

Hospital Disaster Plans and the Incident Command System: an Essay

some general thoughts on hospital disaster plans, and a brief overview of the Incident Command System

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I. In order that a disaster plan be both effective and practical it must meet five important criteria. The first is

A. Completeness. The disaster plan must anticipate and provide for all aspects of disaster operations. Means must be provided to meet the needs of hospital personnel while simultaneously providing procedures to meet with a multitude of emergency medical contingencies. Although the general problem of hospital operations is one of considerable complexity, the disaster plan, if it is to be practical, must have

B. Simplicity. The disaster plan will be executed by fallible people, often under considerable stress. If the disaster plan is as simple as possible, hospital personnel are less likely to make mistakes which would jeopardize patient care. Furthermore, a complex plan burdens hospital personnel with its own procedures rather than fulfilling its proper function of freeing their creative powers to attack the disaster's more substantial problems.

The disaster plan attempts to simplify the conduct of a disaster by identifying and standardizing only the most important and general procedures. For each routine procedure a form is provided (or a standard hospital form is identified) which outlines the standard procedure so hospital personnel don't forget anything, provides work space so hospital personnel get complete and correct information and can organize their thoughts, and, finally, provides a written record for the accurate information of other personnel and for documentation of the mission afterwards. Completing the paperwork assures that the mechanics of the disaster plan are executed smoothly and efficiently but with a minimum of effort.

Still, many different situations may arise during a disaster and rigid standardization will impede progress rather than improve it. Hence the importance of

C. Adaptability. Although the disaster plan is intended to provide standard procedures which may be followed with little thought, it cannot ignore the intelligence of hospital personnel who are using it. It is up to leaders to adapt the disaster plan to the situation at hand and apply only those procedures which are necessary or useful. It is through adaptability that a simple plan can be complete.

There are three main features of a good disaster plan which aid its adaptability. The first is the organization of a disaster into distinct phases:

- 1. Alert and Mobilization Phase** (plans for alerting via paging and phone calls; alerting other organizations, e.g., Central Blood Bank; moving disaster supplies to appropriate areas)
- 2. In-Hospital Response Phase** (small multi-casualty incident, using main Emergency Department only for patient care)

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3. **Out-of-Hospital Support Phase** (large multi-casualty incident using Pediatric ED/Urgent Care Center, and possibly main lobby, as overflow areas)
4. **Damage to Hospital Phase** (evacuation and damage control plans)
5. **Catastrophic Disaster in City Phase (e.g.,** if there are hundreds of victims presenting to Mercy Hospital; use of nearby facilities such as the Palumbo Center for advanced aid stations)
6. **Demobilization Phase**

Each Phase need only be initiated if it is appropriate, and the organization employed in each Phase is based on need rather than procedure.

Another adaptable feature of a good disaster plan is the functional organization of both Incident Command System (ICS) and non-ICS structures: the disaster plan describes many jobs which may need to be performed during a mission, but how people are assigned to jobs, or the jobs to people, depends on the circumstances and is up to the leaders. **The titles used in the disaster plan are carried by functions, not individual people.** The main reason for specifying these functions with titles is to provide a quick and simple means to divide and assign the work of the Incident Staff and hospital personnel.

In many ways, the most important adaptable feature of a disaster plan is its use of the national **Incident Command System (ICS)**. The ICS is part of the National Interagency Incident Management System (NIIMS), a system for improving coordination on federal interagency operations. Although initially designed for federal agencies involved with wildfire suppression, the ICS is now being used by federal and non-federal organizations for a wide variety of incidents including disasters. The ICS provides a management structure which may be expanded as needed for adequate control of a growing operation. A disaster plan's extensive use of ICS structure and nomenclature ensures that the Incident Staff may expand the management structure, using ICS procedures and forms, with little difficulty. This is true whether the hospital retains overall command of the disaster, or if it takes part in a unified command structure with other hospitals and agencies. Thus, the disaster plan's use of the ICS also helps to ensure:

- D. **Compatibility.** Hospitals are used to operating for the most part independently, even with multi-casualty incidents. If the incident becomes big enough, though, ease of coordination with other hospitals and agencies determines how good the disaster plan is. A good disaster plan adopts most of the conventions of the ICS, with some extensions suited for the hospital's primary activities: patient care. Examples would include use of regular Emergency Department and inpatient charting forms, and a special roster to keep track of where patients go from the Emergency Department or other triage areas. None of these extensions is in any way incompatible with the standard ICS. Agencies employing the ICS will find most of the hospital's nomenclature and position descriptions familiar, which promotes understanding and cooperation. It is therefore relatively simple to form a unified command structure, merging the command structure of the hospital with other agencies using the ICS.

Finally, an effective and practical disaster plan must provide

- E. **Clear Delineation of Authority.** A disaster operation can only be useful if it is a coordinated, unified effort. An operation involving many people of different backgrounds, capabilities, and training can only be expected to succeed if the standards of the disaster

plan are enforced by a unified leadership with a well-defined hierarchy. Although some sort of paramilitary chain of command may be the ideal, hospital leaders must understand that neither hospital personnel nor physicians will submit to such a system, and it is surely not necessary. Nevertheless, the leaders must be able to expect that their instructions will be followed fully and that all hospital personnel and physicians will respect the command hierarchy.

The disaster plan provides five distinct levels of authority: Hospital Personnel level, Unit Leader level, Incident Staff level, Incident Commander, and Hospital Administration. It is most important that all hospital members understand that the ultimate authority during a mission is the Hospital Administration. The Hospital Administration is represented by the President of the hospital or the designated or highest ranking administrative official.

II. Alert and Mobilization Phase

A. Several critical events must occur in this phase:

1. The Hospital Administration must **appoint** an Incident Commander.
 - a. The Incident Commander must not be expected to carry out any patient care, logistical, security, or other activities, but must be free to command and coordinate the overall disaster response.
 - b. The Hospital Administration must choose the most competent person to be Incident Commander. (Competence in the context of coordinating a hospital during a disaster.) An Emergency Department physician with Emergency Medical Services and disaster experience would be ideal, but the Incident Commander need not be a physician, nurse, or administrator. For example, if a security chief from another hospital just happens to be visiting, and has run many hospital disasters before, the Hospital Administration should appoint him as Incident Commander.) The Incident Commander inherits authority directly from the Hospital Administration.
 - c. The hospital Incident Commander's job is to direct all aspects of the hospital's participation in the disaster operation. The effectiveness of the hospital is his responsibility.
2. Incident Staff
 - a. The purpose of the Incident Staff (comprised of Command and General Staff) is to provide the hospital IC with enough manpower to meet all his or her responsibilities in conducting the disaster relief operation. This frees him or her to carry out the IC's primary functions of overall supervision, development and implementation of strategic decisions, approving the requesting and releasing of resources, and liaison with the Hospital Administration and any other participating agencies.

For a small disaster operation, the hospital IC may discharge some or all of the Incident Staff duties himself or herself, but a large disaster operation might employ an Incident Staff of twelve or more. The Incident Command System (ICS) lists many potential Incident Staff positions, some of which are designed for fire suppression activities and

clearly unnecessary for hospital disaster operations (e.g. Air Tanker Coordinator).

- b. A Staff consisting of the seven positions most appropriate for a medium-sized disaster operation is shown (Please see Figure "6", attached - stolen from another document). By grouping all hospital-related ICS functions into these seven positions, a concise description of the necessary management functions is achieved. The Incident Staff may be easily expanded by appointing members to these positions.
- c. An important concept embodied in the Incident Command System is that of **span of control**. The ideal maximum span of control is **five**; this means that each member in the command structure should supervise no more than five others. (The functional imperative of this principle, for any management problem, is: when things get too complex, delegate.) Thus, if the operation grows larger than can be managed by the seven positions described here, the management structure must be expanded using some of the methods described in the pocket-sized ICS Field Operations Guide and other ICS materials, such as the establishment of up to five Branches, each consisting of up to five Divisions or Groups.

III. In-Hospital Response Phase

- A. During this phase, extra resources are brought to areas such as the ICU's, OR, and Emergency Department, and some elective operations may be postponed, but otherwise hospital operations proceed much as normal.
- B. Even if the situation will present us with many patients, we will generally start in the Small Multi-Casualty Incident Phase, because it is only a slight extension of normal operations, and can be started without difficulty.
- C. An important part of this Phase is for the Incident Commander to appoint people to necessary staff positions. In a sense, the Incident Staff for a disaster operation is a special "overhead team" that is grafted onto the normal hospital command structure. Therefore, members appointed to the Incident Staff should not have any duties aside from those related to the disaster operation. (See section IX, below, for a concise summary of position duties.)

IV. Out-of-Hospital Support Phase

- A. During this Phase, the number of patients disrupts normal functioning; the Emergency Department is no longer able to handle the patient load, even with extra resources. Other emergency patient care areas must be opened. The Urgent Care Center/Pediatric Emergency Department may be able to postpone care of low-triage problems (sore throats, children with otitis) and take more serious patients. This requires assigning extra nurses, physicians, and support personnel to the area, and establishing command and communications links to the area for adequate coordination.
- B. If the Emergency Department and Urgent Care Center/Peds Emergency Department cannot handle the patient load, an additional triage and treatment area must be set up and staffed (the main lobby?)

V. Damage to Hospital Phase

VI. Catastrophic Disaster in City Phase

- A. If Mercy Hospital is tasked with caring for hundreds of patients, we must be able to extend the hospital's resources out to nearby areas that can handle large numbers of patients. For example, we could send supplies and personnel to the Palumbo Center or the Civic Arena.
- B. During such an extended operation, we would have to, to some degree, merge our Incident Staff with that of the city, in order to form a Unified Command and to allow proper coordination.

VII. Demobilization Phase

VIII. The National Interagency Incident Management System (NIIMS) and Incident Command System (ICS)

- A. The National Interagency Incident Management System (NIIMS) was developed initially as a way to improve the management of large wildfires, ones that required the efforts of many different agencies and jurisdictions (e.g., the Forest Service, the Park Service, and local fire departments). This was later extended into a system for managing any sort of incident that cut across traditional agency lines, including natural disasters and lost person searches. The most important portion of NIIMS for the hospital is the Incident Command System (ICS). The Incident Command System is detailed in documents available through the University of Oklahoma, but a brief outline of portions pertinent to hospital personnel is presented here.
- B. The ICS is designed to be simple, flexible, adaptable, and expandable. Key concepts include:
 - 1. A standardized functional structure with uniform terminology, procedures, and organization, which thereby promotes cooperation between organizations, and which is easily applied to incidents large or small.
 - 2. Provision for a unified command structure and consolidated action disaster plans when multiple organizations are working together.
 - 3. A modular organization which may be expanded as the incident expands, using the concept of manageable span of control to keep command structures from breaking down.
 - 4. Integrated communications using plain English with no radio codes.
- C. The ICS structure has six levels of organization, with a distinct term for each level and for the managers at each level. Since this is a functional organization, positions are created and filled only when and as needed. Thus, for a small disaster with only five patients, the Incident Commander by himself or herself might fulfill all the duties of the entire Incident Staff. See Table 1 and Figure 1 (below) for the basic ICS Incident Staff structure.
- D. When a disaster operation expands beyond the management scheme outlined in the disaster plan, it becomes necessary to use the procedures of the ICS to expand the management structure to meet the needs of the operation. It is assumed that all hospital Incident Staff personnel are familiar with the ICS beyond the material presented in the disaster plan, and will be able to expand the operation smoothly.

IX. Incident Staff Duties:

Hospital Example	Level	ICS Term
Hospital IC	Incident Command	Incident Commander
Hospital Information Officer	Command Staff	Officer
Disaster Operations Chief	Section	Section Chief
Palumbo Center Overflow Director	Branch	Branch Director
Main ED and Peds ED Branch Directors	Group	Group Supervisor
Resources Unit Leader (RESTAT)	Unit	Unit Leader

**Table 1: ICS Organization
Levels, Managers, and hospital disaster plan examples.**

Incident Commander: responsible for everything.

- A. **Plans Section Chief:** makes plans for demobilization, ramping up to another Phase, or relief of present workers as needed.
 - 1. **Resources Unit (RESTAT):** monitors resource availability, and keeps resources ready to be activated as needed (i.e., ensures that nurses and doctors and technicians are contacted and asked if they are available if needed.)
 - 2. **Situation Unit (SITSTAT):** monitors current situation: number of patients coming, number of beds available here and at other facilities.
- B. **Operations Section Chief:** monitors actual progression of patient care, and directs and redirects nursing and medical resources as needed.
- C. **Logistics Section Chief:** responsible for real-time movement, acquisition, and distribution of supplies, and for all physical facilities including communications.
 - 1. **Communications Unit:** Responsible for logging and transmitting all incident traffic.
- D. Finance Section Chief most financial duties (keeping track of overtime, etc.) can be handled by existing hospital departments, using existing procedures. There will probably seldom be a need to appoint a Finance Section Chief for our hospital.

X. Conclusion

I hope this quickly-hacked-together exposition helps the Disaster Committee with some new viewpoints on hospital disaster planning. If you read some of the ICS manuals, do not be put off by the obvious fire service orientation. The ICS has been used for incidents as varied as a planned visit of the Queen of England to demonstrations across from the White House to major disasters.

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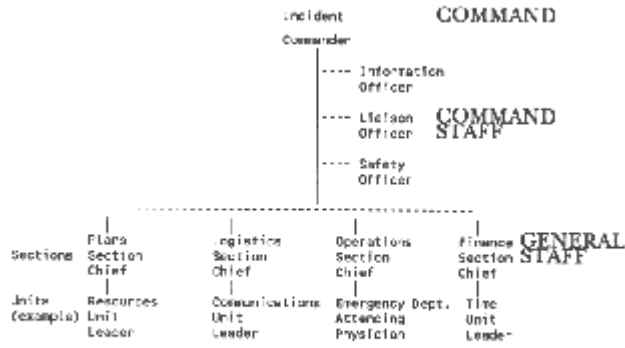


Figure 0: Standard ICS Command Structure