agency resources are properly checked-in at the incident.
- Obtain briefing from the Liaison Officer or Incident Commander.
- Inform assisting or cooperating agency personnel on the incident that the Agency Representative position for that agency has been filled.
- Attend briefings and planning meetings as required.
- Provide input on the use of agency resources unless resource Technical Specialists are assigned from the agency.
- Cooperate fully with the Incident Commander and the General Staff on agency involvement at the incident.
- Ensure the well-being of agency personnel assigned to the incident.
- Advise the Liaison Officer of any special agency needs or requirements.
- Report to home agency dispatch or headquarters on a prearranged schedule.
- Ensure that all agency personnel and equipment are properly accounted for and released prior to departure.
- Ensure that all required agency forms, reports and documents are complete prior to departure.
- Have a debriefing session with the Liaison Officer or Incident Commander prior to departure.

Safety Officer

The Safety Officer's function is to develop and recommend measures for assuring personnel safety, and to assess and/or anticipate hazardous and unsafe situations. Only one Safety Officer will be assigned for each incident. The Safety Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions. Safety Assistants may have specific responsibilities such as air operations, hazardous materials, etc.

Responsibilities:

- Participate in planning meetings.
- Identify hazardous situations associated with the incident.
- Review the Incident Action Plan for safety implications.
- Exercise emergency authority to stop and prevent unsafe acts that are outside the scope of the Incident Action Plan.
- Investigate accidents that have occurred within the incident area.
- Assign assistants as needed.
- Review and approve the medical plan.
- Maintain Unit Log.

The ICS General Staff Positions

The General Staff consists of the following positions:

- Operations Section Chief
- Planning/Intelligence Section Chief
- Logistics Section Chief
- Finance/Administration Section Chief

Operations Section Chief

Responsibilities:

- Manage tactical operations. Interact with next level lower in the Section, (Branch, Division/Group) to develop the operations portion of the Incident Action Plan. Request resources needed to implement Operational tactics as a part of the Incident Action Plan development (ICS 215).
- Assist in development of the Operations portion of the Incident Action Plan.
- Supervise the execution of the Incident Action Plan for Operations. Maintain close contact with subordinate positions. Ensure safe tactical operations.
- Request additional resources to support tactical operations.
- Approve release of resources from assigned status (not release from the incident).
- Make or approve expedient changes to the Incident Action Plan during the Operational Period as necessary.
- Maintain close communication with the Incident Commander.
- Coordinate with activated Operations Sections at agency DOCs and EOCs.
- Maintain Unit Log.

Branch Director

(Branches may be functional or geographic)

Responsibilities:

- Obtain briefing from the Operations Section Chief.
- Supervise Branch operations.
- Develop alternatives for Branch operations as required.
- Interact with the Operations Section Chief and other Branch Directors to develop tactics to implement incident strategies.
- Be prepared to attend incident planning meetings at the request of the Operations Chief.
- Review Division / Group assignments within the Branch and report status to the Operations Section Chief.
- Assign specific work tasks to Division/Group Supervisors.
- Monitor and inspect progress and make changes as necessary.
- Resolve logistics problems reported by subordinates.
- Maintain Unit Log.

Division/Group Supervisor

Responsibilities:

- Obtain briefing from the Operations Section Chief or appropriate Operations Branch Director.
- Review assignments with subordinates.
- Inform Resource Unit (if established) of status changes of resources assigned to the Division/Group.
- Coordinate activities with adjacent Divisions/Groups.
- Monitor and inspect progress and make changes as necessary.
- Keep supervisor informed of situation and resources status.
- Resolve tactical assignment and logistics problems within the Division/Group.
- Keep supervisor informed of hazardous situations and significant events.

- Ensure that assigned personnel and equipment get to and from their assignments in a timely and orderly manner.
- Maintain Unit Log.

Task Force/Strike Team, Platoon or Squad Leader

Responsibilities:

- Obtain briefing from supervisor (Division/Group Supervisor, Operations Section Chief, or Incident Commander, depending upon how the incident is organized).
- Review assignment with subordinates and assign tasks.
- Travel to and from active assignment area with assigned resources.
- Monitor and inspect progress and make changes as necessary.
- Coordinate activities with adjacent Task Force/Strike Team, Platoon, Squad or with other functional groups working at the same location.
- Keep supervisor advised of situation and resource status.
- Retain control of assigned resources while in available or out-of-service status.
- Maintain Unit Log.

Single Resource

The person in charge of a single tactical resource will carry the unit designation of the resource.

Responsibilities:

- Obtain briefing from the Division/Group Supervisor or Task Force/Strike Team, Platoon or Squad Leader.
- Review assignments.
- Obtain necessary equipment/supplies.
- Review weather/environmental conditions for assignment area.
- Brief subordinates on safety measures.
- Monitor work progress.
- Ensure adequate communications with supervisor and subordinates.
- Keep supervisor informed of progress and any changes.
- Inform supervisor of problems with assigned resources.
- Brief relief personnel, and advise them of any change in conditions.
- Return equipment and supplies to appropriate unit.
- Complete and turn in all time and use records on personnel and equipment.

Staging Area Manager

The Staging Area Manager reports to the Operations Section Chief or to the Incident Commander if the Operations Section Chief position has not been filled. Note:

In some disciplines, the Staging Area is established as part of the Logistics Section, requiring the Staging Area Manager to report to the Logistics Chief. However, regardless of Section assignment, the duties of the Staging Area Manager remain the same.

Responsibilities:

- Establish layout of Staging Area.
- Post areas for identification and traffic control.
- Provide check-in for incoming resources.
- Determine required resource reserve levels from the Operations Section Chief, Logistics Chief, or Incident Commander.
- Advise the Operations Section Chief, Logistics Chief or Incident Commander when reserve levels reach minimums.

- Maintain and provide status to Resource Unit of all resources in Staging Area.
- Respond to Operations Section Chief, Logistics Chief or Incident Commander requests for resources.
- Request logistical support for personnel and/or equipment as needed.
- Maintain Staging Area in an orderly condition.
- Demobilize or move Staging Area as required.
- Maintain Unit Log.

Air Operations Branch Director

Responsibilities:

- Obtain briefing from Operations Section Chief.
- Organize preliminary Air Operations.
- As appropriate, initiate request for temporary flight restrictions.
- Participate in the preparation of the Incident Action Plan.
- Perform Operational Planning for Air Operations.
- Prepare and distribute the Air Operations Summary Worksheet (CS Form 220).
- Supervise air operations branch personnel and coordinate with incident and off-incident personnel and agencies.
- Evaluate helibase locations.
- Establish procedures for emergency reassignment of aircraft.
- Schedule approved flights of non-incident aircraft into the incident area.
- Evaluate requests for non-tactical use of incident aircraft.
- Resolve conflicts concerning non-incident aircraft involved in incident over-flights.
- Monitor for accidents or special incidents.
- Maintain Unit Log.

Air Tactical Group Supervisor

Responsibilities:

- Check-in and receive incident assignment (usually via radio).
- Obtain briefing from Air Operations Branch Director or Operations Section Chief. If possible, obtain a copy of the current Incident Action Plan.
- Determine type and quantity of aircraft (fixed-wing and helicopters) operating on the incident; report to Air Operations Branch Director.

If you have any questions or comments, or if you would like to share your experiences with us, we would be more than happy to hear from you.

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The New Emergency Management Standards

An integrated approach

The environment of care (EC) emergency management (EC.1.4) standards, effective January 1, 2001, have been significantly overhauled to reflect many of the lessons health care facilities and their communities have learned—the hard way. (See the summary box on page 11.) For example, new language relating to facility evacuation summarizes what has worked well for organizations faced with floods, hurricanes, earthquakes, or utility outages. Perhaps most significantly, the new EC.1.4 standard draws on the central policy context of the Federal Emergency Management Agency (FEMA): the Comprehensive Emergency Management policy (CEM). CEM has been proven in practice since FEMA's creation in the 1980s.

Lessons learned in the emergency management field, which serve as general advice for program managers, include

- clearly defined roles of officials;
- strong and definitive lines of command;
- disaster organizational structure and procedures similar to those of routine structures;
- good interpersonal relationships;
- ongoing planning;
- an all-hazard approach;
- motivation provided for involvement¹;
- user involvement;

¹Thomas E. Drabek, *The Professional Emergency Manager: Structures and Strategies for Success, Monograph #44*, pp 67–68. *The Institute of Behavioral Science, University of Colorado, Boulder, CO, 1987.*

- coordination among participating groups;
- clearly defined public information function; and
- the ability to maintain comprehensive records during a disaster.

Four phases of emergency management

In the new EC.1.4, facility emergency management plans can use CEM to organize the various emergency management activities into four phases:

Mitigation activities eliminate or reduce the effects of hazards.

Preparedness activities build individual and organization ability to manage the effects of hazards that actively impact a facility. Some of the important preparedness steps include creating an inventory of resources that may be needed in an emergency, including prearranged agreements with vendors and health care networks; maintaining an ongoing planning process; holding staff orientation on basic response actions; and implementing facility-wide rehearsals.

Response activities control the negative effects of emergency situations. Response activities are best divided into actions that all staff must take



Mitigation begins with identifying hazards that may affect the facility and analyzing how vulnerable patients, personnel, facilities, telecommunications, and informational resources may be to those hazards. Mitigation has always been one of the primary thrusts of the environment of care.

when confronted by an emergency, such as implementing “RACE” in response to a fire; and those taken by management, such as initiating the plan, assessing the situation, issuing warning and notification announcements, setting objectives and priorities, and serving as liaison with external groups.

(continued on page 11)

Emergency Management

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■ **Recovery actions** begin almost concurrently with response activities and are directed at restoring essential services and resuming normal operations.

Coordinating with the community

Although a hazards vulnerability analysis is important, emergency management experts and disaster researchers have long maintained that an all-hazards approach focusing on activities that must occur in most emergencies is also effective. Dynes et al¹ described two sets of demands that occur simultaneously in emergencies: agent-generated demands and response-generated demands. Agent-generated demands are caused by the particular hazard. These demands—including search and rescue, care of the injured and dead, and restoration of essential services—have usually received adequate attention in planning. However, how many times have you sat in the critique session after the facility's last exercise or drill and heard about the problems with communication, coordination, and line of command? These are some examples of response-generated demands, which occur within the organization as it mobilizes. Response-generated demands also need to be anticipated and planned for.

The new standards recognize this key lesson and now stress pre-event role clarification and coordination with response agencies as well as adoption

¹Russell R. Dynes, E.L. Quarantelli, and Gary A. Kreps, A Perspective on Disaster Planning, pp 9-13. *The Defense Civil Preparedness Agency (a precursor to FEMA)*, Department of Defense, Washington, DC 1972.

of a command system consistent with that used by the community.

One possibility is the Incident Command System (ICS), originally developed to improve interagency efforts to combat wildland fires in the late 1970s. Several variations of the ICS exist. Regardless of the model used, the key is to ensure that hospitals and community command systems share

- common terminology;
- integrated communications;
- modular organization;
- unified command structures;
- manageable spans of control;
- consolidated action plans;
- comprehensive resource management; and
- predesignated incident facilities (command post, emergency operating center, staging area).²

²The Incident Command System. *Fire Protection Publications*, Oklahoma State University, Stillwater, OK, 1996.

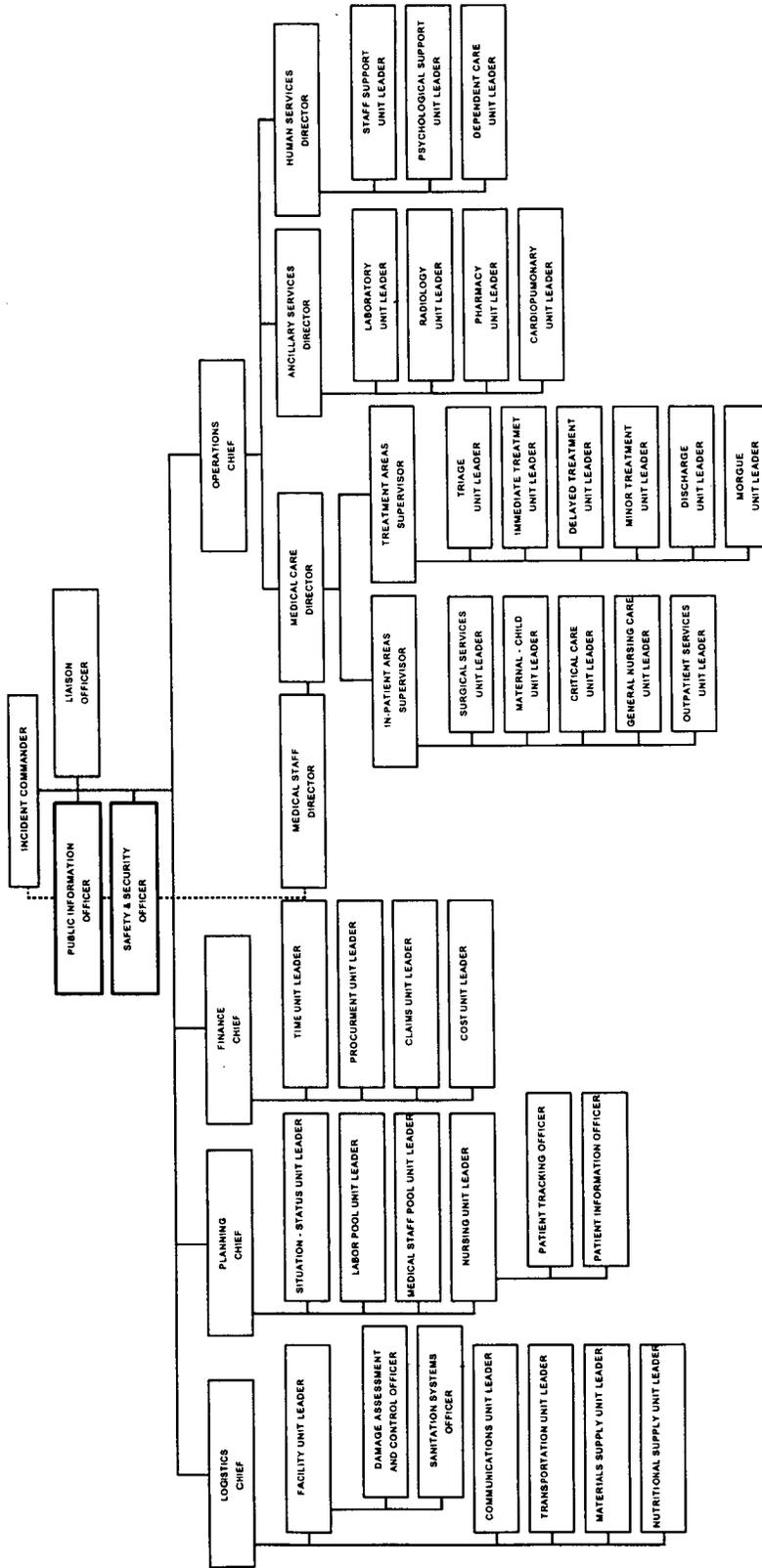
Staff and family safety

A final addition to the new standards concerns staff management. In a real-world emergency, people will naturally be concerned for the safety and well-being of their loved ones. Accordingly, the new emergency management standards call for the management of staff activities—including housing, transportation, and incident stress debriefing—and staff and family support activities.

—Peter W. Brewster is Program Manager, Education & Research, Richard L. Roudebush VA Medical Center, Indianapolis, IN, and Emergency Management Strategic Healthcare Group, Department of Veterans Affairs, Martinsburg, WV

The Hospital Emergency Incident Command System (HEICS)

This organizational chart represents the response portion of a hospital's emergency or disaster plan. The HEICS management system fits within a facility's overall Emergency Preparedness Plan, and is supported by policies and procedures which outline this response plan's activation.



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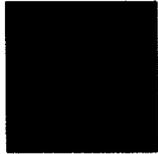
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Articles

PREPARING FOR AN EMERGENCY: A STEP-BY-STEP APPROACH

Over the past several years, a steady flow of large scale disasters has occurred across the nation. Earthquakes, spectacular fires, large scale floods, wildfires, workplace shootings, and vandalism have all grabbed headlines. This series of events has led to an increased focus on the issue of emergency preparedness, as individuals wonder "Could it happen here?" This heightened awareness could have a significant benefit if facilities take the opportunity to develop and implement comprehensive emergency plans.

If an emergency plan is to be effective, it must be tailored to the specific facility for which it is intended. The issues involved in emergency planning are far too widespread for there to be a single, universal "one-size-fits-all" emergency plan. Geographic location, building type, building use, adjacent facilities, and building occupants all effect the potential threats and the potential responses to emergencies. Therefore, an emergency plan must be developed based on the specifics of the facility in question. This article outlines a step-by-step approach that can help educational and health care facilities create, implement, and maintain an effective, comprehensive emergency plan.

The Emergency Planning Process

The proper way to approach any large task is to break the overall project down into a series of manageable steps. The first two steps of the process involve identifying and organizing all relevant issues. Once these issues are identified, the specific strategies of the plan can be developed. These strategies should then be reviewed and tested before the plan is put into place. Implementing the plan involves creating the needed documentation and training those involved. Once the plan is in place, a process for maintaining it is necessary.

The following six steps can be used to create an emergency plan for a facility that has no current plan. It is equally useful for reviewing and updating an existing emergency plan.

Step 1: Identify The Issues

The first step of the emergency planning process involves a straightforward identification of all the relevant issues or factors involved. The first group of issues to identify are the types of potential threats to the facility. The types of threats will depend on the geographical location of the building, adjacent facilities, the building configuration, construction type and systems, the use of the building, and the occupants of the building.

In addition to identifying potential threats, there are four other groups of issues or components that should be identified. They include:

- Regulatory Components—authorities who may adopt or enforce rules, respond to emergencies, or assist in recovery from emergencies
- Human Components—the building population
- Building Components—physical elements or systems
- Business Components—operations, physical contents, data, and insurance

A thorough identification of each of these issues provides a solid base for the development of

a complete emergency plan.

Step 2: Evaluate The Issues

Once all the issues have been identified, the information should be analyzed to form the framework around which the emergency plan can be developed. This step should involve estimating the probability and potential impact of each identified threat, based on each of the identified components that are relevant to that specific threat. Potential problems or conflicts should also be identified.

With the information accumulated at this phase, a preliminary structure of the internal emergency team should also be outlined. This structure can be fine-tuned as the process continues. This preliminary structure is needed so that decisions regarding duties and responsibilities can be made in the next step.

Step 3: Develop The Plan

Specific strategies for addressing each known threat to the facility are developed during this phase of emergency planning. For each identified emergency, the following nine issues should be addressed:

Prevention. This issue involves actions that can be taken in order to reduce the chances of an emergency occurring, or to reduce the effect of an emergency should it occur. The focus of this issue should be actions that become "standard operating procedure" for the facility.

Detection. In every actual emergency, and in some potential emergencies, there is a specific time when some person or some system detects an incident that is occurring. Detection may occur either internally (e.g., a building system detects a fire) or externally (e.g., the utility company issues a power shortage warning). This issue involves the identification of each potential source of detection for a specific emergency situation.

In addition to identifying the potential source of detection, the potential timing of the detection should be identified. Some emergencies may be detected before they affect a facility; other emergencies may not be detected until they are already affecting the facility.

Notification. Once detection has occurred, the next issue is to ensure that proper notification occurs. Notification involves informing those persons (or systems) that need to know about the situation. Persons who are at risk need to be notified, as do persons responsible for responding to the emergency. Each individual and entity that would need to be notified during an emergency must be identified, as well as the methods or systems that will be used for notification. Internally originating emergencies may require notification of both internal and external entities. When an emergency originates elsewhere, the issue is to identify how the facility will be notified of the threat.

The responsibilities and the complexities of notification must be tailored to the detection source. A visitor to the building cannot be expected to perform any but the simplest of notification; a building engineer, or an agency such as the National Weather Service, is likely to be capable of more complicated notification responsibilities.

Communication. It is essential that effective lines of communication be opened and maintained throughout the incident. This issue involves identifying both the systems that will be utilized for communication purposes and the proper channels or procedures to be implemented for ensuring effective communication. Persons involved in an emergency need to know how they will receive information and how they should relay information that they may have. When developing communication strategies, be sure that the system will be reliable and consider having at least one backup system available in the event the primary system breaks down.

Evacuation. Certain emergency situations may require the evacuation of some or all of the occupants of the facility. First, a determination of whether evacuation might be necessary for a specific emergency should be made. If evacuation might be required, determine whether evacuation would need to be complete or partial and if it would be of an emergency (as quickly as possible) or a gradual nature. Other issues to be addressed include: determining who will order and supervise evacuation, how will occupants with special needs be accommodated, who will verify that evacuation is complete, and where will persons evacuate.

...measures, the primary and secondary components, and where the persons evacuate to.

Control/Mitigation. This issue involves identifying the systems or procedures that may be used to reduce the impact that an emergency may have on the facility. This may include actions before "impact," during the emergency, or after the emergency. Unlike preventative measures, which become general procedure, control and mitigation measures are only feasible when an increased threat, or an actual incident, occurs.

Control and mitigation may involve either building systems (which may be passive or active) or human intervention. Human intervention may be by regulatory components (such as firefighters) or building occupants (a trained individual using a fire extinguisher).

Documentation. Thorough documentation is essential before, during, and after an emergency. Before an emergency, good documentation ensures that those persons involved know the plan, know what is expected of them, and know how to report and identify minor problems before they contribute to an emergency. During an emergency, documentation can be a helpful tool for those implementing the plan increasing the likelihood that proper procedures are followed. Good incident documentation also provides an effective means of tracking the progress and status of an incident, and is also useful if a reconstruction of the incident is necessary. After an emergency, documentation can be helpful in improving the plan for future incidents and in streamlining any issues related to liability or insurance.

Recovery. Recovery involves those actions necessary to return to pre-emergency status. Recovery may be either minor (a simple cleanup) or major (reconstruction). The potential steps that may be needed for recovery should be identified in the planning process. Some efforts before an incident may greatly increase the speed at which recovery efforts may begin and be completed.

Regulatory agencies may offer recovery assistance from certain emergencies—these sources should be identified, with the proper contacts noted. Where the building is affected by the incident, repairs or replacement of elements may be needed. Some recovery operations may be able to utilize existing contractors or suppliers; others may require special services. Possible emergency recovery services should be discussed with existing contractors and specialized service providers should be identified and contacted.

Public Relations. The development of the emergency plan should include a process for handling media contacts and requests for information. An effective public relations plan is an important part of the overall facility and organizational response to an incident. A media contact person should be identified and any requests for information about emergency preparedness, an unfolding incident, or a past incident should be initially fielded by that individual. Effective media and public relations policies can limit negative media attention and can also prevent rumors, opinions, and unsubstantiated theories from being broadcast as facts.

Step 4: Analyze The Plan

Now that the plan is developed, this step serves as a "debugging" phase before the plan is put into place. This step involves comprehensive review of the plan, including outside review if possible, and testing of the strategies and systems being used. This step serves as a final review before the plan is implemented.

Step 5: Implement The Plan

In order to implement the plan, those persons involved must be trained and the printed materials needed for the plan must be prepared. Training may involve both simple presentations to all building occupants as well as intensive training with possible certification or licensing of emergency team or building personnel.

The plan documents should also involve several levels of detail. A single document will not be able to serve all of the various persons involved in the plan. A visitor or an employee in the building requires a much simpler explanation of the plan than does a building engineer or facility manager responsible for coordinating emergency response efforts. In addition, regulatory agencies may require a specific set of information in a specific format to be located in a specific place.

Each of the different audiences to be reached should be identified and both the training and the documents developed should be tailored to the needs, the responsibilities, and the expertise of the group.

Step 6: Maintain The Plan

Once the plan is implemented, a process should be put in place to ensure that each piece of the plan remains effective and that the plan responds to any changes that may affect the strategies developed.

Any of the initially identified issues can change over time: the threat of a specific type of incident may change, regulatory components may change rules or response capabilities, building components may be upgraded, added, damaged, or removed, business operations may change, and most commonly, human components will change. Any change to any component needs to be assessed for its impact on the emergency plan.

By constantly monitoring the subtle changes to the overall plan that may occur over time, the plan itself can gradually be revised based on those changes, keeping it up-to-date and as effective as the day it was implemented. If the plan is put into place and then forgotten, when an incident does occur, critical personnel may be untrained, building systems may not function, and time will be wasted trying to identify the proper responses and procedures to implement.

Resolution

Once an incident begins, the opportunity for rational, well thought out planning is lost. Therefore, educational and health care facilities without a comprehensive emergency plan should make it a high priority to develop and implement such a plan. Facilities with existing plans should set up a review process to verify that their plans are complete and up-to-date. A comprehensive emergency plan can prevent emergencies, keep small incidents from escalating into large ones, limit loss of property and/or life, and reduce liability.

Lawrence G. Perry, AIA works as the Codes Representative for BOMA International.

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GRAINGER



Hospital Disaster Preparedness: Meeting a Requirement or Preparing for the Worst?

By Paul V. Richter
Risk Management Coordinator for Support Services
South Carolina Hospital Association
West Columbia, SC

Too many of our nation's hospitals have become complacent over disaster preparedness. They develop a document to meet a licensure requirement or a Joint Commission on Accreditation of Healthcare Organizations standard. The language is minimal and when the document is exercised, only a few portions (personnel recall and mass casualty, in particular) are tested. It would benefit hospitals to take time to talk to those recently effected by floods, earthquakes or hurricanes, so that they would learn that to be really prepared to face and survive a disaster, extensive, in-depth planning must take place.

INTRODUCTION

Disasters come in all shapes and sizes. They can be natural or man-made. They can be called names like hurricanes, earthquakes, floods, fires or chemical spills/releases. They can come with days of prior warning or can happen without any warning at all.

Hospitals throughout the United States have a disaster plan as a requirement of state licensure or complying with a JCAHO standard. The key question concerning these plans is, do they meet the needs of the facility and the community? Too often, they do not.

WHERE TO START

How do hospitals begin to formulate an adequate disaster plan? The responsibility to develop the plan should be given to a committee, using a self-existing disaster preparedness committee or a subcommittee of the safety committee. The committee should include representatives from every department in the hospital.

"...The disaster planning committee...should include representatives from the following:

- Medical staff (ER physician or trauma surgeon)
- Administration (includes risk manager)
- OR manager
- Nursing staff
- Emergency department
- Security
- Communications
- Public relations
- Medical records and admissions
- Engineering/maintenance
- Laboratory
- Radiology
- Respiratory therapy".

This process must be a team effort. No one activity should be given preference over another. The

committee members should serve extended terms and rotate off to assure continuity, and they should have the ability to dedicate the time needed to produce a viable plan. The committee should look at each type of disaster that may affect the facility. With the various types of disasters come problems and situations inherently unique to that specific situation.

The committee should initiate an assessment to determine the hospital's capability, potential problem areas and other concerns that must be addressed during a disaster (Appendix A). The entire premise should be examined to see how a disaster will have an effect on the building and how health care will be provided.

Questions need to be asked, such as: is there a well on the property and is it connected to the emergency generator? If triage has to be done outside of the hospital, is there power in the designated area and is it on the 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 (internally and externally)?

Equipment and supplies must also receive the same scrutiny. Are there enough supplies to take the hospital through the first 72 hours post-disaster? Another type of assessment should be an evaluation of where the staff resides. For instance, in an earthquake or flood scenario, personnel who live in the affected portions of the community may not be able to make it into work. Therefore, staffing will have to be adjusted to meet needs. Will staff members be permitted to cross security disaster area lines with their current identification?

To determine needs after the assessments are completed, the gaming process can be used. Different scenarios should be brainstormed and played. This process will help to identify shortcomings before an actual situation is experienced.

Changes in Patient Needs

Changes in the way health care is delivered has generated another requirement for disaster planning. Hospitals are discharging patients to home health care. Dialysis patients are treated on an outpatient basis. There are all types of special needs patients in our communities. Plans should be made with their family members or friends to evacuate them during times of disasters. For those patients who cannot rely on their own means of evacuation, local emergency preparedness agencies must be used for transportation.

In order for these 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 (consult with the local emergency preparedness agency to establish time frames). Home health agencies must have a disaster plan. This is required by both the Joint Commission and the Community Health Accreditation Program (CHAP). Many communities have special needs shelters which have the ability to provide temporary care until patients can be relocated or moved back into their homes.

"The staff assesses patient disaster plan needs based on patient's health status, type of housing, or geographical location. Patients are assigned a risk level...used to determine patient health care and/or evacuation needs so appropriate actions can be implemented in a disaster."² This way, disaster preparedness agencies know how to prioritize evacuations and the type and amount of transportation that will be needed. Plans should be made to bring these patients in-house if they

cannot be moved to family, friends or out of the area. Red Cross shelters are usually not equipped nor is their staff trained to handle patients with special needs.

The "Buddy System"

Mutual aid agreements with other health care facilities should be included within hospital disaster plans. These agreements should be for personnel, supplies, equipment, transportation and whatever else is determined to be needed in the event that a disaster occurs. These aid agreements should be made with hospitals and vendors both within your hospital's locale and outside of what may be the affected area. These agreements should be written and signed by all parties involved.

Keep It Simple

The most effective document of any kind is one that is easily understood. Most hospital disaster manuals are lengthy and contain voluminous amounts of information. True, this information is very important in assisting staff's reaction to different situations. Realistically, staff members do not have time to familiarize themselves with every aspect of the disaster manual until there is an actual occurrence. Then, if it is not an easily understandable document, items may "slip through the cracks." Disaster manuals should be comprehensive, yet simple. Where possible, important tasks, procedures, supplies, equipment, etc. should be in a checklist format. Each job within the hospital should have a checklist for its specific tasks.

One of the best examples of emergency preparedness through checklists can be found in The Hospital Emergency Incident Command System (HEICS) developed by the Orange County (CA) Health Care Agency Emergency Medical Services, in conjunction with several California hospitals (see Appendix B for an example). The system is flexible and easy to understand and follow.

RECOVERY

The disaster recovery phase is rarely addressed in hospital disaster plans; however, when the disaster is over, the work has just begun. Hospital disaster planners and safety personnel must quickly pass through the denial that nothing will ever happen to their facility and begin to deal with the realities.

At what point does recovery begin? Planning for recovery begins before anything ever happens. Hospitals should start with a complete inventory of their assets, both buildings and equipment. When new buildings are built, additions are constructed, 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-occurrence. "A picture is worth a thousand words" is not just a catchy phrase.

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.

Know your insurance coverage. Not only is replacement insurance needed, business interruption coverage may also be required. Business interruption insurance will help minimize the financial

impact of losses from reduction or elimination of earnings, continued expenses and extra expenses needed to stay open or to reopen. The loss of revenue caused by the amount of time the hospital is closed can be devastating. It can take years to recover.

As soon as possible after the disaster, the building(s) should be assessed for structural damages. This can be done by in-house engineering staff or through an outside contract with a professional engineer. It must be decided if the building is safe for continued occupancy. This will be a major determining factor whether total evacuation is necessary and what level of care the hospital can provide.

There are common post-occurrence problems that must be addressed during the recovery phase (Appendix C). They are not disaster specific and must be addressed during the planning phase so that if they do occur, back-up systems or support from those with whom reciprocal agreements have been signed can be initiated.

Drills

Disaster plans are no help to anyone unless they work. Other than during a disaster itself, the only way to actually test a plan is through organized drills. Do not focus totally on patient treatment. Depending on the disaster, there might not be much of a facility left to offer treatment. If the hospital is in a hurricane zone, utilize "table top exercises" to test preparation during certain time periods prior to landfall. Most planning is done in 24-hour increments (24-48 hours prior to land-fall, zero-24 hours prior, etc.). Then you can focus on receiving patients.

You do not have to be in a hurricane zone to have table top exercises. During the next disaster drill, involve the hospital engineer in solving problems that could be generated from a flood, earthquake, tornado or fire. Ask your local emergency preparedness agency to include your facility in its exercise. Take advantage of these exercises and involve all staff, not just the emergency room staff. If you are an accredited facility part through the Joint Commission, you must have no less than two exercises per year and most licensure organizations require a minimum of one.

SUMMARY

As part of the Disaster Coordination Center for the South Carolina Hospital Association, a review of the majority of South Carolina hospitals' disaster plans was done. Noting inadequacies, a tool (Appendix A) was developed which many hospitals have used to strengthen their disaster preparedness plans. The biggest obstacle in hospital disaster preparedness is finding time for staff to devote to developing a comprehensive, workable plan. Staffs have been reduced to the point where only those tasks necessary for patient care have priority. However, hospitals must realize how important it is to plan for a disaster, even though one may never occur.

Hospital disaster plans should prepare a hospital for any type of disaster that might happen. Extensive planning must occur utilizing the talents of many people throughout the organization. How your facility is prepared to "weather the storm" is as important as how it recovers from the storm. The efforts of the planning will result in how your hospital will be able to serve the community after a disaster. The cycle of planning, exercising and rewriting is never ending. The more you engage in the process, the better prepared you will be.

ENDNOTES

- 1 "Disaster Planning." Operating Room Risk Management. Safety. 3(2):1, July 1992.
- 2 Swanson, Mary Beth. "Gold Coast Home Health Services Disaster/Hurricane Planning." Caring. 12:10, Aug. 1993.

BIOGRAPHY

Paul V. Richter is the risk management coordinator for support services for the South Carolina Hospital Association. He also serves as a member of the South Carolina Earthquake Education Board, the South Carolina Special Needs Patients Disaster Preparedness Task Force, and the South Carolina Department of Health and Environmental Control's Disaster Preparedness Committee.

APPENDIX A**If the Winds Blow and the Earth Shakes: A Disaster Planning Checklist**

A good disaster plan will address any contingency that the hospital may face. Hospitals tend to use a generic approach when preparing their disaster plans. However, not all disasters are the same. Some will involve mass casualties while others will involve the facility and its operation. A disaster plan should be simple so that all staff can understand it, but thorough enough so that if a disaster should strike the hospital or its surrounding community, staff will be able to respond appropriately.

Here are some ideas to help evaluate a disaster plan and issues that should be addressed within the document. This checklist is not intended to be comprehensive; it is developed as a tool to assist in planning.

I. Square One

- A. Has a disaster planning committee been formed?
- B. Are there representatives from the medical staff (particularly from the emergency department and surgery), nursing, various support services and administration?
- C. Has this committee been charged with overseeing the development of the disaster manual?
- D. Does this committee review and critique disaster drills and evaluate whether changes need to be made to the disaster manual?
- E. Has the Board of Trustees been informed of its responsibilities in the event of a catastrophe to the hospital, and is it willing to delegate certain decision-making to the CEO for expenditure of funds for emergency needs/repairs?

II. Address the Threat

- A. Is the area in which your hospital is located susceptible to:
 1. Hurricanes?
 2. Earthquakes?
 3. Tornadoes?
 4. Nuclear accidents?
 5. Physical attacks?
 6. Flooding?
 7. Chemical spills?
 8. Fire?
- B. If the answer is YES to any of the above, have you addressed the following?

1. How each disaster will affect the facility.
2. How each disaster will affect the road network surrounding the hospital.
3. How each disaster will affect the staff's personal life (family and homes) and possibilities of housing certain staff within the hospital during the period following the disaster.
4. Types of injuries caused by each disaster.
5. Types of staff, supplies and medication needed for each type of disaster.
6. Additional support needed to react to each disaster.
7. Photographic documentation of building(s) and equipment (pre-disaster).

III. Organize Staff

- A. Is there a call-back roster and is it updated frequently? Does the roster include the individual's cellular telephone and beeper numbers, when applicable?
- B. Is there a roster for outside support activities needed during a disaster and is it updated frequently?
- C. Have personnel responsibilities been defined and a checklist developed for each key position?
- D. Are there rosters of personnel from within the hospital whose duties are changed when a disaster occurs, and are they aware of their responsibilities?
- E. Has a chain-of-command been developed for the hospital and its departments?
- F. Have communication links been developed within the hospital when normal communication services are disrupted?
- G. Has a command center been identified, as well as personnel who will occupy the center and equipment that will be needed?
- H. Has a security plan been developed?
- I. Has each department developed its own checklist of what needs to be done within its areas to prepare for or react to a disaster?

IV. Survey the Facility

- A. Location of the Hospital Command Center
 1. Is it a central location, easily accessible and familiar to staff?
 2. Is the location isolated from where patient care will be given?
 3. Are there adequate telephone lines into the location (at least one direct line out of the building)?
 4. Will press briefings be given from this location or will another place be designated?
 5. Is the location powered by the emergency generator?
 6. Is it large enough for command activities?
 7. What furniture will be needed during command center operations?
 8. Are tasks for those manning the command center formulated?
 9. Have you made photos of your buildings and structures on your campus?
 10. Have you evaluated your insurance coverage with your insurance agent?
 11. Has your facility been equipped to connect with an external, mobile emergency generator if necessary?
- B. Treatment of emergency patients
 1. Will there be too many patients for the space in the emergency department?
 2. Where will triage take place?
 3. Will patients have to be evacuated? Where to? How will they get there?
 4. Will decontamination from a chemical or radioactive material exposure be required? Where and with what equipment?

C. Damage assessment to the hospital

1. Is the structural integrity of the building compromised?
2. Is the emergency generator damaged?
3. Are there alternative sources of essential utilities?
4. Are elevators safe?
5. Is the water system functional?
6. Is water safe to drink?
7. Are ceilings safe to work under?
8. Is the HVAC system working?
9. Are communication systems working?
10. Is the sewage system working?
11. Are the fire suppression and alarm systems working?
12. Is there a water rationing plan in the event of water outage or other water problems?
13. Is there a camera with adequate amount of film available to record damages to the building and equipment for insurance purposes?

D. Identify patient rooms that may have to be used by physicians and staff if their presence is required around the clock.

V. Supplies

A. Are the following supplies identified or stored for use during a disaster?

1. Flashlights and batteries
2. Water for immediate use
3. Medical supplies
4. Medical equipment (batteries charged)
5. Beds
6. Wheel chairs
7. Linen
8. Litters
9. IV equipment
10. Bed pans and urinals
11. Pharmaceuticals
12. Cellular telephones or other communication linkages
13. Food
14. Other supplies and equipment identified by the disaster planning committee
15. Weather alert receiver
16. Extra supply of oxygen
17. Plywood to protect windows (minimum of ¾" thick)
18. Adequate fuel supply for the emergency generator
19. Sand bags and rolls of plastic if located in flood prone areas

B. Are there emergency "disaster kits" (flashlights, batteries, etc.) located on patient care floors, treatment areas or other designated areas that are immediately accessible if a disaster were to occur, and are they inspected at least annually? (Prior to hurricane season for coastal hospitals.)

C. Have mutual agreements been signed with another hospital(s) (in and outside of your location) to assist in furnishing supplies/equipment in the event there is a need?

D. Have agreements been made with vendors (in and outside of your location) to furnish supplies/equipment during a disaster?

E. Are status reports given daily on supplies and equipment during recovery period?

VI. Accounting

- A. Are the computers that contain vital records and financial information on the emergency generator and uninterrupted power sources?
- B. Are there computer back-up files kept by the medical records and accounting departments and stored in a safe place (where they will not receive water or wind damage)?
- C. Is there a system to gather insurance information from patients who present themselves or someone else to your hospital during the disaster?
- D. Is there a system to pay employees by cash in the event of a major disaster?
- E. Does the CEO have the board's approval for layoffs or over-hires during a disaster?
- F. Is there a system in place to pay or reimburse for patient transfers and/or "out of the ordinary" services that are generated by a disaster?

VII. Patient Care

- A. Is a procedure in place to discharge patients who can be discharged?
- B. Is a triage area determined if the emergency department is overflowing?
- C. Are medical department roles spelled out?
- D. Are standing orders developed?
- E. Are there plans to care for community special needs patients, e.g., dialysis patients, oxygen dependent patients, etc.?
- F. Are there agreements with other facilities to transfer patients that require a higher level of care?
- G. Have arrangements been made for transportation of those patients being transferred?
- H. Has a protocol been developed to determine which patients require staff accompaniment during transfer and what level of staff is to accompany the patient?
- I. Have transportation routes been determined for the transfer of patients?
- J. Are status reports given on patient census and bed availability?

VIII. External Coordination

- A. Has contact been made with the following entities to coordinate each other's role during a disaster?
 1. County emergency preparedness agency
 2. Local chapter of the American Red Cross (it operates disaster shelters and offers assistance to disaster-stricken persons)
 3. Long-term care facilities in the hospital's vicinity
 4. Other organizations which care for special needs patients which may end up in your facility
 5. Local National Guard (remember, its assets and services belong to the Governor during disasters)
 6. Other hospitals, should you have to evacuate
 7. Fire department
 8. Police department
 9. Emergency medical services (ambulances, private and public)
 10. Local utility companies
 11. External means of transporting patients (bus companies)
 12. Local funeral homes for temporary morgue facilities
- B. Coordinate with other hospitals or vendors in developing assistance agreements for supplies, equipment and/or personnel.
- C. Coordinate with local amateur radio operators to assist you in the event of communication disruption (this will require having radios within your facility and

antenna on your roof).

IX. Evacuation

- A. Who authorizes evacuation of the hospital?
- B. For partial evacuation, are areas identified within the hospital where patients will be evacuated? Consider utility requirements for ICU/CCU and OR patients.
- C. Has coordination been planned with receiving unit, and is there equipment to transport when partial evacuation is required?
- D. For full evacuation, has coordination been arranged with receiving facilities and has transportation been arranged to move the patients?
- E. Identify who will accompany relocated patients.
- F. Are evacuation routes identified?

X. Drills

- A. When you conduct disaster drills, are all types of disasters eventually addressed? (See paragraph II, section A)
- B. Are all aspects of a supposed disaster tested or only mass casualties?
- C. Do drills include testing external agreements that you have with hospitals/vendors?
- D. Are areas of the plan tested other than activating the recall roster?
- E. Do staff members understand their functions during a drill?
- F. Are drills evaluated using criteria determined by the disaster planning committee or the safety committee?
- G. Are drills critiqued to determine short falls and strengths?
- H. Is the entire disaster planning committee present for critiques?
 - I. Is the disaster manual corrected when short falls are determined?
 - J. Are new employees educated in what is expected of them during a disaster?
- K. Are all hospital activities involved in disaster drills: engineering, materials, biomedical engineering, accounting, etc.?

XI. Recovery

- A. Have you made a video or taken photos of the damage to the buildings on your campus?
- B. Have you contacted your insurance agent?
- C. Have you made a damage assessment?
- D. Are your buildings structurally sound?
- E. Will you have to totally evacuate or curtail certain services?
- F. Will outside staffing be required to allow your staff members time to take care of their personal disaster needs?
- G. Have broken windows and roof openings been covered?
- H. Are there equipment and/or supplies that need to be protected from the elements if there is damage?
 - I. Are there any environmental concerns?
 - J. Have you categorized all disaster-related costs with a separate cost code for accounting purposes?
- K. Have you established a crises counseling opportunity for staff affected by the disaster?

This checklist is not meant to be all encompassing. The intention is to stimulate idea sharing and coordination among the designated committee members to develop the disaster plan for the hospital.

(Developed by Paul V. Richter, 4/95. Revised 1/96, 4/96, 1/97, 6/97)

APPENDIX B**Materials Supply Unit Leader****Position Assigned To:**

You Report To: (Logistics Section Chief)

Logistics Command Center: Telephone:

Mission:

Organize and supply medical and non-medical care equipment and supplies.

Immediate:

Receive appointment from logistics section chief.

Read this entire job action sheet and review organizational chart on back.

Put on position identification vest.

Receive briefing from logistics section chief.

Meet with and brief materials management and central sterile supply personnel.

Establish and communicate the operational status of the materials supply pool to the logistics Section chief, EOC and procurement unit leader.

Dispatch the predesignated supply carts to the triage area, immediate treatment area, delayed treatment area and minor treatment area, once these areas have been established. Enlist the assistance of the transportation unit leader.

Release search and rescue team equipment packs to those teams designated by the damage assessment and control officer.

Collect and coordinate essential medical equipment and supplies (prepare to assist with equipment salvage and recovery efforts).

Develop medical equipment inventory to include but not limited to the following:

- Bandages, dressings, compresses and suture materials
- Sterile scrub brushes, normal saline, anti-microbial skin cleanser
- Waterless handcleaner and gloves
- Fracture immobilization, splinting and casting materials
- Backboard, rigid stretchers
- Non-rigid transporting devices (litters)
- Oxygen-ventilation-suction devices
- Advance life support equipment (chest tube, airway, major suture trays)

Extended:

Identify additional equipment and supply needs. Make requests/needs known through logistics section chief. Gain the assistance of the procurement unit leader when indicated.

Determine the anticipated pharmaceuticals needed with the assistance of the medical care director and pharmacy unit leader to obtain/request items.

Coordinate with the safety and security officer to protect resources.

Observe and assist staff who exhibit signs of stress or fatigue. Report concerns to psychological support unit leader.

Other concerns:

APPENDIX C COMMON POST-OCCURRENCE PROBLEMS

- Failure of water pressure which shuts down fire sprinkler systems, water flushing systems and inhibits operation of air handling units
- Failure of backflow protection systems
- Lack of potable water
- Failure of emergency generators, air conditioning and public utility systems
- Difficulties with special needs patients (ventilator, dialysis)
- Detrimental effect on operating systems due to volume of patients, evacuees, family members and residents
- Failure of telecommunications systems/staffing systems
- Flooding of mechanical rooms, patient floors, elevator shafts, etc.
- Lack of pumping capabilities to handle flooding
- Waste management problems
- Loss of equipment and damage to hospital roofs
- Loss of windows, doors and frames
- Obstruction from debris
- Inability to manually secure electronic doors and alarm systems
- Security

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THE INCIDENT COMMAND SYSTEM: A PROVEN TOOL FOR THE MANAGEMENT OF EMERGENCY OPERATIONS

By: Ernest G. Vendrell, CPP, CPO, CEM

INTRODUCTION

Each year emergencies and disasters take their toll on government and industry. The devastating effects of these critical events in terms of lives lost, injuries, property damage, and lost business can have serious consequences for organizations and communities.

However, government and industry can limit the effects of emergencies and disasters, and be in a better position to resume normal operations, by planning ahead. This can be accomplished by developing a comprehensive emergency response plan that provides the necessary structure for managing critical incidents. Besides helping to save lives and reduce property loss, a well thought out emergency response plan can serve to lessen an organization's potential liability.

INCIDENT COMMAND SYSTEM

Clearly, the need to effectively communicate and manage resources during a crisis situation is of vital importance to any organization. Someone must be in charge and priorities must be established. Direction and control is essential in order to avoid conflict and confusion and establish order out of chaos.

Fortunately, there exists a recognized system with a pre-determined chain of command, as well as a proven structure, for an organized response to a critical incident. Referred to as the Incident Command System (ICS), it uses common terminology that is descriptive and decisive, yet not difficult to understand, in order to control personnel, resources, and communication at the scene of a critical incident.

ICS was developed in the early 1970's after a series of major wildland fires in Southern California resulted in a number of recurring problems among emergency responders. Some of these included: nonstandard terminology, nonstandard and nonintegrated communications, unmanageable span of control, and lack of the capability to expand and contract as required by the situation.

Although originally a fire service control system, ICS has since been

adopted by a wide variety of local, state, and national emergency management and law enforcement organizations due to its many documented successes. Today, it serves as a model all-risk, all-agency emergency management system. ICS principles have been proven over time in government, business, and industry. In fact, ICS has been endorsed by the International Chiefs of Police (IACP) and the American Public Works Association (APWA).

There is also a legal requirement for using ICS since there are federal laws that mandate its use by individuals responding to hazardous material incidents. Specifically, OSHA rule 1910.120, which became effective March 6, 1990, requires that all organizations that handle hazardous materials use ICS. Non-OSHA states are also required by the Environmental Protection Agency to use ICS when responding to hazardous materials incidents.

In essence, ICS is a well organized team approach for managing critical incidents. It uses common terminology, has a modular organization (which means that it can expand/shrink according to the needs of the situation), has a manageable span of control (the number of subordinates one supervisor can manage effectively; usually 3-7, the optimum is 5), and uses clear reporting and documentation procedures. In effect, emergency response personnel can view ICS as an incident management toolbox. Not every tool in the toolbox will be used for every situation, but the tools are available should they become necessary. Additionally, it is important to note that ICS can be used for all types of incidents regardless of size. However, it is essential that all emergency responders understand the specific roles when using ICS.

The ICS structure is built around 5 major management activities or functional areas⁵:

COMMAND - Sets priorities and objectives and is responsible for overall command of the incident.

OPERATIONS - Has responsibility for all tactical operations necessary to carry out the plan.

PLANNING - Responsible for the collection, evaluation, and dissemination of information concerning incident development as well as the status of all available resources.

LOGISTICS - Responsible for providing the necessary support (facilities, services, and materials) to meet incident needs.

FINANCE - Responsible for monitoring and documenting all costs. Provides the necessary financial support related to the incident.

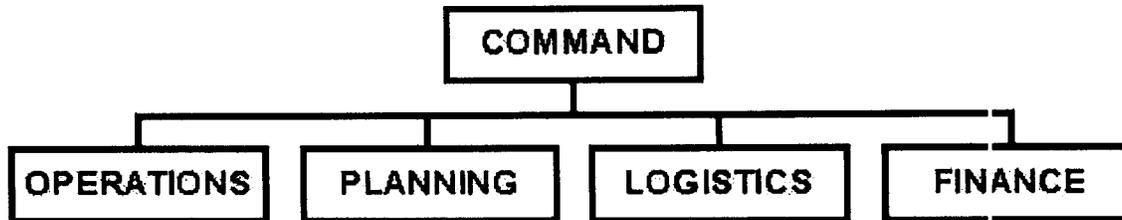


Figure 1. Basic Incident Command System organizational structure.

These five management activities or functional areas form the foundation of the ICS organizational structure. The activities can be managed by one individual in the event of a small incident. Or a fully staffed ICS structure addressing all five functional areas, may be needed to manage larger and more complex events. In both cases, it is important to note that the Incident Commander is the individual in charge at the scene of a critical incident until properly relieved. The Incident Commander is also responsible for assigning personnel to the other functional area (Operations, Planning, Logistics, and Finance) as needed.

CONCLUSION

ICS organizational structure and procedures enable emergency response personnel to work safely together to take control of a critical incident. It can also assist organizations to effectively and efficiently manage the aftermath of a critical incident.

To learn more about ICS, contact your local or state office of emergency management. These offices usually make training available to government and industry.

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Endnotes

1. L. Dezelan, *Incident Management System*. Law and Order, vol. 44, No. 8; and Woodworth, *The Incident Command System: A Tool for Business Recovery*, Disaster Resource Guide, 1998 Edition.
2. Federal Emergency Management Agency, *Incident Command System Instructional Guide* (Washington, D.C.: U.S. Government Printing Office, 1995).
3. Ibid.
4. Woodworth, *supra* note 1; M. Arata, Jr., *Finding Order Amidst the Chaos*. Security

Management, vol. 39, No. 9, pp. 48-53; Ibid.

- 5. Federal Emergency Management Agency, supra note 2.**

OSH Answers

▶ Health & Safety Programs

Emergency Planning

- ▶ [Why have an emergency plan?](#)
- ▶ [Why have some organizations not formulated emergency plans?](#)
- ▶ [What is the overall objective of the plan?](#)
- ▶ [What is a vulnerability assessment?](#)
- ▶ [What are technological and natural hazards?](#)
- ▶ [What is the series of events or decisions that should be considered?](#)
- ▶ [What are elements of the emergency plan?](#)

Why have an emergency plan?

A company may have many reasons for establishing and maintain occupational health and safety (OH&S) programs. A definite plan to deal with major emergencies is an important element of OH&S programs. The lack of an emergency plan could lead to severe losses such as multiple casualties and possible financial collapse of the organization.

Besides the major benefit of providing guidance during an emergency, developing the plan has other advantages. Unrecognized hazardous conditions that would aggravate an emergency situation may be uncovered, allowing them to be eliminated. The planning process may bring to light deficiencies, such as the lack of resources (equipment, trained personnel, supplies), items that can be rectified before an emergency occurs. In addition an emergency plan promotes safety awareness and shows the organization's commitment to the safety of workers.



Why have some organizations not formulated emergency plans?

It may happen because of many reasons. It could be simply because of lack of awareness about hazards and the severity of the risks. An attitude of "it can't happen here" may be present. People may not be willing to take the time and effort to examine the problem. However, emergency planning is an important part of company operation and there should be no excuses for the lack of planning.

Since emergencies will occur, preplanning is necessary to prevent possible disaster. An urgent need for rapid decisions, shortage of time, and lack of resources and trained personnel can lead to chaos during an emergency. Time and circumstances in an emergency mean that normal channels of authority and communication cannot be relied upon to function routinely. The stress of the situation can lead to poor judgement resulting in severe losses.



What is the overall objective of the plan?

An emergency plan specifies procedures for handling sudden unexpected situations. The objective is to reduce the possible consequences of the emergency by:

- preventing fatalities and injuries;
- reducing damage to buildings, stock, and equipment; and

- accelerating the resumption of normal operations.

Development of the plan begins with a vulnerability assessment. This results of the study will show:

- how likely a situation is to occur
- what means are available to stop or prevent the situation and
- what is necessary for a given situation.

From this analysis, appropriate emergency procedures can be established.

At the planning stage, it is important that several groups be asked to participate. Among these groups, the joint occupational health and safety committee can provide valuable input and a means of wider worker involvement. Appropriate municipal officials should also be consulted since control may be exercised by the local government in major emergencies and additional resources may be available. Communication, training and periodic drills will ensure adequate performance if the plan must be carried out.



What is a vulnerability assessment?

Although emergencies by definition are sudden events, their occurrence can be predicted with some degree of certainty. The first step is to find which hazards pose a threat to any specific enterprise.

When a list of hazards is made, records of past incidents and occupational experience are not the only sources of valuable information. Since major emergencies are rare events, knowledge of both technological (chemical or physical) and natural hazards can be broadened by consulting with fire departments, insurance companies, engineering consultants, and government departments.



What are technological and natural hazards?

Areas where flammables, explosives, or chemicals are used or stored should be considered as the most likely place for a technological hazard emergency to occur. Examples of these hazards are:

- fire
- explosion
- building collapse
- major structural failure
- spills of flammable liquids
- release of toxic substances
- exposure to ionizing radiation
- loss of electrical power
- loss of water supply
- loss of communications

The risk from natural hazards is not the same across Canada but the list would include:

- floods,
- earthquakes,
- tornados,
- other severe wind storms,
- snow or ice storms, and
- severe extremes in temperature (cold or hot).

The possibility of one event triggering others must be considered. An explosion may start a fire and cause

structural failure while an earthquake might initiate all the events noted in the list of chemical and physical hazards.



What is the series of events or decisions that should be considered?

Having identified the hazards, the possible major impacts of each should be itemized, such as:

- sequential events (for example, fire after explosion)
- evacuation
- casualties
- damage to plant infrastructure
- loss of vital records/documents
- damage to equipment
- disruption of work

Based on these events, the required actions are determined. For example:

- declare emergency
- sound the alert
- evacuate danger zone
- close main shutoffs
- call for external aid
- initiate rescue operations
- attend to casualties
- fight fire

The final consideration is a list and the location of resources needed:

- medical supplies
- auxiliary communication equipment
- power generators
- respirators
- chemical and radiation detection equipment
- mobile equipment
- emergency protective clothing
- fire fighting equipment
- ambulance
- rescue equipment
- trained personnel



What are elements of the emergency plan?

The emergency plan includes

- all possible emergencies, consequences, required actions, written procedures, and the resources available
- detailed lists of personnel including their home telephone numbers, their duties and responsibilities
- floor plans, and
- large scale maps showing evacuation routes and service conduits (such as gas and water lines).

Since a sizable document will likely result, the plan should provide staff members with written instructions about their particular emergency duties.

The following are examples of the parts of an emergency plan. These elements may not cover every situation in every workplace but serve they are provided as a general guideline when writing a workplace specific plan:

Objective

The objective is a brief summary of the purpose of the plan; that is, to reduce human injury and damage to property in an emergency. It also specifies those staff members who may put the plan into action. The objective identifies clearly who these staff members are since the normal chain of command cannot always be available on short notice. At least one of them must be on the site at all times when the premises are occupied. The extent of authority of these personnel must be clearly indicated.

Organization

One individual should be appointed and trained to act as Emergency Co-ordinator. However, personnel on the site during an emergency are key in ensuring that prompt and efficient action is taken to minimize loss. In some cases it may be possible to recall off-duty employees to help but the critical initial decisions usually must be made immediately.

Specific duties, responsibilities, authority, and resources must be clearly defined. Among the responsibilities that must be assigned are:

- reporting the emergency
- activating the emergency plan
- assuming overall command
- establishing communication
- alerting staff
- ordering evacuation
- alerting external agencies
- confirming evacuation complete
- alerting outside population of possible risk
- requesting external aid
- coordinating activities of various groups
- advising relatives of casualties
- providing medical aid
- ensuring emergency shut offs are closed
- sounding the all-clear
- advising media

This list of responsibilities should be completed using the previously developed summary of countermeasures for each emergency situation. In organizations operating on reduced staff during some shifts, some personnel must assume extra responsibilities during emergencies. Sufficient alternates for each responsible position must be named to ensure that someone with authority is available onsite at all times.

External organizations that may be available to assist (with varying response times) include:

- fire departments
- mobile rescue squads
- ambulance services
- police departments
- telephone company
- hospitals
- utility companies
- industrial neighbours
- government agencies

These organizations should be contacted in the planning stages to discuss each of their roles during an emergency. Mutual aid with other industrial facilities in the area should be explored.

Pre-planned coordination is necessary to avoid conflicting responsibilities. For example, the police, fire department, ambulance service, rescue squad, company fire brigade, and the first aid team may be on the scene simultaneously. A pre-determined chain of command in such a situation is required to avoid organizational difficulties. Under certain circumstances, an outside agency may assume command.

Possible problems in communication have been mentioned in several contexts. Efforts should be made to seek alternate means of communication during an emergency, especially between key personnel such as overall commander, on-scene commander, engineering, fire brigade, medical, rescue, and outside agencies. Depending on the size of the organization and physical layout of the premises, it may be advisable to plan for an emergency control centre with alternate communication facilities. All personnel with alerting or reporting responsibilities must be provided with a current list of telephone numbers and addresses of those people they may have to contact.

Procedures

Many factors determine what procedures are needed in an emergency, such as

- the degree of emergency,
- the size of organization,
- the capabilities of the organization in an emergency situation,
- the immediacy of outside aid,
- the physical layout of the premises, and
- the number of structures determine procedures that are needed.

Common elements to be considered in all emergencies include pre-emergency preparation and provisions for alerting and evacuating staff, handling casualties, and for containing of the emergency.

Natural hazards, such as floods or severe storms, often provide prior warning. The plan should take advantage of such warnings with, for example, instructions on sand bagging, removal of equipment to needed locations, providing alternate sources of power, light or water, extra equipment, and relocation of personnel with special skills. Phased states of alert allow such measures to be initiated in an orderly manner.

The evacuation order is of greatest importance in alerting staff. To avoid confusion, only one type of signal should be used for the evacuation order. Commonly used for this purpose are sirens, fire bells, whistles, flashing lights, paging system announcements, or word-of-mouth in noisy environments. The all-clear signal is less important since time is not such an urgent concern.

The following are "musts":

- identify evacuation routes, alternate means of escape, make these known to all staff; keep the routes unobstructed.
- specify safe locations for staff to gather for head counts to ensure that everyone has left the danger zone. Assign individuals to assist handicapped employees in emergencies.
- carry out treatment of the injured and search for the missing simultaneously with efforts to contain the emergency.
- provide alternate sources of medical aid when normal facilities may be in the danger zone.
- containing the extent of the property loss should begin only when the safety of all staff and neighbours at risk has been clearly established.

Testing and Revision

Completing a comprehensive plan for handling emergencies is a major step toward preventing disasters. However, it is difficult to predict all of the problems that may happen unless the plan is tested. Exercises and drills may be conducted to practice all or critical portions (such as evacuation) of the plan. A thorough and immediate review after each exercise, drill, or after an actual emergency will point out areas that require improvement. Knowledge of individual responsibilities can be evaluated through paper tests or interviews.

The plan should be revised when shortcomings have become known, and should be reviewed at least annually. Changes in plant infrastructure, processes, materials used, and key personnel are occasions for updating the plan.

It should be stressed that provision must be made for the training of both individuals and teams, if they are expected to perform adequately in an emergency. An annual full-scale exercise will help in maintaining a high level of proficiency.



Document last updated on March 5, 1998

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250 Main Street East, Hamilton, Ontario, Canada L8N 1H6