Emergency Management Principles and Practices for Health Care Systems, 2nd edition

Unit 2:
Incident Command System (ICS), Multiagency Coordination Systems (MACS) and the Application of Strategic NIMS Principles

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Unit 2.

Incident Command System (ICS), Multiagency Coordination Systems (MACS) and the Application of Strategic NIMS Principles

Unit Summary

This unit presents Incident Command System (ICS) principles and their application to the healthcare system setting. It also presents the relevant concepts of a Multiagency System (MACS) and extends beyond the tactical scene of the healthcare organization to strategic levels, including all echelons that manage incident–related health and medical issues. An understanding of basic ICS and the National Incident Management System (NIMS) is a prerequisite for this chapter- ICS 100, 200, and 700. Using the model presented in Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources During Large-Scale Emergencies, the unit presents a tiered description of management during large-scale or complex health and medical response, and demonstrates how incident management processes achieve integration within and across the levels of government and the private sector organizations. This approach is now incorporated into the national Hospital Preparedness Program funded by Department of Health and Human Service, Assistant Secretary for Preparedness and Response.

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Module 2.1

Introduction to the Incident Command & Multi-Agency Coordination Systems

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Lesson 2.1.1 Overview: Incident Command and Multi-Agency Coordination

Lesson Objectives

- *Describe the rationale for using the Incident Command System (ICS) for events that could exceed the effectiveness of everyday management methodology.*
- *List the central tenets of ICS.*
- *Explain an ICS system description and concept of operations.*
- *Define Multiagency Coordination (MAC) Systems.*

Introduction

This Unit addresses the central tenets of how healthcare systems should be managed during emergency response to, and early recovery from, emergencies and disasters. The proposed management methodology is based upon the Incident Command System, which is the accepted management paradigm within professional emergency management in the United States. This unit focuses upon the structure and operations of the Incident Command System (ICS) and Multiagency Coordination (MAC) Systems. Unit 3 addresses specific applications of ICS to healthcare systems within the context of the Emergency Operations Plan (EOP).

Traditionally, health and medical training for emergency and disaster response has focused upon clinical issues and healthcare skills. That approach emphasizes operational (tactical) knowledge and skills required by individuals to respond to clinical challenges. For example, recognizing and confirming the diagnosis of unusual disease, performing standard triage, practicing patient decontamination, and providing trauma care under surge conditions are commonly addressed. While these subjects form the traditional basis of "disaster medicine," Healthcare Emergency Management includes this clinical arena but expands far beyond this narrower focus of disaster medicine. Healthcare Emergency Management encompasses the full range of management necessary for healthcare systems to effectively prepare for, respond to and recover from emergencies. While supporting traditional disaster medicine actions, it also manages the protective actions for personnel and mission critical systems, assures effective incident management process, establishes close coordination among local hospitals, acquires and manages mission critical resources, integrates the organization with community response and performs other non-clinical and management functions represented in the expanded scope of Healthcare Emergency Management.

To accomplish this, it is vitally important to develop an operational level of proficiency with **the management system within which the more tactical knowledge and skills are applied under emergency or disaster conditions.** This management system will likely deviate significantly from that used to manage everyday healthcare system practice (see Textbox 2.1.1.1.) In fact, **the recognized need for elements within a larger organization to transition from day-to-day management to a response management methodology is the common "trigger" for activating the organization's emergency operations plan.** The accepted response methodology in this Healthcare Emergency Management is drawn from the tenets of the Incident Command System and the Multiagency Coordination System.

Textbox 2.1.1.1

Why is a different management methodology required during emergency response?

Regular healthcare system management procedures and structures are based upon the environment of day to day operations. Lines of communication involve memos, newsletters, and scheduled meetings, which are inadequate for emergencies. Everyday decision making at the organizational level typically is conducted with deliberate, time-consuming methods such as scheduled committee meetings, executive deliberations, and board meetings, with relatively independent decision authorities (e.g., medical committees, safety committees, administration committees). This organizational structure and associated processes are best suited for managing regular operations.

Other disciplines have long recognized that these processes and procedures are inadequate during the urgent, uncertain dynamic and often high-stakes environment of emergency response. Re-organization of assets to best suit the management decision-making and requisite emergency response actions is necessary. These processes must support rapid and effective decision making even in the face of incomplete information, and allow revision of decisions as more information is obtained. Finally, communications methods must be restructured to convey essential elements of information in as real a time frame as possible to pre-identified parties (internal and external to the organization).

The Incident Command System provides the template for this emergency response management methodology.

Common terminology for the <u>management</u> of Healthcare System response has, until recently, been poorly defined.

- Management objectives in emergency response: During emergency or disaster response, the primary objective of a management system should be to organize and coordinate disparate response resources to effectively address the incident issues. At the same time, the actions should minimize risks (physical, psychological, financial, and others) to responders and victims, and protect the safety and the functional integrity of the organization. This was a primary motivation for the development of the original Incident Command System (ICS) for wildland firefighting in the 1970s.

- Incident Command System as the management method: Incident Command System (ICS) refers to the "combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in incident management activities."[1] A hierarchical organizational structure establishes individual responsibility, lines of authority, and effective span of control of resources. In addition, it establishes procedures that facilitate information flow in a concise and clear fashion under the often chaotic conditions of an emergency. These have all been traditional challenges for healthcare systems during emergency and disaster response.

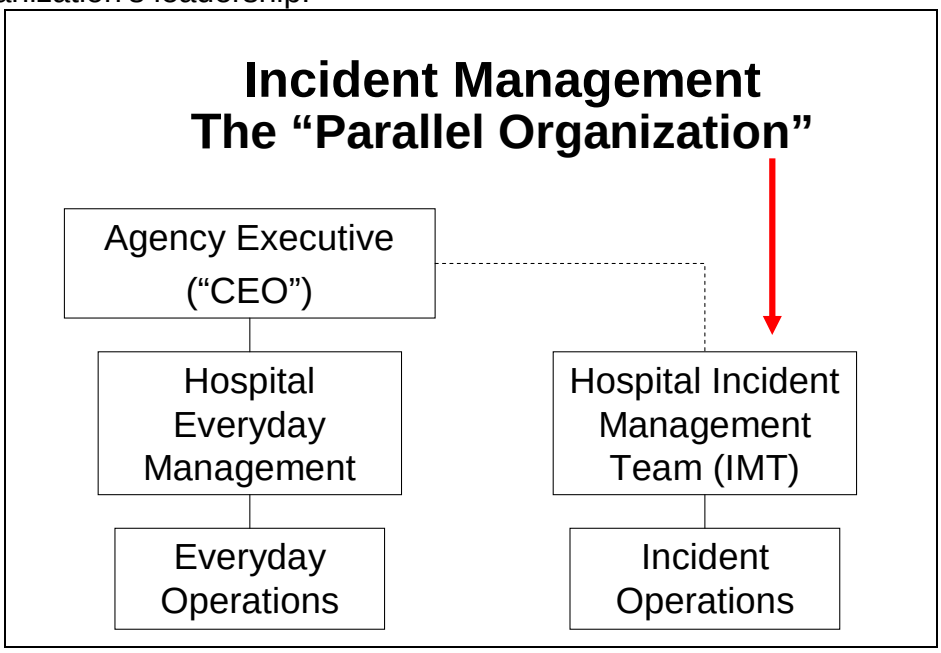
ICS addresses traditional challenges for Healthcare Systems, such as effective management of incident information.

- Incident Command System's position within the organization's larger everyday management structure: During any incident, small or large, in which an organization activates its emergency operations plan and emergency response, the organization continues with its usual functions. The incident management team (IMT) conducting incident command should be considered a temporary "parallel organization" that focuses upon the emergency situation and appropriate actions. Administratively, the IMT reports to and takes policy direction from the organization's leadership. In ICS, this senior leadership position has been designated as the "Agency Executive." The relationship between the Agency Executive and the IMT should be established in the EOP, with functional processes for keeping the Agency Executive informed and appropriately involved. A diagrammatic example of this relationship for hospitals is presented in Exhibit 2.1.1.1.

  The agency executive may rely upon a select group of senior managers for strategic advice during an incident. This "senior policy group" or "emergency policy group" should also be described in the EOP. These important issues are discussed in greater detail in Lesson 2.1.2.

[1] United States Department of Homeland Security. National Incident Management System (2008), *Appendix B: The Incident Command System*, p. 89; accessed October 1, 2009 at: http://www.fema.gov/emergency/nims/

Exhibit 2.1.1.1 The relationship between Incident Management and the organization's leadership.



ICS is traditionally described as having eight basic features that demonstrate its advantages. One of the most critical is the use of common terminology. For healthcare systems, which often have disparate organizational structures and processes during day-to-day operations, this can be of tremendous importance.

ICS Principles

ICS incorporates eight principles that contribute to the successful application of this management system. These ICS principles and their advantages to responding organizations are briefly presented below:

- Common terminology: The use of similar terms and definitions for position descriptions, resource descriptions, organizational functions, and incident facilities across disciplines. When an organization has integrated ICS into its EOP, personnel within the organization, by default, utilize commonly understood and accepted terminology to refer to entities, such as resources, processes, positions, and organizational structures. This presents an obvious advantage by reducing confusion, especially when multiple organizations are involved that don't commonly work together.

- Integrated communications: The ability to send and receive information within an organization, as well as externally to other disciplines. ICS places emphasis on the collection, processing, and appropriate dissemination (to participating parties) of information. It is recognized that many different types of information exist, with varying levels of importance and different dissemination requirements. ICS promotes the development of a common Communication Plan for use across the response and, in addition, promotes interoperability

between communication systems.

- Modular organization: Response resources are organized according to their responsibilities *during* the incident. A critical concept in ICS is that the response organization is composed of functional modules that are scalable. They can expand or contract flexibly based upon the incident size, type, and response needs. Functions, activities, or tasks within the organizational structure that have not been specifically assigned personnel are the responsibility of the immediately "higher" position on the organization chart. This means that for some incidents with limited scope, the response organization may only consist of a few personnel (covering all 5 functions as needed) and still perform the functions of ICS. If the incident were to expand, personnel are added to the response organization in a modular fashion. Large incidents may involve hundreds of persons organized according to the five functions referenced above. It is important to understand that the response organization can expand or contract based upon the incident needs, demobilizing valued everyday resources as soon as possible so they can return to their critical everyday tasks.

In ICS, only those positions in the response organization that are needed are activated. This important point is often not recognized by healthcare systems. For example, a very limited incident could require activation of only a few positions within the ICS organizational structure to address the hazard impact. This can be expanded or contracted in a modular fashion as needed.

- Unity of command: This is the concept that each response position has only one position within ICS where they report and take direction. Multiple disciplines and response organizations may work through their designated managers within ICS to establish common objectives and strategies that prevent conflict and duplication of effort, but the ICS structure portrays how each position reports directly to only one higher position. One individual is assigned with oversight for all aspects of the organization's response. For hospitals, this is the Incident Commander for the healthcare system. Unity of command should be distinguished from "unified command." In incidents where multiple organizations have major responsibilities for managing the response, a single "unified" command structure is promoted. This structure allows the various organizations to develop and agree upon common response objectives, under the guidance of an incident commander from the "lead agency."

- Manageable span of control: The response organization is structured so that each supervisory level oversees an appropriate number of assets such that effective supervision is maintained. Traditional ICS defines this as supervising no more than 3-7 subordinates. This quantitative measure, however, may be less important than a realistic assessment of the management tasks for that position, and assuring that they are attainable **under incident circumstances** (see discussion in Lesson 1.1.3). The number is influenced by the incident type, the positioning of resources, similarity of functional assignments, complexity of supervised tasks, and other factors. For certain simple

and straightforward activities, this number could potentially expand.

- Consolidated action plans: A single, formal documentation of incident objectives, strategies, and major assignments is approved by the incident commander to guide the organization's response. Because management of the incident is through established objectives, ICS encourages the dissemination of these objectives along with other critical information, such as the assignment of resources, tactics being used, safety information, and other critical response data. This comprises an Incident Action Plan. It can be either orally disseminated or, for any complex incident, via a written document (preferred). Incident Action Plans from different responding organizations should be consolidated and guidance for how this is accomplished is provided by ICS.

- Comprehensive resource management: It is important to describe, maintain, identify, request, receive and track all resources within the system during an incident. ICS provides the processes for categorizing, ordering, dispatching, receiving and assigning, tracking, and demobilizing resources. The term "resources" in ICS is expansive and encompasses personnel, equipment, supplies, and facilities.

- Pre-designated incident facilities: ICS assumes that certain critical activities during response will need specific functional areas for the tasks to be performed. These areas include places such as the "Incident Command Post," staging areas, and others. These incident resources must have adequate space and technical support for the assigned function.

The above concepts translate into specific and tangible ICS benefits during emergency response that include:

- Common objectives and priorities

- Organization and coordination across the incident response

- Enhanced collective security

- Increased information sharing

- Optimal responder and public understanding of incident actions, their individual and collective responsibilities, and other critical information.

- Optimal functional configuration: The hierarchy of personnel positions within ICS is dictated by the needs of the incident, and everyday

supervisory personnel may be assigned positions below someone they outrank in everyday operations. The common terminology and functional structure of ICS positions allows this to occur so that the best aligned resources can be used to address incident needs.

ICS is intended to serve as the framework for an organization's response plan – not to replace the organization's response plan.

These benefits are realized because the ICS structure and functions are specifically designed to address not just the **hazard-generated demands** created by the hazard agent and its impact, but also to address the **response-generated demands** created by a large or disparate collection of personnel and/or organizations responding to the incident. These concepts are discussed in detail in Lesson 1.1.3.

Traditionally, medical response to an unusual incident such as mass casualties is "driven" by **hazard-generated demands**. Excessive casualties requiring a deviation from the usual emergency department triage to "disaster triage" is an example of a hazard generated demand on and reactive action by a healthcare system. Another example of a hazard generated demand for a healthcare system is the need to activate a decontamination facility and clean patients prior to entering the healthcare facility. As these actions unfold, medical care personnel continue to primarily react to presenting circumstances and the management system usually follows as the situation evolves. As long as everyday management methods are primarily used, the response and follow-on actions remain "reactive" throughout the event.

Response-generated demands, on the other hand, are created when the size and complexity of the response exceed the usual management capacity of the involved organizations. The issues generated by emergency actions, which need to be effectively addressed, are predictable and very similar across all incidents. A key example is managing information flow that is less certain, more urgent and follows different pathways than everyday information. Management of unusual resources such as surge personnel to the emergency department, deployment of unusual personal protective equipment, and activating a perimeter management system all require management that varies from everyday administrative actions. Without effectively meeting these demands, the responders are unlikely to adequately address the hazard-generated demands in a timely and efficient manner.

It is notable that the biggest "failures" commonly described in after-action reports are those directly related to suboptimal management of response-generated demands: communications, coordination and support. While the specific details vary from incident-to-incident, response-generated demands may be addressed with standardized

processes. The mechanisms for accomplishing this have been delineated within ICS, and therefore the structure and processes may be implemented before the need is fully apparent. This allows prompt, "proactive" management of these critical issues.

ICS – "Command" versus "Management": One of the significant issues that non-fire service disciplines have with "incident command" is whether ICS mandates a "command" relationship between successive levels of the incident command system. This approach is especially problematic for disciplines such as medicine and public health, where direct chain of command authority does not exist in any everyday practice, and where the culture of the disciplines is more conducive to "management" rather than "command." Upon careful analysis, the following considerations provide insight into this issue:

- "Command" application: At the scene-level of a fast-moving, dangerous, and/or life-threatening incident, "command" is commonly the most appropriate terminology, with precise orders coordinating the assets under direct supervision of incident commanders. Analogy to this in everyday medical experience is found in trauma resuscitations or in "running a code." As with these examples, "command" is applied within a tactical scene where relatively direct oversight is provided by the command element being personally present and directly involved.

- "Management" application: As the "scene" expands, or as the response levels evolve beyond a physically defined "scene," management rather than command is the much more commonly applied and accepted approach. In ICS, this is effectively accomplished through the following steps:

    - Assets are assigned to a position within the ICS according to the tasks they are to accomplish. They report to the supervisory position (within the ICS organization) immediately above them.

    - The assigned resources are given objectives to achieve and parameters within which to operate (overall strategy and priorities, geographic area of operation, and recommended tactics).

    - Within these parameters, the assigned assets manage their individual assignments and develop their specific tactics to achieve their objectives.

    - Specific reporting requirements are used to maintain adequate situational awareness for the supervisory and incident command elements if the Incident Management Teams.

- Management doctrine and ICS: Analytical review of ICS publications and guidance reflect the above described management concepts within the doctrine of ICS. Examples include:

  - ICS is referred to as "Incident Management" by the U.S. Coast Guard.[2]

  - The Standardized Emergency Management System (SEMS) that regulates major incident response in California (and is described later in this unit) refers to "management" beyond the incident scene.[3]

  - NIMS guidance also speaks specifically to this issue:

    Chapter IV - A. Incident Command System.
    "The ICS is a widely applicable management system designed to enable effective, efficient incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. ICS is a fundamental form of management established in a standard format, with the purpose of enabling incident managers to identify the key concerns associated with the incident…."[4] In recognition of this, the remainder of this chapter uses "command" in reference to authority rather than to a specific management style.

ICS – "System Description" and "Concept of Operations": As a management methodology, ICS provides two central forms of guidance to organizations.

- System Description: A presentation of an overall system architecture and it components, including how they are organized, how they relate to each other via management principles, and what they do. In a comprehensive EOP, the system description often precedes and 'sets-up' the Concept of Operations. ICS structure and elements are fully

[2] U.S. Coast Guard. *U.S. Coast Guard Incident Management Handbook(August 2006)*, COMDTPUB P3120.17A, accessed January 31, 2010 at: http://www.uscg.mil/hq/nsfweb/docs/FinalIMH18AUG2006.pdf

[3] California Emergency Management Agency. *Standardized Emergency Management System (SEMS) Guidelines*; accessed January 31, 2010 at http://www.calema.ca.gov/WebPage/oeswebsite.nsf/ClientOESFileLibrary/Plans%20and%20Publications/$file/2006-SEMSGdlins-Part1A.pdf

[4] United States Department of Homeland Security. National Incident Management System. (2008), *Component IV: Command and Management*. Page 45; accessed October 1, 2009 at: http://www.fema.gov/emergency/nims/,. The text underlines are author-added highlights.

integrated into the customized EOP for an organization, and so ICS itself becomes invisible within the EOP.

- Concept of Operations: or "CON OPS" is a description of how the system components, presented in the System Description, operate in a coordinated manner through successive stages of emergency response and recovery. Here to, ICS processes are incorporated into the EOP processes that the organization will use to manage its emergency response.

  In simple terms, the System Description describes organizational roles and responsibilities while the Concept of Operations outlines how these components operate throughout emergency response and recovery.

  Some publications do not delineate a separate "system description" and guidance is provided with only a broad Concept of Operations. This text maintains that presenting the system description first provides an understanding of how the response is organized, and the roles and responsibilities of key elements. This generally promotes greater understanding of processes and procedures described in the Concept of Operations. The remainder of this unit and Unit 3 maintain this distinction.

ICS and its relationship to jurisdictional response: The point of reference for ICS is the local jurisdiction. Based upon the concept of Federalism and a longstanding U.S. tradition, the authority for managing any major incident that extends beyond a single organization usually rests with the local community.[5] Therefore, the "Incident Commander" for any incident that is larger than the healthcare system location is typically a jurisdictional authority. For healthcare systems, this becomes relevant to their use of ICS terminology. Qualifiers should be added to designate healthcare system positions and documents, such as "Hospital X Incident Commander," to prevent confusion and conflict when integrating with jurisdictional response. Another example would be the use of "Hospital Y Operational Action Plan" to distinguish a healthcare system's action plan (i.e., response document) from the jurisdiction's Incident Action Plan.

Multi-agency coordination: Another set of principles that establishes a management element for coordinating emergency response and

[5] This authority may be abdicated to a higher authority (e.g. to a State, or by a State to the federal government). In some incidents (including some public health emergencies) this local authority may be superseded by State authority, through State law or regulation, or by federal authority because of the threat of inter-State spread of diseases.

recovery activities is that of multi-agency coordination (MAC), which compliments ICS. NIMS states "the primary function of a MAC system is to coordinate the activities above the field level and to prioritize the demands for critical or competing resources, thereby assisting the coordination of the operations in the field."[6] As an example, an Incident Management Team (IMT) activated by an organization at a jurisdictional level interfaces with and is supported by an Emergency Operations Center, the most common form of a MAC system, for that jurisdiction. Simply put, MAC systems do not command or direct incident resources but coordinate resources prior to incident assignment and MAC Systems provide other support to the IMT.

The concepts of multiagency coordination are applicable to healthcare organization emergency response, both for managing coordination within the healthcare organization and for managing coordination with other response entities. The specifics are outlined in lesson 2.1.4.

[6] NIMS 2008 *Component IV: Command and Management*, page 64; accessed October 1, 2009 at: http://www.fema.gov/emergency/nims/

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Lesson 2.1.2 ICS System Description: The Organizational Structure

Lesson Objectives

- *List the major functions and positions as described in an ICS response model and describe their primary responsibilities.*
- *Explain how ICS organizational elements may be modified to promote flexible adaptation of response to the scale and type of incident.*

Introduction

A major advantage to using ICS is that the steps and processes for organizing the management of actions and resources during emergency response are reproducible across all types of incidents. Assets are therefore organized, using a consistent logic that groups tasks with similar objectives into specific functions. This then represents the "systems description" for ICS.

The ICS System Description organizes response personnel into 5 functions: Command, Operations, Planning, Logistics, and Finance/ Administration.

- Functional alignment of assets: ICS organizes all response assets into an Incident Management Team (IMT) with five sections, or functional areas: Management, Operations, Planning, Logistics, and Finance/Administration. Exhibit 2.1.2.1 highlights the five sections and their primary functional roles.

    - Grouping by function: In developing the ICS organizational structure, responsibilities and tasks necessary for accomplishing incident objectives are listed and grouped according to similarity of purpose, and then further placed under one of the five ICS sections according to each position's functions.

    - Scalable to incident needs: The sections are expanded and contracted with additional positions that are organized through branches or other organizational elements according to incident needs. As ICS explains, not all functions or positions are staffed individually in all incidents. In fact, some limited incidents for healthcare systems may be effectively managed with 2-3 individuals assigned to conduct all of the ICS functions. Staffing decisions are always based upon the size, nature, and complexity of the incident. **In events where no individual is assigned to a position, the responsibility for accomplishing the function or task is assumed by the immediate supervisory position**.

    - Assigning authority and responsibility: ICS effectiveness and efficiency is achieved by its processes that **appropriately**

Not every position or function needs to be staffed during responses to each event. When personnel are not assigned, the responsibilities for that unassigned position or function revert to the immediate supervisor.

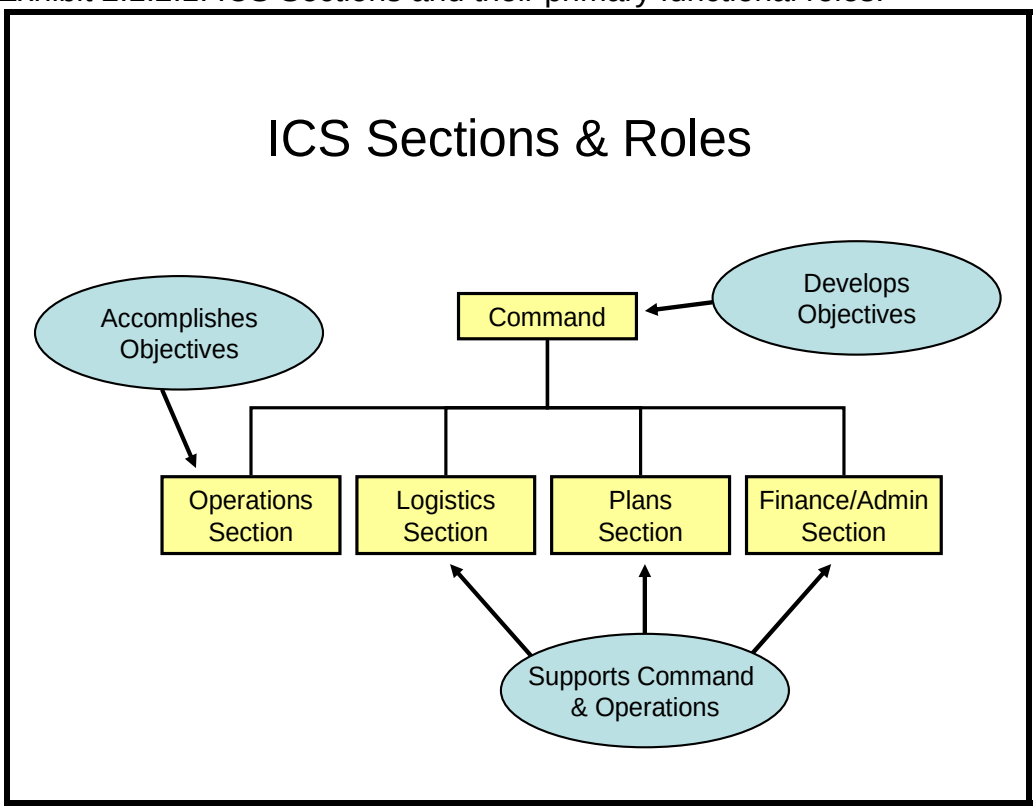
distribute authority and responsibility for specific incident tasks. AZT the same time, it maintains control of management and coordination through the issuance of operational parameters (objectives, strategies, and tactics). Disciplined reporting by response elements, with the Planning Section processing the reported data into immediately useful knowledge, enhances this process. ICS management can therefore maintain adequate situational awareness and conduct an informed decision-making process, without directly controlling every action.

- Line authority: While command authority is clearly delineated ***within*** most fire department and law enforcement organizations, line authority is always less clear or does not exist ***across*** disciplines and organizations within a jurisdiction. It becomes even less clear when incident management involves private sector resources without a clearly defined contractual relationship. This authority issue is important to recognize and address during preparedness planning.

The main ICS functions with positions are explained next (see Exhibit 2.1.2.1).

An easy way to conceptualize the ICS Systems Description is to think of the Operations Section as dedicated to accomplishing organizational goals and objectives. The other three sections support Command and Operations.

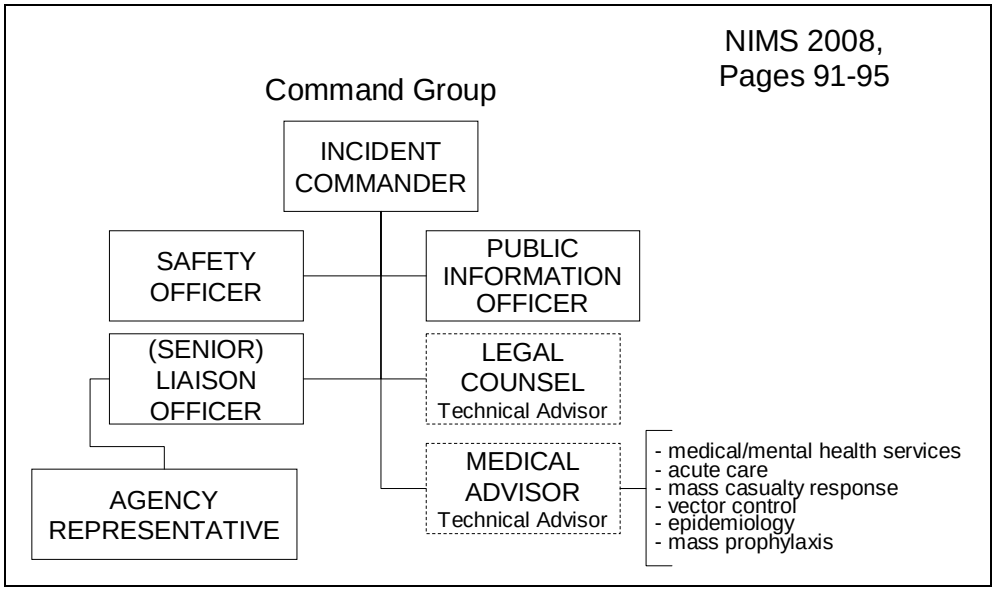
Exhibit 2.1.2.1: ICS Sections and their primary functional roles.



Incident Commander and Command Staff

- Command: Provides overall direction of the response by establishing response objectives for the system and determines the configuration of the overall Incident Management Team. This functional area includes specific "Command Staff" positions with responsibilities critical to effective incident management. Exhibit 2.1.2.2 outlines specific command staff positions and their relationships. The positions are discussed in the following text.

Exhibit 2.1.2.2: NIMS Command Staff with two designated senior advisors positions (dotted lines), with the "reach-back" capability of the Medical Advisor noted.[7]



  - Incident Commander: Retains overall responsibility for effective performance of the Incident Management Team for the evolving incident, and is more specifically responsible for the performance of the Command Staff actions.

  - Unified Command: In certain circumstances, a Unified Incident Command is indicated. This is defined below as it too may have application in some healthcare organization settings as explained in Unit 3 (see Textbox 2.1.2.1).

[7] NIMS March 2004, *Appendix A: The Incident Command System*, Department of Homeland Security, Washington, DC; p. 7-31.

Textbox 2.1.2.1

Unified Incident Command

Multiple organizations may have leadership responsibilities during a mass casualty or complex event. ICS has a designated model, Unified Command (UC), which allows multiple stakeholders to actively participate in incident command. When this occurs, the resulting Unified Command promotes cohesive action within the response system, and provides a uniform interface for integration with other levels of government. A commonly cited example is unified command between police and fire services responding to a terrorist bombing.

The concept of Unified Command is also critically relevant for participation by public health agencies, since they bear a primary responsibility for the well-being of the general population during emergencies or disasters. The unified management model provides a mechanism for direct input from health and medical practitioners at the strategic decision-making level.

UC brings together lead personnel of each major organization involved in the incident to coordinate an effective response, while allowing each commander to carry out his/her own jurisdictional or discipline responsibilities. UC links response organizations at the leadership level, thus providing a forum for these entities to make joint decisions. Under UC, various jurisdictions and/or agencies and non-government responders may work together throughout the incident to create and maintain an integrated response system driven by a single incident action plan. UC may be established to overcome divisions from:

- Geographic boundaries.
- Government levels.
- Functional and/or statutory responsibilities.
- Some combination of the above.[8]

Unified, proactive incident command is accomplished through joint decision making that establishes common incident objectives (i.e., management by objectives). During an incident, clearly delineated incident objectives are agreed on and formally documented. These incident objectives form the basis for the incident action plan. To

[8] Adapted from: *U.S. Coast Guard Incident Management Handbook* (August 2006), COMDTPUB P3120.17A, accessed January 31, 2010 at: http://www.uscg.mil/hq/nsfweb/docs/FinalIMH18AUG2006.pdf

accomplish this strategic guidance throughout an incident, unified management must entail:

- A single integrated management structure for the emergency Response.
- Shared or co-located management facilities.
- A single planning process and IAP (single set of goals and objectives).
- A coordinated process for requesting and managing resources.

- Command Staff: Command Staff positions, other than the "Incident Commander," are designated as "officers." They include:

  - Public Information Officer (PIO): If assigned, this position manages information released to media and therefore the public. In many discussions of ICS, this is commonly presented as primarily a public relations function, shaping the public assessment of the quality of the incident response or providing direction/instructions to the public. In NIMS, the PIO is described as serving this role as well as monitoring public information relevant to the incident.[9] Robust older versions of ICS, such as the 1994 National Training Curriculum,[10] recognized a more comprehensive role for PIOs including conveying information "to the news media, to incident personnel, and to other appropriate agencies and organizations." Appropriate information dissemination to responders is recognized as a critical tool in the actual success of any incident response, and has a wider scope than merely "public information." A recent incident command guide describes the PIO role beyond that described in NIMS as "…responsible for developing and releasing information about the incident to the news media, to incident personnel, and to appropriate agencies and organizations."[11] Healthcare systems will likely find this expanded role of the PIO important for conveying information to their own personnel and to the 'public within' – the non-incident patients, visitors and

Public Information Officers manage the media message to inform the public and guide appropriate population behavior. They are tasked with monitoring media messages as well. Advanced systems may consider using the position to also assure that adequate information is transmitted to responders.

[9] NIMS 2008. *Component IV: Command and Management*; page 52; accessed October 1, 2009 at: http://www.fema.gov/emergency/nims/

[10] National Wildfire Coordinating Group. *Incident Command System National Training Curriculum: ICS Position Descriptions and Responsibilities* (October 1994). National Interagency Fire Center, Boise, CO.

[11] FIRESCOPE California: *Field Operations Guide ICS 420-1 Incident Command System Publication*, June 2004, p. 5-3; accessed January 31, 2010 at http://www.firescope.org/ics-big-fog/ICS420-1FOG8x11Cmplt.pdf

contractors. The messages may serve a range of purposes:

- Provide general incident information and incident context.
- Guide public actions or explain that no action is necessary.
- Reassure the public.
- Prevent or address speculation and rumors.

○ Safety Officer: This position originated from the multiple threats posed in the field **to incident responders** but has important applicability to the healthcare setting as well. The Safety Officer assesses the incident site/s and circumstances for hazardous and unsafe conditions, identifies these risks, and develops measures to support responder safety. While traditionally the safety function has been narrowly focused upon "workplace safety," the safety officer function is now recognized as a critical management activity that provides oversight for **all issues related to responder safety,** including personal protective equipment, preventive medical and psychological issues, and "security safety" during incident response. This function manages very active processes, which execute overall strategic and administrative tasks as well as individual field monitoring activities. The Safety Officer provides direct input into command decision making through contributions to the incident action plan (see below) as well as direct interventions, if indicated, at the worksite. A Safety Officer for a healthcare system, therefore, could conceivably fulfill his/her role rotating between the command area and the active work locations throughout incident response.

The Safety Officer identifies and manages risks to responders and oversees the implementation of processes to ensure responder safety.

○ Liaison Officer: Commonly referred to as a "Senior Liaison Officer" to distinguish this position from tactical level liaisons, this role ensures high-level (strategic) coordination with agencies/organizations not within the ICS structure itself. The Liaison Officer is responsible for coordinating with major organizations outside the response system but involved in the response (e.g., Federal law enforcement, the U.S. military, etc.). If an outside agency supplies personnel to the ICS as their liaison, this position is designated in ICS as an **Agency Representative** (see Terminology Textbox).

The Liaison Officer maintains communication and coordination with organizations involved in the response that are external to the organization's incident command system.

Terminology alert!

Agency Representative: A person assigned by a primary, assisting, or cooperating Federal, State, local, or Tribal government agency or non-governmental or private organization, that has been delegated authority to make decisions affecting that agency's or organization's participation in incident management activities following appropriate consultation with the leadership of that agency.[12]

- Senior Advisor/Technical Specialist: Presented in NIMS/ICS as a Technical Specialist position on the Command Staff, ICS commonly describes the role of a Senior Advisor as one that provides **strategic advice** to the command group. This assistance is distinguished from the usual "technical specialist," which is a position in the Planning Section or attached directly to the Operations Section and provides tactical level advice. Examples cited in NIMS include legal counsel and medical senior advisor positions (see Exhibit 2.1.2.2). There are other approaches to providing strategic advice to the Command Staff, and these are discussed further in Unit 3.

Senior Advisors are often included in the Command Staff. These individuals are selected only when needed to provide strategic advice to the Command Group.

Distinguishing between the ICS structure of the overarching Incident Management Team (IMT) and lower level ICS elements within the IMT

Individual organizational elements (Task Forces, Groups, and others) within an IMT may have their own internal ICS structure and function. Their leader is not referred to as an "incident commander," but rather is designated according to the functional role of the element within the specific ICS (for example, the use of the term "leader" for the position managing an individual Task Force or Strike Team). The terminology provided by ICS/NIMS for these designated positions that supervise organizational elements in ICS is presented in NIMS and reproduced below (see Exhibit 2.1.2.3).

[12] NIMS 2008. *Glossary of Key Terms*, p. 135; accessed October 1, 2009 at:: http://www.fema.gov/emergency/nims/

Exhibit 2.1.2.3: NIMS/ICS leadership position titles by IMT element.[13]

Organizational Element	Leadership Position
Incident Command	Incident Commander
Command Staff	Officer
Section	Section Chief
Branch	Branch Director
Division and Groups*	Supervisors
Unit**	Unit Leader
Strike Team/Task Force	Leader

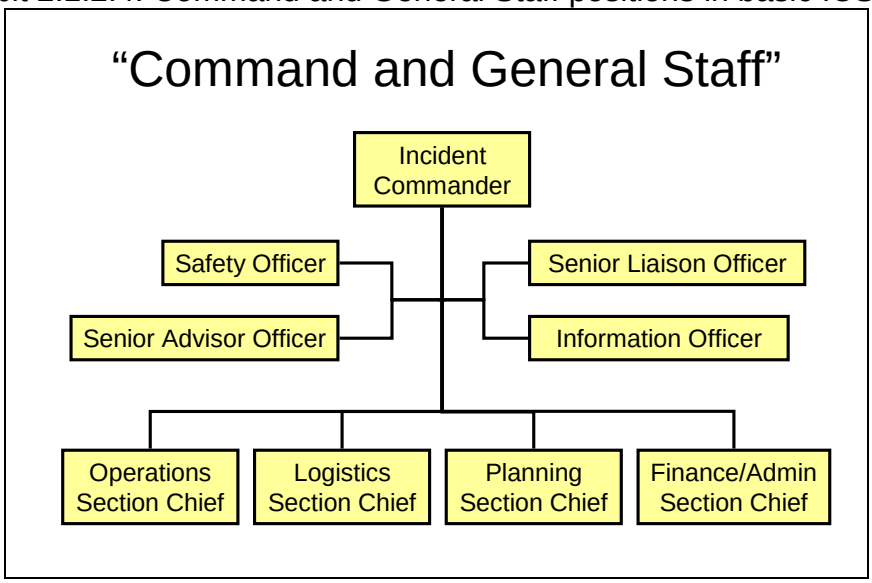
*The hierarchical term supervisor is only used in the Operations Section.
**Unit leader designations apply to the subunits of the Planning, Logistics, and Finance/Administration Sections.

Table B-1: ICS Organization

"Command and General Staff" is a term that is utilized to refer to the aggregate of positions that includes the Command positions listed above plus the Section Chiefs for the four major functions within ICS (see Exhibit 2.1.2.4).

[13] Adapted from United States Department of Homeland Security. *National Incident Management System*. (2008), *Appendix B: Incident Command System*: page 92; NIMS 2008; accessed October 1, 2009 at: http://www.fema.gov/emergency/nims/

Exhibit 2.1.2.4: Command and General Staff positions in basic ICS.



"Command and General Staff" refers to all positions within the Command group plus the Section Chiefs.

- Operations Section: Simply put, the Operations Section includes all assets below Command that manage or perform the tactical operations to achieve the incident objectives, which were defined by the command function. Actions under this section are guided by the Operations Section Chief through directed strategies, specific tactics, resource assignments, and direct supervision specific to each operational period. The Operations Section may be organizationally sub-divided through the use of branches, with divisions (for geographic organization) or groups (for functional organization) (see Exhibit 2.1.2.5) further sub-dividing the control and direction of the operations section. Terminal management at the resource level is depicted by the use of task forces, strike teams (or "teams"), and individual resource units (see Exhibit 2.1.2.6). These elements are designated and staffed according to the discretion of the Operations Sections Chief. Leadership terms for these elements are presented in NIMS (page 94) and above. Operations Section Staging is an additional area to examine, since this can be a confusing for healthcare organizations (see Textbox 2.1.2.2).

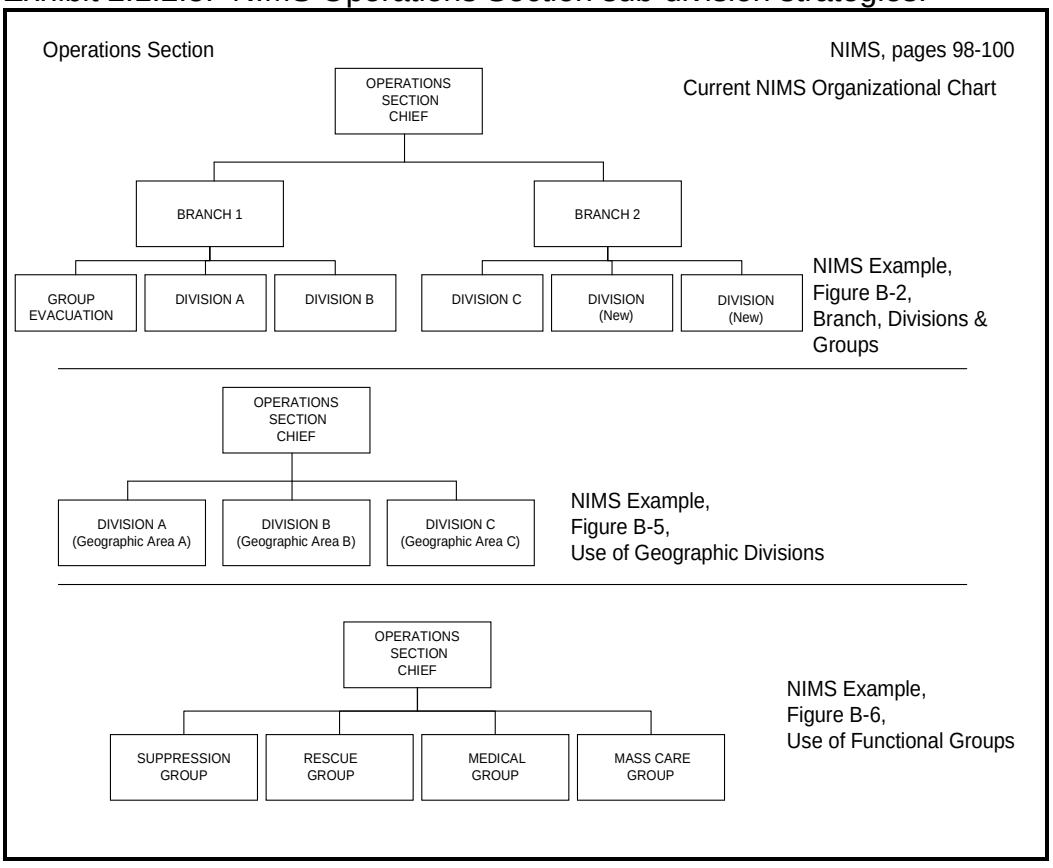
The structure for the Operations Section may vary (even for the same organization responding to different events). Standard organizational elements (branches, divisions, units, etc.) are used in organizing sections to provide consistent relational concepts.

Textbox 2.1.2.2

The Relationship between Staging Areas and a Personnel Pool

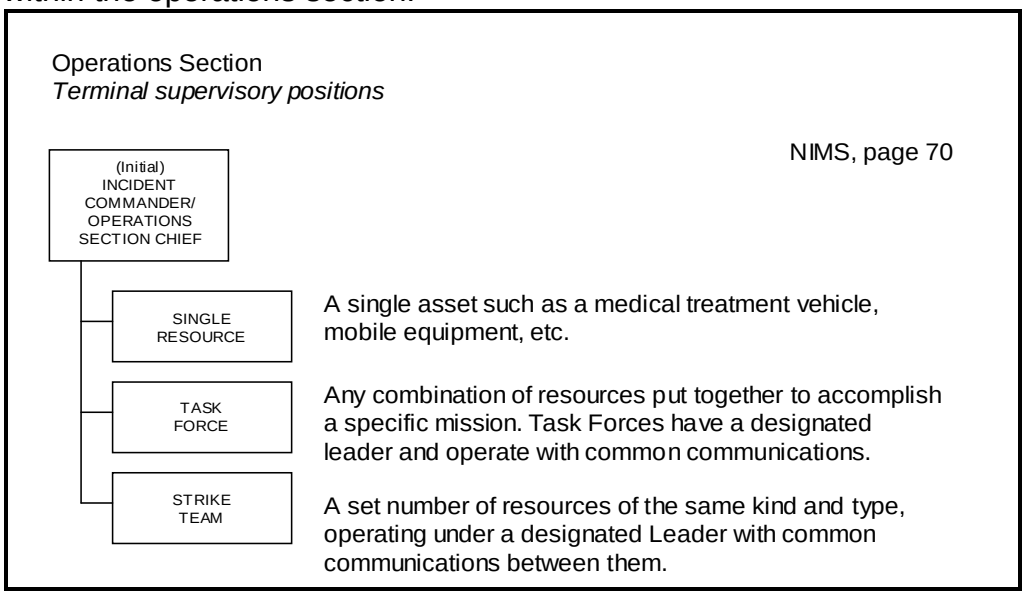
In classic ICS, "staging" is where personnel, equipment, and supplies that have been ordered by the Operations Section are collected. Staging is under the direct supervision of the Operations Section since resources have already, through the ordering process, been assigned to the Operations Section to await specific task assignment within that Section. This "staging" should be distinguished from any "personnel pool" or other term in healthcare system emergency management, which is a Logistics function that identifies and rosters personnel who are available but not yet assigned to a task or to an ICS section staging area.

Exhibit 2.1.2.5: NIMS Operations Section sub-division strategies.[14]



[14] NIMS 2008, *Appendix B: The Incident Command System*, p. 98-100; October 1, 2009 at: http://www.fema.gov/emergency/nims/

Exhibit 2.1.2.6: NIMS-designations for terminal management positions within the operations section.[15]



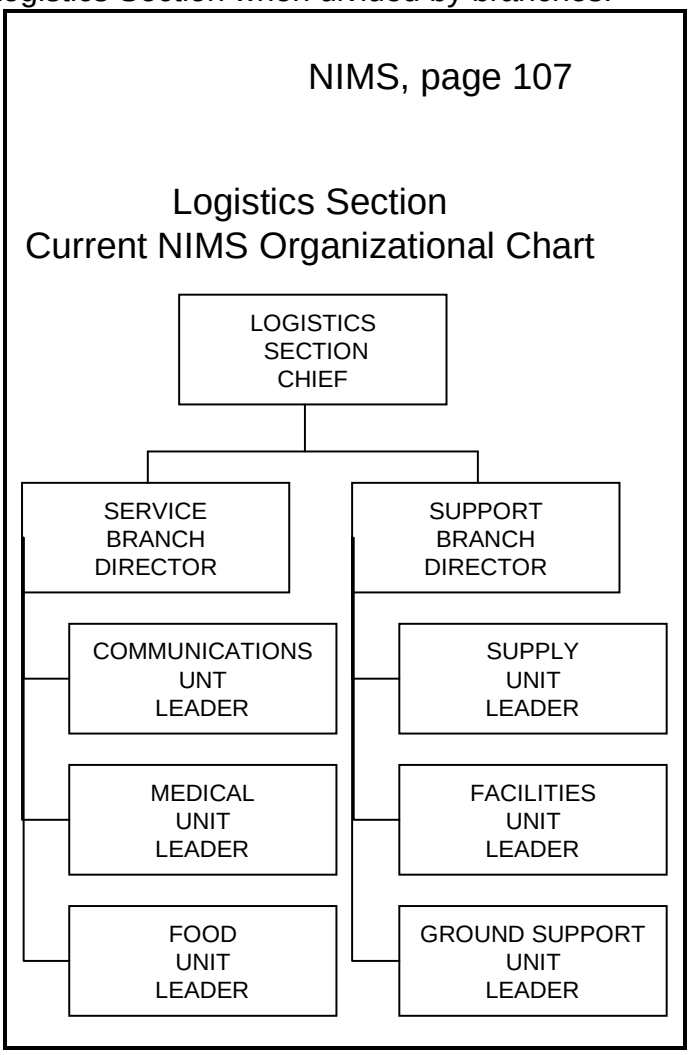
- Logistics Section: According to NIMS/ICS, "the Logistics Section is responsible for all service support requirements needed to facilitate effective and efficient incident management, including ordering resources from off-site locations. This Section also provides facilities, security for the incident command facilities and personnel, transportation, supplies, equipment maintenance and fuel, food services, communications and information technology support, and emergency responder medical services, including inoculations, as required."[16] The Logistics Section may be sub-divided into branches, usually a Support Branch and a Services Branch according to NIMS/ICS, to maintain effective span of control (see Exhibit 2.1.2.7).

[15] NIMS March 2004, *Appendix A: The Incident Command System*, p. 70. US Department of Homeland Security, Washington DC

[16] NIMS 2008. *Component IV: Command and Management*: Page 57; accessed October 1, 2009 at http://www.fema.gov/emergency/nims/

ICS typically only discusses "branches" for the Operations and Logistics Sections. For particular incidents branches may be important for the Planning Sections as well (this would be consistent with the inherent flexibility of NIMS/ICS).

Exhibit 2.1.2.7: NIMS-designations for terminal management positions within the Logistics Section when divided by branches.[17]



These individual units are named to intuitively indicate their functions in supporting the Incident Command System. Their use in healthcare system emergency response is discussed in more detail in Unit 3.

- Planning Section: According to NIMS "the Planning Section collects, evaluates, and disseminates incident situation information and intelligence[18] to the IC/UC and incident management personnel. This Section prepares status reports; displays situation information; maintains status of resources assigned to the incident; and prepares

[17] NIMS, *Appendix B: The Incident Command System*, p. 107; accessed October 1, 2009 at: http://www.fema.gov/emergency/nims/

[18] In NIMS, "intelligence" generally refers to law enforcement and security/counter-terrorism information.

and documents the Incident Action Plan (IAP)…"[19] As noted, an important responsibility of this section is processing incident information. Since information accuracy is a combination of both factual correctness and appropriate level of detail, significant attention must be focused upon acquiring, verifying, and processing data to meet the information needs. For example, this information managed by the Planning Section would be used by the Command Staff and Operations Sections when establishing response objectives, strategies, tactics, and assignments:

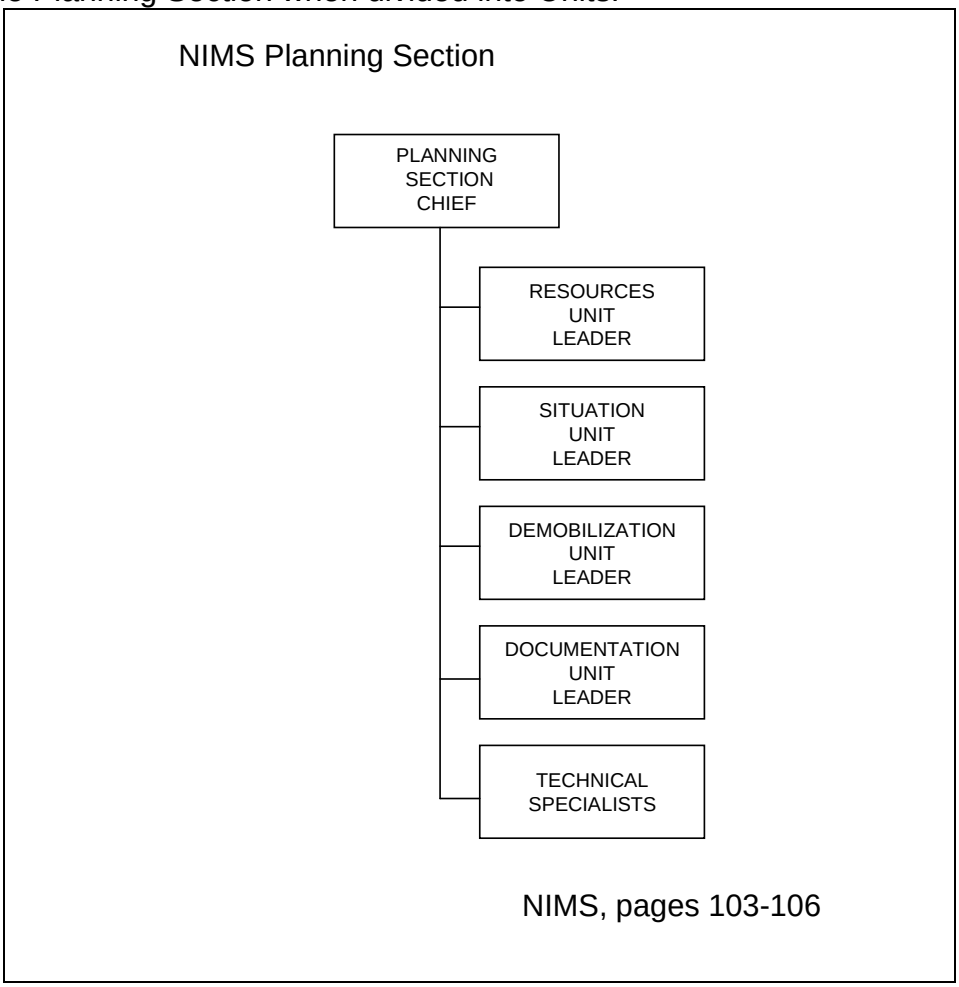
- NIMS-designated components of the simplified ICS Planning Section (see Exhibit 2.1.2.8) include:
  - Resource Unit or equivalent: Tracking of the status of resources.
  - Situation Unit or equivalent: Maintains current updates of the incident details.
  - Demobilization Unit: Early and ongoing development of demobilization plans.
  - Documentation Unit: Processing through to completion of incident action plans and planning support documents; archiving while maintaining the availability of incident action plans, their supporting components, and all other incident-related documents.
  - Technical Specialists: Personnel with specialty expertise to provide advice at various levels within the organization's ICS sections.

  Other units may be established to address the planning complexities, such as the development of contingency and alternate plans.

The Planning Section collects, processes, and maintains incident information relevant to action planning, and accomplishes the action planning steps that produce the Incident Action Plan and supporting documents.

[19] United States Department of Homeland Security. *NIMS (2008). Component IV: Command and Management*, page 55; accessed October 1, 2009 at: http://www.fema.gov/emergency/nims/

Exhibit 2.1.2.8: NIMS-designations for terminal leader positions within the Planning Section when divided into Units.[20]

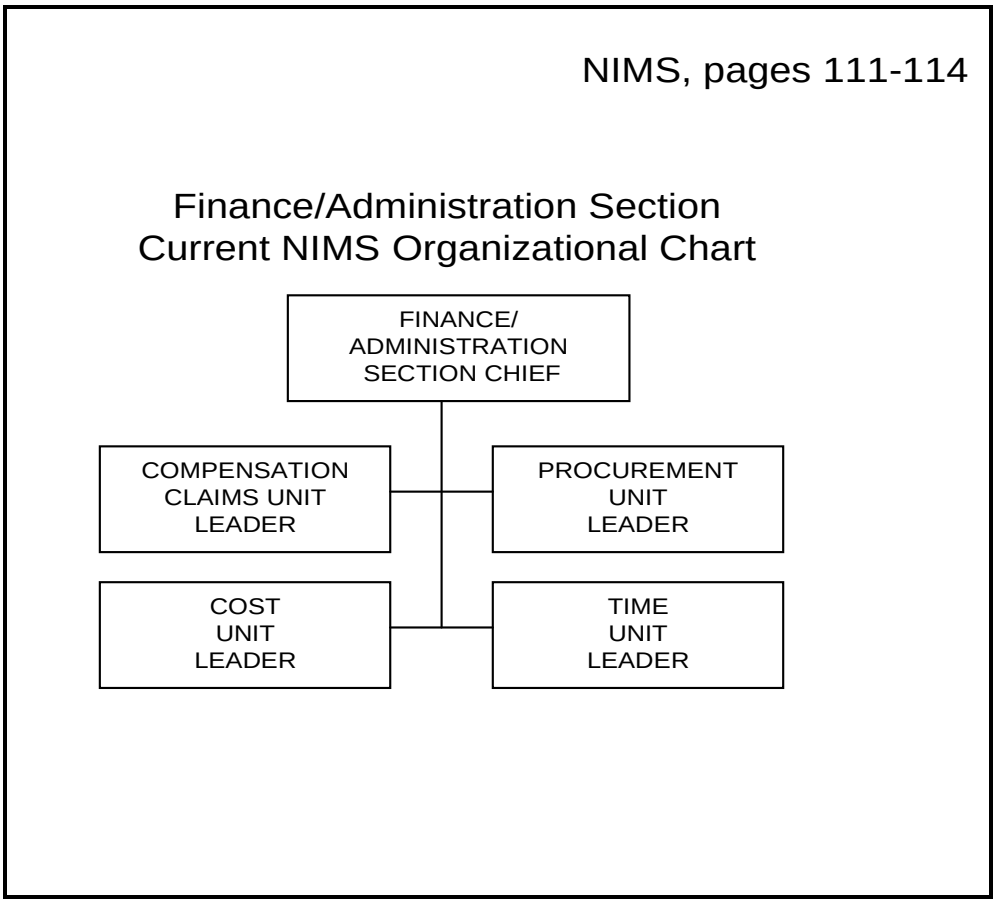


The Finance/ Administration Section oversees administrative issues for the ICS, and provides the financial accountability services.

- Finance/Administration: This section of ICS (see Exhibit 2.1.2.9) supports management and operations by addressing, according to NIMS, any "specific need for financial and/or administrative services to support incident management activities."[21] This section may be particularly important in health and medical response. Activities may vary widely, from tracking of such issues as reimbursement to monitoring and addressing regulatory compliance. These issues are extensively addressed later in Unit 3 and 4.

[20] United States Department of Homeland Security. *NIMS 2004 Appendix A: The Incident Command System*, p. 75-79. Federal Emergency Management Agency, Washington DC.
[21] United States Department of Homeland Security. *NIMS 2008, Appendix B: The Incident Command System*, page 113; accessed October 1, 2009 at http://www.fema.gov/emergency/nims/

Exhibit 2.1.2.9: NIMS-designations for terminal management positions within the Finance/Administration Section when divided into Units.[22]



The Role of the Organization's Regular Leadership in Relation to ICS

It is very important for the senior leadership of each organization involved in ICS to understand how ICS relates to the usual administrative structure within the organization. This is presented briefly in Lesson 2.1.1 and discussed in greater detail here.

- Co-existence of ICS and normal administration: The normal administrative structure must continue to operate within the organization, even as the organization mobilizes and responds using its EOP and ICS. Non-incident operations continue to be managed by the usual administrative system, and so the two management systems exist in parallel within the organization during incident response. For healthcare organizations, **most responses to**

[22] United States Department of Homeland Security. *NIMS (March 2004) Appendix A: The Incident Command System*, p. 87-89. Federal Emergency Management Agency, Washington DC.

incident hazards will not require utilization of all of the organization's assets. An example is the receipt of a large number of contaminated patients. Though the response may require multiple personnel from within the healthcare organization, it most likely will not require all of the personnel on duty at the time and interrupt all other healthcare activities. Therefore, the usual administrative structure should remain active to the extent possible while the IMT manages incident related activities. It is the rare situation (e.g., full emergent facility evacuation) in which the ICS organization encompasses the entire organization.

- Senior executive and incident commander relationship: With this relationship between the ICS and the day-to-day administrative structure in mind, the individual serving as the Incident Commander for an organization is usually NOT its most senior administrator. **It is important, however, to understand that the senior executive remains in charge of the entire organization, including the incident response, even if he/she is not the Incident Commander (IC)** (see Textbox 2.1.2.3)**.** In many, or even most incidents, it may be best for the senior executive to not assume the IC position.

Textbox 2.1.2.3

Issues of Concern to Executives[23]

There are at least three issues that concern Executives relative to their responsibilities and roles at incidents.

A. What are the implications of an incident to my organization and to myself?

Any incident can have a mix of political, economic, social, environmental, and cost implications with potentially serious long-term effects. Also, more and more incidents are multi-agency and/or multijurisdictional. ICS, as a management system, helps to mitigate the risks by providing accurate information, strict accountability, planning, and cost-effective operations and logistical support for any incident. By your support to planning, preparedness, and training activities, the potential implications can be minimized.

B. How do I maintain control when incidents occur?

As the Executive, you establish the policy and provide guidelines

[23] National Wildfire Coordinating Group. Incident Command System, National Training *Curriculum Module 17: ICS for Executives Instructor Guide*, October 1994: pp.17-5 to 17-7. NOTE: this has been replaced by EMI G-402 and is no longer web available. EMI G-402 does not contain the same detailed material. EMI G-402 was accessed October 8, 2009 at: http://training.fema.gov/STCourses/crsdesc_spec.asp

on priorities, objectives, and constraints to a qualified Incident Commander. In many agencies this is done as a matter of policy through a written delegation of authority to your designated Incident Commander.

C. Where do I fit in the incident management process?

ICS has a hierarchy of command. Once you have clearly articulated the policy you wish followed, and delegated certain authorities, the Incident Commander who reports to you will have the necessary authority and guidance to manage the incident. The Incident Commander is the primary person in charge at the incident. In addition to managing the incident scene, he or she is trained to keep you informed and up-to-date on all important matters pertaining to the incident. Your task is to ensure that you are informed and that your Incident Commander is functioning in a responsible manner.

Role of the Executive

The Executive is the administrator, chief executive officer, or designee of the agency or political subdivision that has responsibility for the incident. The title also includes Executives from the private sector. Executive and agency administrator are synonymous terms as used in this text.

In ICS, the Executive establishes policy, direction, and allocates authority to the Incident Commander. Generally, the Executive is not at the scene of the incident, but must have the ability to communicate and meet with the Incident Commander as necessary.

Depending on the nature of the incident or level of the overall emergency, the Executive could function from the following locations:

- The agency or jurisdiction offices.
- An Emergency Operations Center (EOC).
- A Multi-agency Coordination Group (either as a functional agency representative, or representing a political subdivision).

- Policy guidance during incident response: The senior authorities in a political jurisdiction, a governmental agency, or a non-governmental organization may wish to establish a formal response role where they provide policy guidance and oversight to the ICS. This is commonly

accomplished with a "Senior" or "Emergency Policy Group"[24] or other terminology for this arrangement, such as "Emergency Policy Team."[25] Healthcare organizations/systems may elect to establish a similar entity to advise the Agency Executive on policy issues and issues at a high strategic level.

- Providing clear authority to the IC: Per the ICS for Executives noted above, "It is very important that the Executive provide the Incident Commander with clear authority, direction, and the support necessary to accomplish agency goals related to management of the incident or planned event. In some agencies and for some incidents the delegation of authority is required in writing."

ICS Organizational Elements and Positions

NIMS/ICS provide guidelines for the flexible breakdown of sections as dictated by incident needs. The guidelines (as noted above) include organizational elements such as branches, divisions, groups, task forces, strike teams, and units.

The traditional ICS Plans Section has multiple units focused upon information management. Given the complexity of the action planning process, two branches might be warranted to adequately manage these important activities.

- Sectoring of functions and/or geographic area to maintain span of control: With branches, divisions, and groups to organize elements within ICS sections, it is easy to sector the "incident scene" geographically if it is too large, or functionally if it is too complex for effective management by a single ICS position.

- Flexibility in organizing ICS sections: In traditional ICS, the Operations Section is the section that typically has described "Branches" whereas the "support" sections of ICS (Logistics, Plans, Finance/Admin) are depicted as having a section chief and then devolving immediately to the "units" level of organization. This is because of the historical experience in wildland ICS, where the support sections became standardized due to the relatively predictable support needs. NIMS recognizes the potential need for "branches" within the Logistics Section. The devolution to units from Section Leader permits a relatively small organizational footprint to address support issues while maintaining the manageable span of control principle, but may need to be altered in health and medical response:

[24] Multiple examples may be found for this – a representative private organization example is from University of California at Riverside. *Emergency Management Policy Group Guide, Version 7*; accessed October 8, 2009 at: http://www.ehs.ucr.edu/forms/empg.pdf

[25] *Arlington Virginia Emergency Operations Plan* (May 2005); accessed October 6, 2009 at: http://www.arlingtonva.us/departments/EmergencyManagement/pdf/EOP.pdf

- Logistics: NIMS already recognizes that Logistics may become too complex for unit-level organization, and therefore mentions that branches may be used (NIMS Appendix B, page 107).

- Planning & Admin/Finance: In large, complex health incidents, adhering to a "span of control" doctrine (see Lesson 1.1.3) may require the Planning and Finance/Administration Sections to also expand their organizational structures to include branches, divisions, and groups. This expansion would be determined by the section chief, with approval by the incident commander, and is consistent with the stated "flexibility" of NIMS/ICS.

  - As an example, the traditionally described Planning Section Units are generally focused upon information management (except for the Demobilization Unit). In a complex incident with the need for extensive long-range, contingency, and alternate planning as well as the demobilization plan development, an "Incident Action Planning" Branch may be important to accomplish adequate planning while maintaining span of control.[26] This branch could co-exist with an Information Processing Branch under which the information units would be placed.

  - Similarly, in a complex incident the "Situation Unit" may require a significant expansion and compartmentalization in order to track all of the parameters. The use of divisions (geographic designator) or groups (functional designator) may be necessary to maintain effective span of control.

- ICS Positions: ICS Systems Descriptions include detailed information on key positions throughout the organizational structure.

  - Position Descriptions (PDs): A position description outlines the roles and responsibilities as well as reporting requirements for a specific response position.

    - As with any customized emergency operations plan using ICS, healthcare systems should develop specific descriptions for the positions within its IMT that are commonly activated. At a minimum, the Command and General Staff positions should

The System Description should present details about the response structure and positions, including position descriptions and required qualifications.

[26] For further discussion of this issue, see Barbera, JA; Macintyre, AG. *Medical and Health Incident Management System: a comprehensive functional system description for mass casualty medical incident management*. A report for the Alfred P. Sloan Foundation grant, November 2002; accessed October 1, 2009 at: http://www.gwu.edu/~icdrm/, .

have clear position descriptions written into the Systems Description.

- Less commonly activated but critical positions for specific types of emergency response and recovery (such as a DECON Task Force Leader) should also be well-described. Many additional positions may require documented PDs depending upon the organization and the complexity of its emergency response roles.[27]

Terminology alert!

Position Description (PD): Position description is a written summary of the critical features of an emergency response or recovery job, including the nature of the work performed and the specific duties and responsibilities. It is intended to help assigned personnel understand their specific role and to clarify relationships between positions.

- Position Qualifications (PQs): Position qualifications should be similarly listed in the Systems Description. Position Qualifications essentially present the required attributes, including knowledge, skills, and abilities (i.e., the emergency response and recovery competencies) needed by an individual to effectively perform in the incident position. The PQs may attempt to describe these by outlining the necessary training certifications and/or experience indicated for key positions, plus more general requirements (age, experience, college degree, etc.). They are most accurately described, however, by carefully developed competencies (see lesson 1.5.6). PQs are intended to prevent the assignment of personnel to positions where they are ill prepared or inherently not capable of performing the specific tasks of that position. This becomes particularly critical for healthcare Command and General Staff. It should not be assumed that any individual can fill a particular position just by referring to a job action sheet.

[27] For Command and General Staff positions, deputies are often assigned so that staffing may be maintained 24 hours a day onsite.

Lesson 2.1.3 ICS Concept of Operations

Lesson Objectives

- *Explain the concept of "management by objective" and how it applies to incident management.*
- *Describe the incident action planning process considerations used for achieving incident objectives.*
- *Describe the key components of the planning cycle and its products that serve to accomplish effective incident management.*
- *Explain the use of ICS forms to facilitate information exchange and to drive the planning process.*

ICS Concept of Operations: The Incident Management Process

A critical advantage provided by ICS is that ICS includes a general "Concept of Operations" (CON OPS), or a description of how the incident management team components operate in a coordinated manner during successive stages of an emergency response. The concept of operations is consistent across all organizations using ICS and all types of incidents managed by ICS. The CON OPS therefore provides consistent processes and procedures for use in all types of incidents. These are particularly valuable for addressing the "response generated demands" noted in Exhibit 1.1.3.1. If carefully addressed in emergency operation plan (EOP) development, this consistent concept of operations greatly assists with training requirements, evaluation during exercise and post response, and implementing organizational change to improve the EOP. Unfortunately, the incorporation of this important ICS process into organizational EOPs has been only superficially addressed in many disciplines, including many healthcare organizations. While the Hospital Incident Command System (HICS) describes the use of ICS, guidance for fully incorporating ICS into a Healthcare EOP is not entirely addressed.[28]

The Concept of Operations provides consistent processes and procedures that coordinate the different components listed in the Systems Description. For clarity, it ideally examines these through the successive stages of incident response and recovery.

- Incident management process: Within the Concept of Operations, an **incident management process** using "management by objectives" (see Lesson 1.1.3) is described. This process, designated "incident action planning", presents an ordered sequence of actions that conduct comprehensive incident management. This methodology promotes a pro-active organizational response (as opposed to reactive) and therefore has critical importance for the overall success

[28] California Emergency Medical Services Administration. *Hospital Incident Command System*, August 2006. Page 12; accessed October 9, 2009 at: http://www.emsa.ca.gov/hics/

of the organization. General steps are presented below:

- Establish incident objectives: This initial step has been variably explained and revised several times in successive guidance documents. At times, they have been referred to as "Control Objectives," and "Overarching Incident Objectives." In this document, establishing "incident objectives" refers to broad based statements of what the response system should achieve during incident response (i.e., goals). Therefore, these are general statements that may change little throughout incident response and are distinguished from lower order "operational period objectives" defined below.

- The current version of NIMS (2008) does not distinguish this as a separate step in the management process.[29] It is, however, widely regarded as the first important management step. Examples of generic incident objectives for healthcare systems, to reflect their four major emergency response and recovery capabilities, might be to:
  1) Maintain a medically safe and secure environment for personnel, current patients and visitors.[30]
  2) Sustain the organization's functional integrity: business, facility and usual healthcare service operations.
  3) Provide health and medical surge services to incident patients as indicated.[31]
  4) Integrate into the overall emergency response, meeting the organization's external emergency response and recovery commitments.[32]
  5) Address environmental and regulatory concerns where indicated, without compromising the higher priority objectives above.[33]

[29] The unfortunate result of the wording utilized in NIMS 2008 is that any distinction between the broader statements of what the system is trying to achieve (incident objectives) and specific operational period objectives appear blurred or they appear to be one and the same. They are best approached as two distinct processes. The two separate types of objectives are supported by earlier versions of ICS and other management disciplines.

[30] "Medically safe" means an environment that supports usual medical care, including temperature/humidity, hygiene and similar issues.

[31] Recognizing that not all hazard impacts result in the generation of additional patients

[32] Examples of these commitments may include participation in healthcare coalition activities (mutual aid, information sharing and other activities), re-supply of EMS vehicles per an existing contract, or providing personnel for deployment on Disaster Medical Assistance Teams (NDMS) or for other federal, state or local disaster assistance programs.

[33] This recognizes that in extreme circumstances, conditions may exist where this objective is secondary to the preceding life-safety objectives.

Incident objectives for a specific situation are often adapted from these types of pre-developed objectives, which are established by the organization for its projected emergency roles. This step is emphasized because the incident objectives, once established and promulgated, guide the development of more specific operational period objectives, strategies and tactics (see Terminology Textbox for the NIMS and a more general definition of incident objectives).[34]

Terminology alert!

Incident Objectives:

- Statements of guidance and direction needed to select appropriate strategy(s) and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow strategic and tactical alternatives. *(NIMS 2008)*

- The broadly described desired end states for the organization's emergency response role(s) that are not limited to any single operational period and change little during the response. They may be stratified for priority attention and resources. For example, protection of responders is typically considered a higher priority than protection of property.

- Establish operational period objectives: These objectives (see Terminology Textbox) are interim steps to achieve the overarching incident objectives. Incident objectives are designed to be tangible and measurable. Each should be achievable within the defined operational period, or a specified longer time interval, and achievable with the available or projected to be available resources. The critical point is that a defined activity with a tangible, measurable and achievable end point has been described for the system to achieve and this is regularly used to assess progress and determine whether it is still needed as a stated operational period objective. An example for healthcare

This publication distinguishes between "incident objectives" which are broad guidance statements for the response system and more specific "operational period objectives" which are more specifically delineated interim achievements that support the attainment of incident objectives.

[34] ICS 300 (2008 version) and other ICS resources refer to "Incident Priorities" that are typically described as #1 Life Safety, #2 Incident Stabilization, and #3 Property Conservation. These may be appropriately applied to the incident objectives for many response situations that a healthcare system could face.

systems relevant to the incident objective related to protecting staff would be to "establish procedures that can provide prophylaxis to all at-risk hospital staff within X time interval."

Terminology alert!

Operational Period Objective: A statement that describes a specific, measurable progress or achievement for the organization to accomplish during a specific time interval (which may be one or several operational periods) with the available resources, and that contributes towards achieving the incident objectives. The Operational Period Objectives, once delineated, guide the development of appropriate strategies and tactics and assignment of resources to achieve the stated objective.

- Management by objectives: By clearly delineating both incident objectives and operational period objectives, direction is provided for the organization and, simultaneously, measures of effectiveness can be established. This management methodology (**management by objective**) has its inception in the business world and has been effectively adapted by a wide range of different response disciplines.[35] To ensure that useful operational period objectives are developed for the response organization, the following attributes are provided in Textbox 2.1.3.1.

Management by objective has multiple advantages in incident response, including using the objectives to establishment f measures of effectiveness. This type of management is consistent with the ICS incident action planning process.

Textbox 2.1.3.1

Writing "SMART" Objectives[36]

The following attributes are important in developing maximally useful objectives:

Specific: Is the wording precise and unambiguous?

Measurable: How will achievements be measured?

Action-oriented: Is an action verb used to describe expected accomplishments?

[35] Drucker, PF. *The Essential Drucker,* (2001). Chapter 8: "Management by Objectives and Self-Control"; Harper Collins.

[36] ICS-300: Intermediate ICS for Expanding Incidents (Version 2.0, April 2008). Unit 4: Incident/Event Assessment and Incident Objectives, page 4-25. FEMA Emergency Management Institute, Emmitsburg, Maryland.

Realistic: Is the outcome achievable with given available resources?

Time-sensitive: What is the time frame (if applicable)?

- Incident action planning: The incident action planning process addresses the multiple considerations necessary for establishing and efficiently achieving incident objectives. NIMS outlines five steps in incident action planning.[37] This text describes an eight step process that is consistent with but more detailed than NIMS. The two similar approaches are compared in Exhibit 2.1.3.1. The eight steps are further discussed in the following text.

Exhibit 2.1.3.1: Comparison of Incident Action Planning Steps

Comparison of Incident Action Planning Steps

NIMS	More detailed approach
1.) Understand situation	1.) Understand the incident situation
2.) Establish incident objectives and strategies	2.) Set incident objectives (broad guidance) with accompanying operational period objectives
	3.) Define strategies to achieve incident objectives
3.) Develop the plan	4.) Define response structure/ organization and assign resources
4.) Prepare and disseminate the plan	5.) Complete the incident action plan and disseminate the information
5.) Execute, evaluate, and revise the plan	6.) Implement the action plan (tactical decisions made and carried out)
	7.) Evaluate and monitor effectiveness
	8.) Revise incident action plan as indicated

#1 Understand the incident situation: Available information must be obtained and processed to adequately understand the incident details. Achieving this critical understanding is referred to as having "situation awareness" (see Terminology Textbox). This is accomplished through a situation assessment (see Terminology Textbox), which can occur at the beginning of an incident or

[37] NIMS 2008. Appendix B: Incident Command System, Page 122; accessed October 1, 2009 at: http://www.fema.gov/emergency/nims/

throughout the life cycle of an incident (see Textbox 2.1.3.2 and 2.1.3.3). The situation assessment is disseminated through a situation report (see Terminology Textbox).

Terminology alert!

Situation awareness: "The perception of the elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future" (Endsley 1988).[38] Endsley's model has three "levels": 1) Perception of elements in current situation, 2) Comprehension of current situation, and 3) Projection of future status

Terminology alert!

Situation assessment: An assessment produced during emergency response and recovery that combines incident geography/topography, weather, hazard, hazard impact, and resource data to provide a balanced knowledge base for decision making. Adequate situation assessment and dissemination of a comprehensive situation assessment (through situation reports and other means) creates the "common operating picture" and supports accurate incident projection.

[38] Endsley MR. *Design and evaluation for situation awareness enhancement* (1988). In Proceedings of the Human Factors Society 32nd Annual Meeting (pp. 97-101). Santa Monica,CA: Human Factors Society. Quoted in: Groner NE. *Achieving Situation Awareness is the Primary Challenge to Optimizing Building Movement Strategies*; accessed January 31, 2010 at: http://fire.nist.gov/bfrlpubs/fire05/PDF/f05005.pdf

Textbox 2.1.3.2

Situation Assessment

The situation assessment includes basic categories of information that, if available, should be collected at designated time intervals to assist decision makers during the incident response and recovery. Each situation assessment should therefore be date and time stamped.

What (incident characteristics)
- Hazard type and impact.
- Magnitude of known impact.
- Expected duration (if the primary hazard impact is ongoing).
- Likely secondary hazards and hazard impacts.
- Weather and geophysical conditions.

When (timing of hazard and impact)
- Warning period and length.
- Impact timing and duration (day and time of onset).
- Response onset if applicable.

Where
- Location and scope of impact.
- Predicted expansion and/or migration of impact area.
- Specifics of impact by location (e.g., patient census/occupancy, activities affected, essential resources compromised).

Resource Needs
- Specific needs – type, amount, location.
- Priority of resource needs if indicated.

Textbox 2.1.3.3

Essential Elements of Information[39]

Federal Emergency Response Team (ERT) guidance published in 1999 provides specific information elements to be collected for situation assessment to be used by the Planning section. They are listed here as an example of relevant types of information. **Note the lack of human injury and death categories**.

Essential Elements of Information

- Boundaries of the disaster area
- Social/economical/political impacts
- Jurisdictional boundaries
- Status of transportation systems
- Status of communication systems
- Access points to the disaster area
- Status of operating facilities
- Hazard-specific information
- Weather data affecting operations
- Seismic or other geophysical information
- Status of critical facilities
- Status of aerial reconnaissance activities
- Status of key personnel
- Status of Emergency Support Function (ESF) activation
- Status of disaster or emergency declaration
- Major issues/activities of ESFs
- Resource shortfalls
- Overall priorities for response
- Status of upcoming activities
- Donations
- Historical information.

Terminology alert!

Situation report (SITREP): A document that is developed and distributed during response as a means for disseminating a current situation assessment.

[39] Adapted from: FEMA. *Federal Response Plan, Emergency Support Function #5 Information and Planning Annex* (April 1999), p. ESF#5-12; Federal Emergency Management Agency, Washington, DC.

#2 Set incident objectives with accompanying specific operational period objectives: As discussed above, incident command delineates the incident objectives or end states that the Incident Management Team strives to achieve. Incident objectives may be stratified by priority. Operational period objectives are then selected that are more specific and facilitate the achievement of the broader incident objectives. Both types of objectives are typically described as being the responsibility of the Incident Commander though in both theory and practice, other ICS sections may contribute towards shaping them.[40]

#3 Define strategies to achieve operational period objectives: Once operational period objectives are established, the approaches (strategies) for achieving them are outlined. Strategy (see Terminology Textbox) may include starting points, priorities, the sectoring of scene management or functional tasks, and other approaches as indicated to achieve the objectives.

Terminology alert!

Strategy: "The general plan or direction selected to accomplish incident objectives" *(NIMS 2008),* or the approach to how a goal and objectives are to be achieved.

#4 Define or refine the response structure/organization of the Incident Management Team and assign resources: An ICS consistent organizational chart is developed with personnel and resources assigned to Incident Management Team (IMT) positions and sections. This should be developed to provide the adequate management and resources needed for the organization to accomplish the incident objectives through the outlined strategies. It is important to note that the IMT organizational structure is constantly re-evaluated throughout the life cycle of the incident to ensure that it is adequate. Changes can be made (e.g., different personnel in positions, staffing or un-staffing of positions), but the current IMT structure should always be well documented and disseminated.

#5 Complete the incident action plan (IAP) and disseminate the information: The remainder of the IAP is completed so that incident information beyond objectives, strategy and major tactics

[40] ICS-300: *Intermediate ICS for Expanding Incidents (Version 2.0, April 2008). Unit 4: Incident/Event Assessment and Incident Objectives*, page 4-23. FEMA Emergency Management Institute. Emmitsburg, Maryland.

can be effectively conveyed through formal incident documents. These are presented through an operations briefing to key personnel, who then convey the information to the resources that they supervise and through other meetings, discussions, and liaison activities. The following are some of these mechanisms (explained in more detail below) that promote information dissemination and coordination throughout the IMT and with external organizations:

- Incident action plan and its supporting plans.
- Situation update reports.
- Operations briefings.
- Public information releases.

#6 Implement the plan: The operational period objectives with associated strategies and assignments are executed. In addition to operational period objectives and strategies, specific service level tactics (see Terminology Textbox) need to be developed. This is typically done at the individual functional level. Tactics may be incorporated into supporting plans, procedures, incident assignments, and protocols that establish parameters within which assigned resources operate.

Terminology alert!

Tactics: Tactics in incident management are specific actions, sequence of actions, procedures, tasks, assignments, and schedules used to fulfill strategy and achieve objectives.

#7 Evaluate and monitor effectiveness[41]: Good management processes dictate the constant monitoring of strategies and tactics for effectiveness in achieving objectives. In ICS, this is easily done by assessing the progress towards achieving the operational period objectives throughout an operational period and assuring that expected progress is achieved in a safe and timely manner.

#8 Revise and update incident action plans as indicated: The incident action plan is kept current and relevant through a cyclical process of re-evaluation and revision. By revising the operational period objectives, strategies, and tactics as indicated by successful

[41] "Effective" is defined as achieving the established organization-wide and/or unit-level strategic and tactical objectives.

actions and evolving incident circumstances, management maintains proper focus on priorities. **Because incident parameters, resource availability, and incident information all change through progressive stages of an incident, the operational period objectives will necessarily have to change from one period to the next**. Staying proactive and current through accurate and timely incident projection has been problematic for health and medical responders in the past (see Textbox 2.1.3.4), but should be effectively addressed using the formal incident action planning process.

Textbox 2.1.3.4

Revising/Changing Plans as an Incident Evolves

Promulgating written, incident-specific action plans has been difficult for some public health and medical incident managers, who feel that they must "be exactly right very quickly" and that a subsequent change to the plan constitutes failure.[42] This has caused delay in critical guidance during public health and medical incidents such as the anthrax 2001 dissemination (Amerithrax).[43] Incident action planning addresses this issue by providing a method for making incident decisions in a timely fashion and revising them at expected intervals as the incident evolves. Action planning also addresses the special considerations necessary for implementing decisions that carry a high degree of uncertainty.

- Deliberate management: The incident management or action planning process provides guidance on management methodology to transition rapidly from the early reactive posture to a more deliberate, proactive approach to managing the incident. Organizations are most effective when they 1) provide clear guidance for personnel during the early, reactive phase of incident response (e.g., using EOP checklists and job action sheets); 2) transition early from "reacting" to "proactively managing" the incident response actions (see below) using specific management by objective; and 3) maintain proactive management that coordinates effective action across the incident.

[42] Gursky, E.; Inglesby, T.V.; O'Toole, T. Anthrax 2001: Observations on the Medical and Public Health Response. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*; 1(2) 2003; pp. 97-110. Available at http://www.liebertonline.com/doi/pdf/10.1089/153871303766275763?cookieSet=1, accessed January 11, 2006.

[43] Gursky, E.; Inglesby, T.V.; O'Toole, T. Anthrax 2001: Observations on the Medical and Public Health Response. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*; 1(2) 2003; pp.97-110.

Sophisticated response systems provide efficient guidance to responders for the early, "reactive" phase of any incident. They also implement procedures that facilitate an early transition to "pro-active" management.

- Reactive guidance: Actions during the initial (reactive) phase of incident response are guided by personnel training and experience and by the checklist procedures established in the EOP. Response actions under this posture are guided by personnel reacting to their immediate situation, plus following defined procedures from the EOP such as initial reporting requirements, initial mobilization activities, and other specific tasks. The knowledge and skills used to address these activities are ideally achieved through adequate guidance from the EOP and personnel preparedness activities (i.e., education and training).

- Proactive guidance: As response progresses beyond the initial hectic moments and the IMT structure is implemented, management transitions from the purely "reactive phase" described above to a method of "proactive" management. This is accomplished by **establishing incident objectives, operational period (even if they are brief) objectives, strategies, tactics, and resource assignments that are focused forward in time rather than upon meeting only immediate tactical incident needs.** In an incident of prolonged duration, this **management by objective** is extended further by implementing formal incident action planning and developing a written incident action plan for defined operational periods. It is the responsibility of the Incident Commander to determine whether formal documentation of an incident action plan is warranted.

The Incident Planning Cycle provides a structured series of meetings in which organizational objectives are established and re-evaluated after defined periods (hence allowing the organization to pro-actively manage the event).

- Incident planning as the driving force: The flux in incident and response conditions is best managed using a formal incident action planning process that is based on regular, cyclical reevaluation of the incident information, incident objectives, strategies, tactics, and assignments. Commonly known in ICS as the Incident Action Planning Cycle, this iterative process can enhance the integration of health and medical organizations with other response agencies that also conduct action-planning cycles.

- Sectoring incident time into specified intervals for effective incident action planning: One of the difficult coordination issues during incident response is "getting everyone into synch" so that all are working from the same objectives during the same time period. This is accomplished in ICS by defining specific time intervals where the operational objectives, strategy, and tactics are applicable. This time interval is known as an **operational period** (see below).

  - An early important action for any IC is to establish the timing of

the operational periods (see Terminology Textbox).

Terminology alert!

***Operational period*:** A designated time interval during incident operations in which organizational strategies and tactics are guided by specific response objectives (operational period objectives) and action plans for that time interval. Operational period objectives are reviewed and revised (as necessary) before the subsequent operational period.

- The operational period can be of any length, although it is rarely longer than 24 hours except in low grade or chronic incidents.

- The operational period is not necessarily related to any particular shift length, although coordinating the operational period to start at the outset of at least one workforce shift may maximize efficiency.

- Incident action planning cycle: As described, incident action planning is an iterative process, continuously occurring throughout all stages of an incident. It is accomplished through a series of specific meeting types (see Exhibit 2.1.3.2). The timing of the planning cycle is tied to the designated operational period. For example, if the IC has designated an operational period of 12 hours, then the processes outlined below all occur within a time frame where the Operations Briefing immediately precedes the onset of the next operational period.

- Variations in incident action planning descriptions: **A wide variation exists in how the incident action planning cycle is described.** NIMS is not specific in addressing these variations. The specified meetings in the planning cycle that accomplish the incident action planning steps vary between ICS descriptions and between ICS organizations, although the tasks to be accomplished are the same overall. This is discussed in Textbox 2.1.3.5, and the rationale for selecting the description in this text is presented.

Textbox 2.1.3.5

Published Variations on the Planning Cycle

The multiple agencies and organizations that utilize ICS and "management by objectives" are all concordant in the need for operational period objectives to be established at the outset of the planning cycle. The actions that consistently follow the establishment of operational period objectives are devoted to developing suitable strategies, assignment of resources, and tactics to meet those objectives. How this is presented varies widely in terminology and exact methods, particularly as they relate to "meetings," the number and titles of meetings, and hence the exact description of the planning cycle.

For example, the original National Interagency Incident Management System (NIIMS)[44] listed only Planning Meetings and Operational Briefings that occur during the planning cycle. Though planning activities are described, these are primarily related to the Planning Section Chief. The operational period objectives are therefore implied to be "set" during or just before the Planning Meeting.

Many other agencies and organizations have discovered the utility of establishing operational period objectives and strategies through separate meetings that occur before the larger Planning Meeting. This allows the Planning Meeting to be more focused on establishing specific strategies, designating resources, listing reporting locations, placing orders for other resources, and other important considerations. This approach is reflected in the statement from the National Wildfire Control Group (NWCG):[45]

"Incident Objectives and Strategy should be established before the planning meeting. For this purpose, it may be necessary to hold a strategy meeting prior to the planning meeting."

The U.S. Coast Guard (USCG) documents are consistent with this approach and have been the most detailed. They establish both an "IC/UC Objectives Meeting" and a "Tactics Meeting" prior to the Planning Meeting in its "Planning Cycle P" model (see Exhibit

[44] NIIMS: *National Interagency Incident Management System*, accessed April 12, 2006 at: http://www.fs.fed.us/fire/operations/niims.shtml

[45] NWCG: *National Wildfire Coordinating Group, Fireline Handbook, Chapter 11 – Planning*, page 246; accessed October 9, 2009 at: http://www.nwcg.gov/pms/pubs/410-1/chapter11.pdf,.

2.1.3.3 in this text).[46] This approach has been incorporated into the latest revisions to NIMS (2008) – see figure 2.1.3.4 which designates an "IC/UC develop/update objectives meeting."

Other organizations establish meetings with similar purposes that occur prior to the Planning Meeting. They may be referred to as Management Meetings (objectives and strategies) and "Pre-Planning" Meetings (tactics and even some assignments are developed prior to the Planning Meeting – covered by the USCG in Preparing for the Planning Meeting in Exhibit 2.1.3.3).

This text recognizes the importance and efficiency gained by establishing objectives and some strategies before the Planning Meeting and therefore refers to these in this manner: Management Meetings are used to set objectives and broad strategies. Pre-planning meetings are not discussed in depth but may occur as needed to begin the process of establishing tactics and assignments prior to the Planning Meeting.

- Planning cycle steps: The key steps in the incident action planning cycle for healthcare systems are:
  - Transitional management meeting: This marks the initial transition in incident response from reactive to proactive incident management. The transitional meeting brings together the leadership of key response disciplines, **defines the primary IMT structure and assigns personnel to key position assignments (Command and General Staff and others as indicated).** It also provides the opportunity for these personnel to be briefed on the known incident parameters and so promotes a common operating picture. The operational periods are designated and so the timing of the Planning Cycle is also defined. The Incident Commander (usually in consultation with others) sets the incident objectives and the initial operational period objectives; the planning cycle process then moves forward. The transitional management meeting is designated differently by some response organizations, but the purpose and activities remain the same. For example, in the NIMS 2008 description of the Planning Cycle, the transitional management meeting could be represented by three steps in the Planning P (see Exhibit

The Transitional Management Meeting allows an organization to formalize the IMT organization and set initial operational objectives and to define its initial response structure.

[46] U.S. Coast Guard . *U.S. Coast Guard Incident Management Handbook(August 2006)*, COMDTPUB P3120.17A, accessed January 31, 2010 at: http://www.uscg.mil/hq/nsfweb/docs/FinalIMH18AUG2006.pdf

2.1.3.4).[47]

- Incident briefing using ICS 201.
- Initial Incident Command/Unified Command meeting.
- IC/UC develop/update objectives meeting.

Terminology alert!

Transitional Management Meeting: The initial meeting (preferably in person) in which the IC is determined. Staff that participated in the initial reactive activities should brief the selected IC on incident parameters as they are known. Initial organizational decisions and assignments to Command and General Staff are made, and initial operational period objectives are established.

- Planning meeting: Using operational period objectives set during the transitional (or a subsequent) management meeting, the Command and General Staff decides upon strategies, general tactics (if not already accomplished in a Tactics Meeting), the **incident assignments** (the primary purpose of the planning meeting). These are documented by the Planning Section and become a central component of the IAP. The addition of supporting plans (safety plan, medical plan, communication plan, and others) completes the IAP for the upcoming operational period. The Incident Commander then approves the IAP by signature.

[47] United States Department of Homeland Security. *National Incident Management System*. (2008) *Appendix B: Incident Command System*, page 123; accessed February 15, 2010 at: http://www.fema.gov/emergency/nims/

Exhibit 2.1.3.3: Depiction of the planning cycle's detailed activities from NIMS 2008.[48]

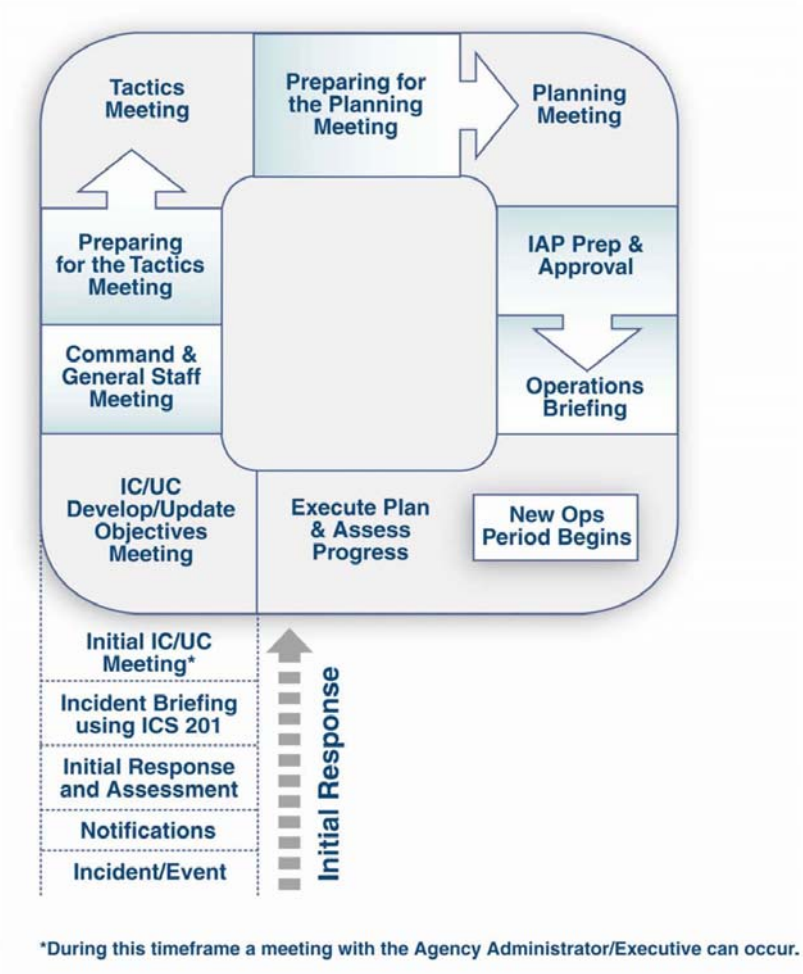
APPENDIX B: INCIDENT COMMAND SYSTEM

B. Responsibilities and Specific Planning Activities

1. Operational Period Planning Cycle

Figure B-9 is a graphical representation of the planning cycle.

Figure B-9. Operational Period Planning Cycle



*During this timeframe a meeting with the Agency Administrator/Executive can occur.

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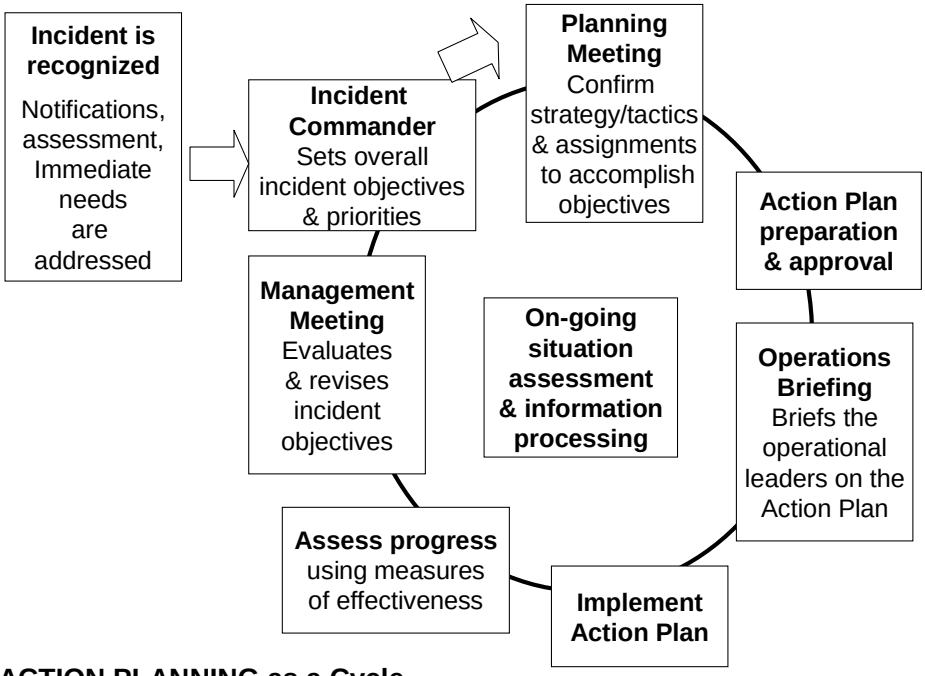
[48] U.S. Department of Homeland Security. *NIMS 2008. Appendix B: Incident Command System*, page 123; accessed October 1, 2009 available at http://www.fema.gov/emergency/nims/

The Operations Briefing is an important event that allows the sharing of critical organizational objectives and assignments. .It is often attended by representatives from supporting organizations or from different levels of government.

- Operations briefing: All components of the response system are briefed on the incident objectives, operational period objectives, strategies, and assignments. The purpose of the operational briefing is to impart a common operating picture, convey information specific to the next operational period and allow attendees to raise any emergent issues. It is not to discuss alternative plans, debate choices made in the planning process, or undertake extensive problem solving. In traditional descriptions of ICS, the operational briefing occurs in person, but it may also occur telephonically or through electronic communications. A defined briefing process imposes disciplined and efficient operational briefing, with time constraints adhered to, distractions limited, and questions kept to a minimum. The next operational period begins at the conclusion of the operations briefing.

- Management meeting: This marks the onset of the next planning cycle. Incident managers reevaluate operational period objectives and progress made towards achieving them, based upon information collected throughout the operational period. Operational period objectives are revised and new ones are established as indicated. The general ICS structure is reevaluated and changes made as indicated to meet the objectives. In the NIMS planning P, this could be equated to a combined IC/UC develop/update objectives meeting and the command and general staff meeting.

Exhibit 2.1.3.4: Incident action planning depicted as a cycle,[49] with the Incident Commander accomplishing the transition to formal planning. In this version, overall incident objectives and priorities can be interpreted to mean "incident objectives" and "operational period objectives" respectively.



ACTION PLANNING as a Cycle

The coordination of the timing of Planning Cycles within and across different levels of government or response can provide a critical means for coordinating these entities.

- Timing of the Planning Cycle between responding organizations: The timing of the development of incident action plans should be coordinated among different agencies. The updated information and updated "incident objectives" (the overall objectives for the incident) may be shared across response agencies before operational period objectives, strategies, and tactics for each participating organization are established.

Command and General Staff personnel all have distinct responsibilities in contributing to the incident action planning process.

- Incident action planning responsibilities: Responsibility for contributing to the comprehensive incident action planning is distributed among the Command and General Staff, with the Planning Section personnel coordinating the process and assembling the data. The responsibilities are summarized in Textbox 2.1.2.6.

[49] Adapted from Mr. Pete Brewster (VA EMSHG) slide presentation on incident management.

Textbox 2.1.3.6

IAP Responsibilities

Incident Commander
- Provide general incident objectives, operational period objectives and major strategy (priorities, etc.).
- Activate ICS positions, as needed.
- Establish policy for resource orders.
- Approve initial actions and completed IAP.

Planning Chief
- Prepare for the Planning Meeting, including developing supporting plans such as Demobilization and Contingency Plans.
- Conduct the Planning Meeting.
- Support the Operations Section Chief with the Tactics Meeting if requested.
- Coordinate preparation of the IAP.
- Advise Incident Commander on ICS Units needed in Plans.

Operations Chief
- Determine area(s) of operation.
- Advise Incident Commander on ICS Branches/Divisions/Groups/ Units needed in Operations.
- Determine tactics (Possibly using a Tactics Meeting).
- Determine work assignments.
- Determine resource requirements.

Logistics Chief
- Ensure resource ordering procedures are developed.
- Advise Incident Commander on ICS Units needed in Logistics.
- Ensure the IAP can be supported.
- Develop IAP Supporting Plans such as the Communication and Transport Plans.

Finance/Administration Chief
- Provide cost implications of control objectives, as required.
- Ensure the IAP is within the cost limitations established by Management.
- Advise Incident Commander on ICS Units needed in Admin/Finance.

- Incident action planning cycle critical teaching points:

  - The value of a documented IAP: For health and medical disciplines, documentation of an incident action plan has not commonly been viewed as an essential action during response,. It is, however, one of the most effective means for coordinating between multiple locations, resources, and levels of government.

  - Frequent Planning Meetings during the reactive phase: In the early stages of an incident, especially a sudden onset impact with no-prior notice, the Command and General Staff may need to meet frequently to accomplish incident action planning. They compare information, discuss initial operational period objectives, strategy, and major tactics and examine the effectiveness of current actions. This is accomplished in the early stages of an incident by conducting "Planning Meetings" at regular intervals, with more frequent meetings if unexpected circumstances arise.

  - Planning Meetings as a coordinating mechanism: The above-described meetings allow the Command and General Staff the opportunity to develop a "common operating picture" (i.e., all understand the situation). The meetings also assure adequate support from Logistics, Planning, and Finance/Administration by providing them information so they can anticipate support requirements well ahead of when they are needed.

  - Meeting discipline is critical: All incident action planning meetings and briefings should be short, very tightly structured, and adhere to an agenda. They should avoid lengthy problem solving by identifying issues and assigning parties to resolve them outside the formal meeting. These "sidebar" issues should be tracked and their recommended resolution reported at the next planning meeting or through incident messages as indicated.

  - Setting tactics: The Operations Section Chief is generally responsible for the tactics to accomplish the operational period objectives. The Planning Section captures these for incorporation into the incident action plan. In complex incidents, this may occur at a separate Tactics Meeting (see Exhibit 2.1.3.3) that is conducted prior to the Planning Meeting,

  - Monitoring effectiveness of the ICS organization: Incident Command must continually evaluate the response structure and span-of-control, and may need to make urgent changes even before the next Management Meeting.

All incident planning cycle meetings should be brief and concise. Templates as to who is responsible for presenting specific material are often used in ICS. As an example, Operations Briefings should not last longer than 30 minutes.

- Span-of-control strategies: Strategies to address span-of-control issues include incorporating more sub-divisions to the IMT organization and therefore supervisory more positions. It may also include sectoring (by geography or by function) a large or complex incident scene.

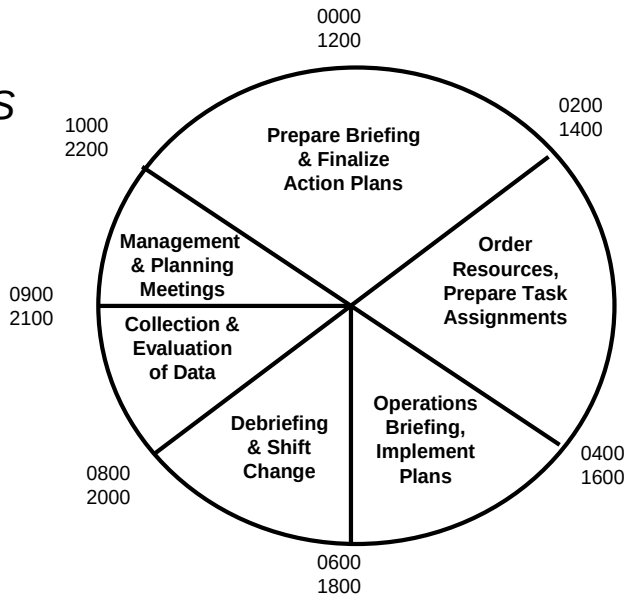
- Resources strategies: Strategies for addressing the need for additional management and supervisory resources include mutual aid and other avenues beyond the IMT's usual assets.

○ Timing of incident action planning cycle tasks: Setting the operational period will determine the timing of the incident action planning cycle and the specific planning cycle tasks (see Exhibit 2.1.3.5 for an example). An incident action planning cycle is timed so the Operations Briefing precedes the start of the next operational period, since the work for that period is guided by the new IAP presented in the Operations Briefing. As noted earlier, scheduling the briefing to occur just before the onset of the next worker shift may be most efficient, providing direction to incoming workers from the new IAP.

○ Planning Section as the Action Planning driver: Throughout the incident action planning process, the Planning Section plays a critical role by stewarding the planning activities and by processing data into information that is relevant to incident decision-making.

Exhibit 2.1.3.5: An example of timing a Planning Cycle based on a 12-hour operations cycle.[50]

Planning cycles must be synchronized across the ICS Organization.



Brewster

- ICS Forms: The incident action planning process is facilitated in a coordinated and deliberate manner through use of **ICS forms** (Exhibit 2.1.2.6). The Planning Section establishes early reporting requirements (when forms need to be submitted) to effectively manage the Incident Action Planning Cycle.

  - Timing: The proper use of the forms at the indicated time phases will actually drive the planning process forward (see Exhibit 2.1.2.6). Completion and processing of the forms, in basic ICS, develops the incident action plan.

  - Healthcare Systems ICS forms: Many different forms are commonly utilized in ICS. Exhibit 2.1.2.5 lists ICS forms that are very useful when adapted for the healthcare system use. An explanation of each form follows the exhibit.

[50] Adapted from Mr. Peter Brewster (VA EMSHG) slide presentation on the Incident Management process.

ICS has established pre-numbered forms that are used to facilitate information management and drive the incident action planning process. The numbered forms commonly relevant to the IAP are Forms 202-206.

Exhibit 2.1.3.6: Summary purpose of the ICS forms

ICS Forms

Initial Phase	Planning Meeting	Incident Action Plan	Executive Summary	Resource Tracking	Misc.
201: Incident Briefing	215: Planning Worksheet	202: Incident Objectives	209: Incident Status Summary	210: Status Change	213: General Message
	215A: Safety Analysis	203: Organization List		211: Check-in List	214: Unit Log
		204: Assignments		219: T cards	230: Meeting Schedule
		205: Comm Plan		221: Demob Checkout	
		206: Medical Plan			
		207: Org Chart			
		208: Safety Plan			

- Commonly Used ICS Forms:
  - 201, Incident Briefing: Designed for the early stages of an event to capture essential initial information as it is known. This form carries the title "briefing" since it is intended for use by initial response personnel to brief the Commander assuming control of the incident.
  - 215, Planning Worksheet: Used to match resources with needs prior to and during incident Planning Meetings (updated as needed).
  - 215A, Safety Analysis: Used to assess safety for responders during a specific incident response. The form promotes a detailed and organized evaluation of risks that may be present, and prompts considerations for reducing or eliminating those risks. The information developed may be transmitted to responders through Form 208 and/or the safety message in the body of the IAP.
  - 202, Incident Objectives: Used to list organizational objectives. May be configured to list overall incident

objectives and specific operational period objectives. Usually contains a summary safety message as well (developed and subsequently revised/updated during the Management Meeting for each operational period).

- 203, Organization Assignment List: Contains list of organization response and recovery positions with names of persons assigned to each position. This is initiated during the Management Meeting to list assignments to major positions, completion of assigned positions are finalized during the Planning Meeting; updated during the Planning Meeting for each operational period.

- 204, Assignment List: Specific tasks with assigned tactics and resources listed to meet operational period objectives that were documented on the 202 (updated/finalized during the Planning Meeting for each operational period). Several 204s may be filled out, depending upon the complexity of the incident and the number of tactical assignments within the Operations Section.

- 205, Communications Plan: Listing of key personnel with contact methods (developed and updated by the Logistics Section Communications Unit at the end of the Planning Meeting for each operational period).

- 206, Medical Plan: Step-by-step instructions for emergency care of injured or ill **response** personnel (developed and updated by the Logistics Section Medical Unit for each operational period).

- 207, Organizational Chart: Presents a one-page organizational chart for listing personnel assigned to specific positions. In essence, it presents in a visual format the same information provided on the 203. Completed by the Planning Section at the end of the Planning Meeting.

- 208, Site Safety Plan: Safety considerations for response personnel to consider, and is used for non-routine incidents or those with complex safety issues. This document will often list both hazards and protective actions (Developed and updated by the Safety Officer for each operational period). In incidents with only straightforward safety issues, a Safety Message within the body of the IAP (on form 202) may substitute for a 208.

ICS Form 206, the Medical Plan, is used to outline medical care if needed by responders. It is not the operational plan for providing care to incident victims.

- 209, Incident Status Summary: Brief review of hazard impact on organization (and community as appropriate), response efforts/achievements, intended actions, and special concerns (updated as often as requested by management/command). This form serves as valuable update mechanism internally (e.g., for PIO) and externally (e.g., for the Agency Executive, for the EOC, for political leadership and other).

- 211, Check-in List: Used to document the arrival of key response personnel; may also be used for accountability as a sign-out sheet.

- 213, General Message: Used to formally document any important communications from one element of the response system to another. In ICS, this form can also be used to document resource requests.

- 214, Unit Log: Used to document activities of each specific unit during each operational period.

- 221, Demobilization Checklist: Used to track the out-processing of response personnel at the completion of an incident. This form includes checklist items such as the return of response specific equipment.

- 230, Meeting schedule: Listing of times, purpose, and locations of various meetings important to management of system (updated each operational period).

ICS forms can be adapted to the individual specific needs of the individual healthcare system. Some systems may not find the need to utilize all of them.

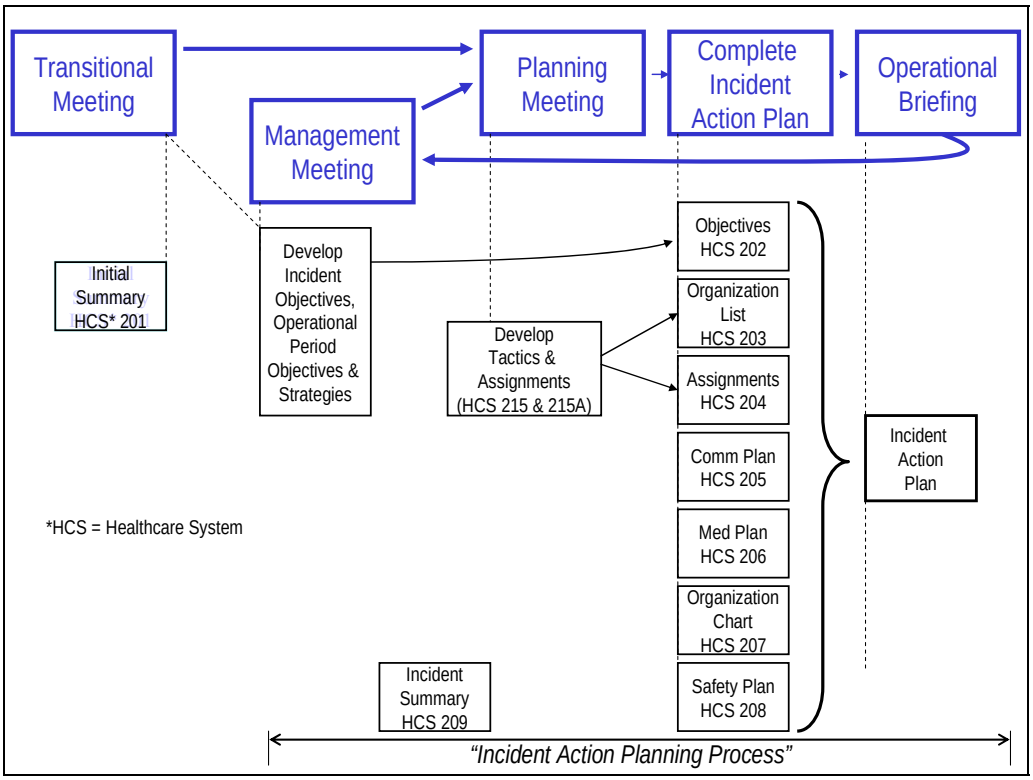
- Customizing ICS forms: ICS forms were originally developed for the wild land firefighting environment. The exact content and the format of the standard forms reflect the wild land fire experience. They may therefore require adjustment by other disciplines so that they are optimally useful to their incident response situation. The intent of each form and the designation responsibility for individual forms should remain consistent with standard ICS. See Unit 3 for healthcare examples.

- ICS forms as the IAP: In traditional ICS, the incident action plan is merely a compilation of the ICS forms appropriate to the specific incident and its current operational period. Forms 202-206 serve as the primary component of an IAP, with other forms added as needed (and approved by the Incident Commander). Exhibit 2.1.3.7 depicts the use of ICS forms in driving the incident action planning process and forming the IAP.

- Additional forms developed within the ICS: As each organization develops its EOP using the ICS framework, they may recognize the need for additional forms that are not standard within ICS in order to manage their information. For example in healthcare, forms related to patient tracking or forms to manage a personnel pool within the hospital may be necessary. These generally are assigned as subsets to standard ICS forms and are numbered accordingly to reflect that. A patient tracking form, for example, may be considered a subset of the Situation Report/Incident Status Summary (ICS-209) and therefore could be designated "Hospital ICS-209T."

In traditional ICS, the Incident Action Plan is merely a compilation of the ICS forms appropriate to the specific incident and its current operational period.

Exhibit 2.1.3.7: The use of ICS forms in driving the planning process to an IAP.



- Additional ICS Concept of Operations issues: Other system management issues can become important during emergencies, and so are best considered and addressed when delineating the Concept of Operations. They include:

  - Incident Recognition: This is the interval when an organization determines whether emergency response actions are needed. The incident recognition process identifies an anomaly (either independently or through communication with others), develops a

It can be difficult to recognize that evolving event parameters constitute a potential incident for the organization. Processes to facilitate the incident recognition and activation decision-making process may be important, especially for Healthcare Systems.

rapid situation assessment of the anomaly, and determines whether an emergency response by the organization (i.e., one requiring emergency response beyond baseline operational capability) may be necessary. An "incident" exists for the organization whenever an actual or potential need arises to provide emergency-related actions and so activation of the Emergency Operations Plan is indicated. This is not always obvious. For example, one or two patients presenting to scattered healthcare facilities with progressive paralysis indicating botulism may not be immediately recognized as a major public health problem until they are linked to a single toxin source. Because of this potential ambiguity, the process used to move from an early suspicion to recognizing that incident response is indicated should be carefully considered (see Textbox 2.1.3.7):

- Prompt assembling of command personnel: Early convening of an organization's multi-disciplinary command personnel (an authority from each lead agency or from key operating units within a healthcare system, for example) may provide the necessary understanding of any health impact associated with an event, and it may clarify whether an event needs to be formally declared an emergency or some component of EOP activation is warranted.

- Standardized convening process: A process must be in place to quickly bring together (physically or virtually) the key decision makers within the organizational tier to discuss whether this is an incident, provide a balanced picture across multiple disciplines, and determine the next steps. This "planning meeting" may be accomplished, for example, through group paging and a conference call line reserved for this critical group, with a designated position within this group to facilitate the meeting.

Textbox 2.1.3.7

When Do "Circumstances" Become an "Incident"?

A set of circumstances becomes an "incident" when the system managers decide that the ICS processes within its EOP are needed, and so the EOP is partially or fully activated.

Initial incident parameters may be very subtle, and it is only later that it is obvious they were indicators that the EOP should be activated. Conversely, the findings may be obvious at the outset. In healthcare systems, these indications may arise from within the organization (e.g., identification of an infectious agent in a patient that has already been admitted) or externally (e.g., an explosion and notification via EMS or the media).

The initial "incident" could therefore be *"determining if an incident (for the healthcare system) exists, and what to do if it does."* The primary resources activated may only be assigned to monitor the media or other reports, and to develop contingency plans (through assigned Planning Section personnel) in case the concern becomes a reality.

Similarly, an "imminent threat" can be the incident. For example, with an approaching hurricane, the EOP is activated to manage "incident" activities. Pre-impact actions include "hardening" the physical plant (hurricane shutters if indicated, preparing for flooding, checking the electrical generators), and managing personnel availability (rostering personnel for the impact and immediate post-impact period, relieving them of duty to prepare their families, and others).

- Establishing incident command authority: For certain types of incidents, the lead management authority and how management will be conducted are relatively straightforward (e.g., local fire service usually manages an explosion at a shopping mall), and a decision support tool should be developed to address the majority of incident types (see Exhibit 2.1.3.8). Management authority is more ambiguous in incidents that extend across jurisdictional boundaries or authorities (e.g., bombing at a Federal facility) or when the impact is diffuse (e.g., disease outbreak in multiple State jurisdictions). **For most major incidents, tradition (and successful previous experience) dictates that local jurisdictional authorities and their designated public safety leaders are responsible for incident management. For a**

Clear delineation of Command organizations and locations is a vital initial response activity outlined in the Concept of Operations.

diffuse impact scenario, State public health authorities (in a unified management model similar to "area command" described in NIMS) might assume the lead role in unified incident management and coordinate the incident response across the affected jurisdictions. Jurisdictional authority as established in public law is the basis for determining whether local versus State public safety agencies are the incident command authority and which specific agency is lead authority. This can vary by State. If the authority is unclear, the decision may be made by agreement between the parties or by decree by the controlling political authority.

Exhibit 2.1.3.8: Decision Support Tool example: Lead Agency Designation for Arlington County, Virginia[51]

Hazard Type	Lead Incident Command Agency(s)
Aircraft Incident	Fire Department or Police Department
Building Collapse	Fire Department
Earthquakes	Fire Department/Office of Emergency Management
Epidemics, Diseases, and Health Threats	Department of Human Services
Explosion	Fire Department or Police Department
Fire	Fire Department
Floods	Fire Department/Office of Emergency Management
Food contamination	Department of Human Services
HAZMAT Incidents	Fire Department
Jail (Riot/Hostage)	Sheriff's Office
Nuclear Attack	Fire Department
Radiation Incident	Fire Department
Pipeline Spill, Fire, or Explosion	Fire Department
Riots, Civil Disturbances, Mass Arrest	Police Department
Terrorism Crisis and Hostage Situation	Police Department
Tornado, Hurricanes, and Severe Storms	Fire Department/Office of Emergency Management
Train Derailment	Fire Department
Water Contamination – Human Threat	Department of Human Services
Water Quality/Quantity	Department of Environmental Services or Department of Human Services
Water Supply Distribution System	Department of Environmental Services
Winter Storm	Department of Environmental Services
Resource Shortage	Emergency Management

Lead Agency designation for Incident Command and Unified Incident Command, listed by hazard type. For some hazards, multiple lead agency possibilities exist, depending upon the specific incident circumstances.

- Establishing the Incident Command Post: The site where the primary management team will function must be rapidly established and publicized across the response system. During any sudden onset or large-scale incident, several initial management sites are often established and operated by the

[51] Arlington Virginia Emergency Operations Plan, May 2005: 27, accessed October 9, 2009 at: http://www.co.arlington.va.us/Departments/EmergencyManagement/pdf/EOP.pdf

various response disciplines and across the range of government tiers. The terminology used to designate them may not reflect their actual roles. Thus, identifying and publicizing the primary management site and how it integrates the other sites is a critical task in organizing incident-wide, proactive management. As soon as possible in the incident planning process, an overall incident command structure should be established and publicized, so that the relationship between the various command, support, and operations centers are understood.

- Other early activities in the Concept of Operations: Multiple other actions are important to accomplish in this early stage of incident response. Exhibit 2.1.3.9 provides a summary example of these items.

Exhibit 2.1.3.9: Early actions in a no-notice sudden onset incident.

Incidents without Warning

(Explosion, shooting, fire, hostage, chemical spill, structural collapse, tornado strike, IT failure, other)

Employees/Supervisors initiate the response:

- ***Someone Takes Charge ('assumes command')!***
- Conduct size-up
- Establish a Command Post
- Establish communications & effect notification to the organization and public safety as indicated
- Develop an "initial attack" strategy
- Resource analysis
- Designate an Operations Chief
- Designate a Safety Officer
- Secure the scene
- Deploy responders
- Designate a Planning Chief
- Designate other functions, as needed
- Reassesses response organization & management

Adapted from Brewster

- Ongoing activities in the Concept of Operations: As the incident continues to unfold and data is accumulating from initial response actions, the Command moves towards more organized management structure and formal incident action planning.

"Using" ICS for Incident Response

It is important to emphasize that an organization "uses" ICS during an incident because ICS has been fully incorporated into its emergency

operations plan (EOP). ICS is then "used" through the activation and use of the EOP, not by "using ICS." The EOP's guidance, forms, and other job aids all should have incorporated ICS principles in a consistent manner. The EOP activation threshold should therefore be clearly described, and should be set so that if ICS principles provide a more effective management of the evolving event compared to normal management methods, the EOP activation is triggered.

Organizations should distinguish between "occurrences" that happen on a day-to-day basis and "emergencies" that trigger EOP activation. One terminology approach to defining these is presented in Textbox 2.1.3.9.

Textbox 2.1.3.9

"Occurrences" Versus "Incident"
Differentiated in Terms of the Response Needs

- ***Everyday occurrence:*** The usual organizational functions accomplish the expected outcome using everyday management and operations. Even if an organization considers its everyday operations as "emergency response," these everyday activities are distinct from the emergency management definition of true emergencies.

- ***Urgent occurrence:*** Stepped up everyday response to accomplish the expected outcome; these are events where the organization and its personnel "work very hard" to accomplish the expected outcome using everyday management and operational procedures.

- ***Emergency incident:*** Incident-level response to accomplish the expected outcome. These are circumstances where incident management and incident level response, accomplished through partial or full activation of the EOP, is necessary to achieve the expected outcome.

- ***Disaster incident:*** Incident-level response that is unable to meet incident demand and the outcome is less than expected. A goal of emergency management is to transform potential "disaster" incidents into "emergencies."

- ***Proxy events:*** Actual experiences that, while not true emergencies or disasters, have characteristics that provide valid insight into the adequacy of response system components. They may therefore provide some predictive value for system performance in future incidents. Exercises may be considered to be constructed proxy events.

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Lesson 2.1.4: Multi-Agency Coordination Systems

Lesson Objectives

- *List potential components of a Multiagency Coordination (MAC) System.*
- *Define the NIMS terms "EOC" and "MAC Group."*
- *Describe different organizational models for EOCs.*
- *List examples of the application of MACS concepts to healthcare systems.*

Introduction

As mentioned in lesson 2.1.1, the concepts that exist within Mutliagency Coordination Systems (MACS) have important applicability to healthcare systems. The principles behind MACS have existed for the same period of time as ICS and have undergone similar, slight revisions over the years.

As NIMS states, "Multiagency coordination is a process that allows all levels of government and all disciplines to work together more efficiently and more effectively."[52] Simply put – whereas ICS provides guidance for how organizations will internally manage their response, the concepts behind MACS provide guidance for how multiple agencies can work together to coordinate and support incident management activities Given that healthcare organizations can be complex in and of themselves and their response is often tied inextricably with that of other response organizations, MACS principles are applicable to their emergency response efforts.

MACS and MACS elements defined

Another way of explaining MACS can be the following. The traditional point of reference for incident command is the jurisdiction, typically a specific agency. The term "agency" in ICS and MACS, however, does not have to be governmental entity (see Terminology Textbox).

[52] U.S. Department of Homeland Security. *National Incident Management System.* (December 2008). Washington DC, page 64; accessed October 1, 2009 at: http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf.

Terminology alert!

Agency: An agency is a division of government with a specific function, or a nongovernmental organization (e.g., private contractor, business, etc.) that offers a particular kind of assistance. In ICS, agencies are defined as jurisdictional (having statutory responsibility for incident mitigation) or assisting and/or cooperating (providing resources and/or assistance).[53]

When an incident occurs, it is often locally based and managed. For incidents that cross jurisdictional boundaries, area command (see Terminology Textbox) may be established or State level command may be established. The local incident command is often supported by personnel, facilities, equipment and supplies that are provided through a locally based Emergency Operations Center (EOC), other Department Operations Centers (DOCs), dispatch centers, or by high level public officials making policy decisions that furnish resources from elsewhere. Collectively, these entities and the processes they follow are referred to as elements of a MAC system. A more formal definition of MACS extrapolated from the material provided by NIMS and ICS 400 is in the following Terminology Text box.

Terminology alert!

Multiagency Coordination Systems: A system that provides the architecture to support coordination for incident prioritization, critical resource allocation, communications, systems integration, and information coordination. MACS assist agencies and organizations responding to an incident. The elements of MACS include facilities, equipment, personnel, procedures, and communications. Two of the most commonly used elements are Emergency Operations Centers and MAC Groups.[54]

[53] FIRESCOPE California: Glossary of Terms ICS-010-1 Incident Command System Publication October 15, 1999, accessed May 20, 2010 at: http://www.firescope.org/ics-guides-and-terms/ICS%20010-1.pdf

[54] U.S. Department of Homeland Security. *National Incident Management System Glossary*. (December 2008). Washington DC, page 143; accessed October 1, 2009 at http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf.

Terminology alert!

***Area Command**:* An organization established (1) to oversee the management of multiple incidents that are each being handled by an ICS organization or (2) to oversee the management of large or multiple incidents to which several Incident Management Teams have been assigned. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources according to priorities, ensure that incidents are properly managed, and ensure that objectives are met and strategies followed... Area Command may be established at an emergency operations center facility or at some location other than an incident command post. [55]

There are several basic attributes in the concept of a MAC system:

- Wide applicability: MACS can exist at all levels of government, between levels of government and with and within the private sector. Hence, MACS principles have applicability to all types of healthcare organizations.[56]

- Supporting, not managing, the actual incident: Though MACS may control (have command of) resources until control is assumed by the Incident Management Team, they do not all have control of the incident scene. MACS provide methods for the coordination of the resources in support of incident command.[57]

- Multiagency coordination can exist in many different formats: The MACS function can range from very complex to very straightforward, depending upon the size and scope of the incident. For very limited incidents, the simple act of a resource coordinating teleconference is

[55] U.S. Department of Homeland Security. *National Incident Management System Glossary*. (December 2008). Washington DC, page 135; accessed October 1, 2009 at http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf.

[56] U.S. Department of Homeland Security. *National Incident Management System*. (December 2008). Washington DC, page 66; accessed October 1, 2009 at http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf.

[57] The concepts behind a defined "incident scene" are easier to conceptualize when traditional *public safety* incidents are considered (whether focal or broad based). An incident scene is harder to define in *public health* incidents such as the outbreak of an infectious disease. This problem is compounded by the widespread reticence of many health departments to assume incident command.

consistent with the MACS function.[58] Obviously, more complex activities are necessary for large incidents involving multiple organizations and levels of government.

- Established MAC methods are superior to ad hoc coordination: Multiagency coordination can occur in an ad hoc fashion but it is better conducted utilizing pre-planned processes and procedures.

The coordination function of MACS can be expansive. Because the term "coordinate" can be interpreted in different ways during response, relatively objective definitions are presented (see Terminology Textbox) and used in this text.

Terminology alert!

Coordinate: Exchanging information and coming to broad agreement.

NIMS 2008 Definition: To advance an analysis and exchange of information systematically among principals who have or may have a need to know certain information to carry out specific incident management responsibilities.

The primary coordination functions of MACS have been described in NIMS as:[59]

- Situation assessments
- Incident priority determination
- Critical resource acquisition and allocation
- Support relevant incident management policies and interagency activities
- Coordination with other MACS elements
- Coordination with elected and appointed officials
- Coordination of summary information

Multiagency coordination systems are traditionally described as being made up of facilities, equipment, personnel, procedures, and communications (note similarity to the definition of ICS).

[58] ICS 400 Student Manual. Version 2, April 2008. Page 5-18. FEMA Emergency Management Institute. Emmitsburg, Maryland.
[59] U.S. Department of Homeland Security. National Incident Management System. (December 2008). Washington DC, pages 68-69, accessed October 1, 2009 at: http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf.

Two important and frequently cited elements of MACS are the coordination center function, commonly called the Emergency Operations Centers (EOCs), and the strategy and decision function, categorized as MAC Groups. Definitions are provided in the following terminology alerts with NIMS definitions provided for comparison.

Terminology alert!

Emergency Operations Center: A location from which centralized emergency management can be performed during response and recovery. The use of EOCs is a standard practice in emergency management, and is one type of multiagency coordinating entity. Local governments should have designated EOCs. The physical size, staffing, and equipping of a local government EOC will depend on the size and complexity of the local government and the emergency operations it can expect to manage. A local government's EOC facility should be capable of serving as the central point for:

1) Coordination of all the jurisdiction's emergency operations
2) Information gathering and dissemination
3) Coordination with other local governments and the operational area.[60]

NIMS 2008 Definition: The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction.

[60] California Emergency Management Agency. *Standardized Emergency Management System, Section C. Local government level*., accessed March 26, 2010 at: http://www.calema.ca.gov/WebPage/oeswebsite.nsf/ClientOESFileLibrary/Plans%20and%20Publications/$file/2006-SEMSGdlins-Part1C.pdf

Terminology alert!

Multiagency Coordination Group (MAC Group): Typically formed by senior level executives, administrators, or their designees representing the various organizations participating in the MAC System and that commit resources and funds. Based upon their decision-making authority for their respective organizations, these representatives can collectively de-conflict priorities amongst the representative agencies and make policy level decisions relevant to the response that affects multiple organizations. Formerly called "MAC Entity" in NIMS 2004.

NIMS 2008 Definition: A group of administrators or executives, or their appointed representatives, who are typically authorized to commit agency resources and funds. A MAC Group can provide coordinated decision making and resource allocation among cooperating agencies, and may establish the priorities among incidents, harmonize agency policies, and provide strategic guidance and direction to support incident management activities.

It is important to note that though EOCs are defined by NIMS as physical locations, the **EOC function** can occur outside of a predetermined or designated facility. This is particularly relevant to healthcare emergency management, where healthcare organizations may coordinate and conduct distributed activities between and among themselves during emergency response and recovery without requiring a fixed EOC. Interestingly, MAC Groups are not defined by NIMS in association with a fixed location. It is recognized that they can be convened virtually in many, if not most, situations.

Further complicating the concepts of EOCs is the idea that in some large incidents, Incident Command may be co-located with an EOC. "EOC facilities can be used to house area command and multiagency activities, as determined by agency or jurisdiction policy."[61] If this is to occur, it is recommended that the "command" and the "MACS" activities are physically distinguished and located.

The current version of ICS 400 student guide provides another way of considering the types of organizations associated with MACS (see exhibit 2.1.4.2).

[61] Federal Emergency Management Agency. *ICS 400 Student Manual, Version 2, April 2008*, pages 5-21. FEMA Emergency Management Institute. Emmitsburg, Maryland.

Exhibit 2.1.4.2: Examples of multiagency coordination organizations[62]

Examples of multiagency coordination organizations include:

- Decision making elements
  - Multiagency coordination (MAC) groups
  - Crisis action teams
  - Policy committees
  - Agency executives
- Facilities/Operations support elements
  - Dispatch centers
  - Emergency operations centers (EOCs)
  - Department operations centers (DOCs)
  - National operations centers (NOCs)

Organizational structures for EOCs

It is accepted that EOCs can possess different organizational structures. There is no one mandated structure or operating system. Examples include the following:[63]

- ICS functional organization: The structure of the EOC organization is arranged according to traditional ICS functions. Therefore, there are designated command, operations, planning, logistics, and finance/admin elements within the EOC. The Command Position of the EOC is not referred to as "Commander" but more commonly as a "Manager" or "Director." It is imperative that designators are used to distinguish the EOC functional elements from ICS functional elements (e.g. EOC Planning Section Chief).

- Management functions: In this model, major management activities of the EOC are grouped. Examples include a Coordination Groups (collects and analyzes data), Operations Group (composed of representatives from agencies with a role in the response), and a Resource Group (representatives from agencies that are providing

[62] Federal Emergency Management Agency. *ICS 400 Student Manual, Version 2*, April 2008, pages 5-20. FEMA, Emergency Management Institute. Emmitsburg, Maryland.
[63] Federal Emergency Management Agency. *ICS 701 Student Manual, October 2006*, pages 2-11 to 2-16. FEMA Emergency Management Institute. Emmitsburg, Maryland.

supporting resources to the response).

- Emergency Support functions: This model organizes the EOC according to the support functions presented in the National Response Framework (NRF) – see exhibit 2.1.4.3. The 15 ESFs can serve independently as the organizational structure or they can be incorporated into an ICS structure (e.g. Operations containing ESF 4, ESF 8, and ESF 9, etc.).

Exhibit 2.1.4.3 – NRF Emergency Support Functions

Emergency Support Functions of the National Response Framework (January 2008)

- ESF 1: Transportation
- ESF 2: Communications
- ESF 3: Public Works and Engineering
- ESF 4: Firefighting
- ESF 5: Emergency Management
- ESF 6: Mass Care
- ESF 7: Logistics Management and Resource Support
- ESF 8: Public Health and Medical Services
- ESF 9: Search and Rescue
- ESF 10: Oil and Hazardous Materials Response
- ESF 11: Agriculture and Natural Resources
- ESF 12: Energy
- ESF 13: Public Safety and Security
- ESF 14: Long Term Community Recovery
- ESF 15: External Affairs

ICS 701 notes the inherent strengths and weaknesses of each of the above listed models. Most significantly, the interaction with the ICS and the clarification of resource ordering is not intuitive in some of the models. California SEMS[64] and many others are increasingly using ICS principles to manage EOCs, Department Operations Centers (DOCs), and other MAC elements. This approach is strongly endorsed by the authors of this text.

If ICS principles are applied within the MACS, the concept of operations for many MACS elements such as EOCs will often look very similar to that of ICS response organizations. For example, the principles behind

[64] California Emergency Management Agency. *Standardized Emergency Management System, Section C. Local government level*., accessed March 26, 2010 at: http://www.calema.ca.gov/WebPage/oeswebsite.nsf/0/7386D576C12F26F488257417006C07A7?OpenDocument

management by objectives and incident action planning are often utilized in EOCs even though they do not command the incident scene itself. The EOC incident objectives are more typically tied to one of the primary coordination functions listed above.

MACS principles applications in healthcare systems

There are different frames of reference for the application of MACS principles to healthcare organization emergency response. The following are offered for consideration:

Internally: Though MACS principles highlight inter-organizational coordination, they can be considered for application within any healthcare organization. Due to their complexity and often size, management of the overarching healthcare organization's emergency response can be viewed in total as conducted by the larger MAC System, with Incident Command occurring at a tactical location such as in an Emergency Department or Decontamination Area. This application establishes the "Incident Command Post (ICP)" at the tactical scene. The EOC would be established, usually at a fixed location, elsewhere in the facility (e.g. administrative offices or executive conference room). These concepts would not necessarily apply if the incident involved the entire healthcare organization being mobilized for the incident (e.g., evacuation). In such situations, the ICP and EOC functions could be co-located.

In addition, some healthcare systems are very large and include multiple facilities. A relevant example is the Veterans Health Administration, with headquarters, regional centers (Veterans Integrated Service Networks or VISNs), and VA medical centers (VAMCs) and their associated satellite medical facilities. The use of MACS and EOC concepts to support and coordinate response activities at these multiple point-of-care facilities is representative of topics discussed in this lesson. As discussed in Unit 2.2, headquarters, VISNs, and VAMCs may each have an IMT to manage their specific incident, and a MACS that coordinates the elements within its organizational level that aren't directly involved in the incident:

Externally: There are several models for MACS applications beyond the hospital but relevant to healthcare organizations. These include:

- Local Jurisdiction EOC: The local government will commonly establish a MAC system with an EOC that provides opportunity for healthcare organization participation. Examples include a healthcare representative seated at an ESF 8 desk at the local EOC or a

teleconference system established between healthcare organizations and public safety response organizations to provide situation updates.

- Healthcare Coalition: Healthcare Coalitions entail a number of different healthcare organizations in a geographic area working together to address collective response issues. Healthcare Coalitions incorporate MACS principles. This is further discussed in Module 2.2 under Healthcare Coalitions.

Coordination between public health and healthcare organizations: Operational "Partnerships" have been implemented in many jurisdictions around the U.S. These utilize MACS principles to coordinate the efforts of healthcare facilities with that of jurisdictional response efforts. They differ from Healthcare Coalitions, where coalition members do not have legislated or regulatory authority over each other. Partnerships that have a public health department primarily managing and/or operating the relationship may have a MAC component, but are distinguished from a healthcare coalition.

Module 2.2

Strategic Inter-Organizational Coordination in Healthcare Emergencies

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Lesson 2.2.1 Overview: Strategic Coordination in Healthcare Emergencies

Lesson Objectives

- *List some of the major strategies that permit inter-organizational integration during health and medical emergencies and disasters.*
- *Describe the general concept of a "tiered" organizational structure presented in the* Medical Surge Capacity and Capability *handbook,*[65] *and how this organizational approach may be used to establish strategy and tactics (activities, processes, and procedures) to accomplish a coordinated response.*
- *Describe how individual resources participate in this management construct, and how they benefit by participating.*

Background and Introduction

Much of this text is focused upon the individual healthcare organization and its individual capacity and capabilities to respond to emergencies. The reality is, however, that for many types of emergency situations, a healthcare organization will best be able to maintain its operations, assure a medically safe and secure environment for patients and personnel, and meet its requirements for healthcare surge and external commitments if it participates effectively in the larger response community.

Though local resources are the primary response intervention, efficient mechanisms for integrating outside resources must exist.

For this to occur, it is also important for healthcare response to be organized beyond the single healthcare organization or even beyond the local jurisdiction. An optimal response capability for a healthcare organization requires integration into the larger response community. Using the NIMS ICS and MACS principles described in Module 2.1, this module presents a six-tiered integration model, with an accompanying management strategy to achieve medical surge and healthcare system resiliency. This is useful for understanding the potential relationship between the many current medical preparedness activities within the United States. Tiered integration may also help with focusing upon priority issues. The model organizational structure demonstrates the relational arrangement of individual response assets with the local, State, regional, and Federal government levels. The medical surge capacity and capability model also incorporates multiple emergency

[65] Barbera J.A., Macintyre A.G. (Knebel A, Trabert E, eds). *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources during Large-Scale Emergencies.* CNA Corporation under contract to the U.S. Department of Health and Human Services, (Second Edition, September 2007); accessed February 15, 2010 at: http://www.hhs.gov/disasters/discussion/planners/mscc/index.html

response and recovery strategies:

- Strategy for continuity of operations: Effective strategy for maintaining mission-critical systems for the healthcare organization during these extreme events must be established. The strategy must incorporate the preservation of quality medical care while maintaining the integrity of the healthcare system. Some hazards necessitate assistance from outside organizations to maintain this resiliency.

- Strategy for medical surge: Any strategy to address healthcare issues in a mass casualty and/or mass effect incident must recognize that the **required emergency interventions are time sensitive and must be based primarily at the local level**. This urgency limits the ability of the Federal government to independently establish, stockpile, or own/control all resources necessary for immediate primary intervention. At the same time, the strategy should promote optimal integration of outside resources as they become available, whether Federal, State, local mutual aid, non-governmental organization, or private sector assistance. Local mutual aid will likely be critical to success.

- Universally applicable strategies: Additionally, the strategies employed must permit healthcare systems **of all types within a community** to become integrated into the management of the local response. Because most medical resources in the United States are privately owned, response strategies must specifically bridge the public-private divide. The "public safety" roles that healthcare systems perform during emergencies[66] dictate they must be prepared to provide patient care and other pre-determined services for the response. In return, they should be confident of adequate support to perform their function as a key resource within the community. This support includes appropriate information, resources, and continuity of operations interventions, such as priority utility restoration, financial reimbursement for emergency efforts that provide primarily public benefit.

- Strategy for coordination across jurisdictional borders: Any local response system that addresses health and medical issues must be coordinated with neighboring jurisdictions and with local and higher levels of government in a manner that provides effective support to

[66] Barbera, Joseph A., MD; Anthony G. Macintyre, MD; and Craig A. DeAtley, PA-C. *Ambulances to Nowhere: America's Critical Shortfall in Medical Preparedness for Catastrophic Terrorism.* BCSIA Discussion Paper 2001-15, ESDP Discussion Paper ESDP-2001-07, John F. Kennedy School of Government, Harvard University, October 2001; accessed March 26, 2010 at: http://belfercenter.ksg.harvard.edu/publication/2788/ambulances_to_nowhere.html

healthcare systems under emergency response conditions. The result should be an overarching **system for organizing and managing the many diverse medical and public health entities involved in incident response**, as well as other disciplines involved. This will most likely NOT be a single incident command system that is organizing all aspects of the response, but rather a "system of systems" using multiple IMTs and MAC Systems that coordinate the multiple incident response efforts at the various levels of government and across jurisdictional boundaries.

- Strategy for efficient coordination of resources: As noted above, this larger construct should provide management processes that facilitate coordination of resources at each individual level, plus support the integration of "outside" assistance in a timely and efficient manner. The management construct should also promote the rapid transition from baseline operations to incident surge capacity and capability while preserving continuity of operations, and then allow efficient demobilization as soon as possible. This includes strategy to accomplish a rapid "return-to-readiness" for response assets and the earliest resumption of baseline healthcare services for everyday healthcare resources.

- Management coordination in incident response: As presented in Unit 1, a comprehensive plan for addressing response requirements must incorporate a **system description** (i.e., how the different response components are organized and managed) and a **concept of operations** (i.e., how the system components function and interact through successive stages of emergency response and recovery). This lesson presents overarching considerations in this system design. The overall system description is presented in lesson 2.2.2. The concept of operations to maximize integration between response components across all levels of government and private industry is presented in lesson 2.2.3.

Medical Surge Capacity and Capability: A Conceptually "Tiered" Organizational Structure for Mass Casualty Medical Response

The Medical Surge Capacity and Capability (MSCC) Management System[67] describes a system construct for interdisciplinary, intergovernmental, and public-private coordination for major incidents.

[67] Barbera J.A., Macintyre A.G. (Knebel A, Trabert E, eds). *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources during Large-Scale Emergencies.* CNA Corporation under contract to the U.S. Department of Health and Human Services, (Second Edition, September 2007); accessed February 15, 2010 at: http://www.hhs.gov/disasters/discussion/planners/mscc/index.html

The following are important attributes of the MSCC Management System.

MSCC provides the construct to integrate multiple levels of health and medical response, from the individual facility to the federal level.

- Addresses the range of response levels: The six-tier construct (Exhibit 2.2.1.1) depicts the various levels of health and medical resource management organization during response to mass casualty, mass effect, or complex combination incidents with increased patients and/or healthcare system compromise (e.g., the 2005 Hurricane Katrina, the 2001 Houston Floods, and others). The tiers span the range from the individual healthcare facility and its integration into a local healthcare coalition, to the coordination of Federal assistance. **More importantly, it provides a management construct for *managing coordination* across the otherwise difficult divides of jurisdictional boundaries, levels of government, and public-private enterprises.** It also provides a construct for integrating large, multi-level organizations like the Veterans Health Administration.[68]

- Widely applied through the Hospital Preparedness Program: The MSCC construct and management strategy has been incorporated into the grant guidance provided by DHHS/ASPR for the national Hospital Preparedness Program.[69] As a consequence, it is being widely applied across the US.

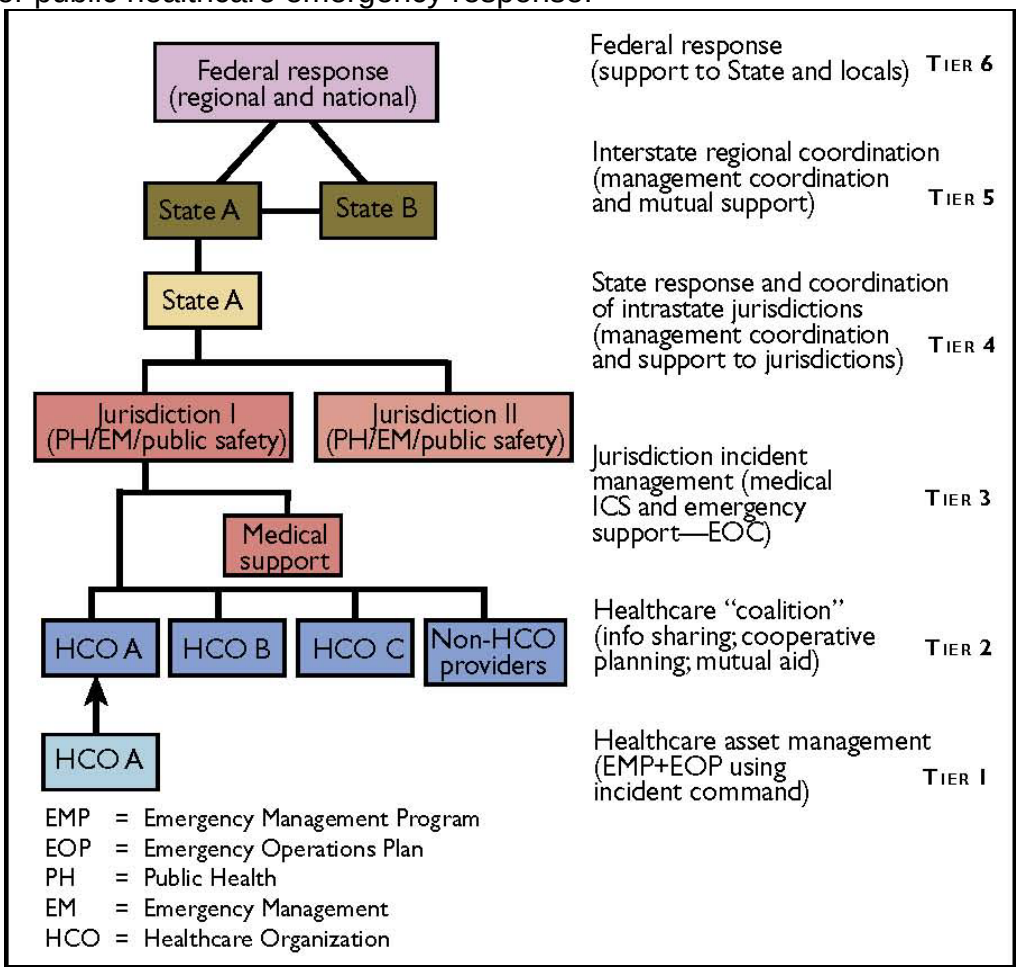
Each tier has the primary responsibilities of managing its response, supporting its response management, and integrating with lower and/or higher tiers (as appropriate).

- Tiered management and authority: This management construct is consistent with key concepts in NIMS. It emphasizes both **responsibility** and **authority** at each level for incident tasks. In other words, the issue of "Who's in charge?" is subsumed to the more important questions of: 1) **"Who is responsible? 2) For what?** and 3) **Has the authority been distributed/delegated to the responsible party?"** The levels recognize and address authority, while grouping resources and actions that are responsible for similar incident needs. For example, each health and medical asset is responsible for managing its own operations (Tier 1), as well as integrating with other response entities in the second level (Tier 2 or healthcare coalition), in the tiered framework. This provides a template for response assets to coordinate in a defined manner that is more effective than the individual, ad hoc relationships that otherwise develop during a major emergency or disaster (see Textbox 2.2.1.1).

[68] U.S. Department of Veterans Affairs, Veterans Health Administration web site, accessed March 26, 2010 at: http://www1.va.gov/health/aboutVHA.asp

[69] U.S. Department of Health and Human Services/Assistant Secretary for Preparedness and Response. *The Hospital Preparedness Program*, web site accessed March 26, 2010 at: http://www.hhs.gov/aspr/opeo/hpp/

Exhibit 2.2.1.1 The "tiers" of MSCC, an integrated management system for public healthcare emergency response.[70]



- Internal coordination and external integration: For this construct to effectively operate, **each tier must be effectively managed internally in order to coordinate and integrate externally with other tiers. Conversely, it is the responsibility of a higher tier to assist its next lower tier, not just with response resources, but also with management services if the tier's capacity and or capabilities are severely challenged.** This concept is presented in detail in Lesson 2.2.3.

[70] Adapted from: Barbera J.A., Macintyre A.G. (Knebel A, Trabert E, eds). *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources during Large-Scale Emergencies.* CNA Corporation under contract to the U.S. Department of Health and Human Services, (Second Edition, September 2007); accessed February 15, 2010 at: http://www.hhs.gov/disasters/discussion/planners/mscc/index.html

Support to a response organization comes from primarily within the tier. If this is inadequate, assistance is typically sought from a higher tier.

- Defining coordinating mechanisms: Established principles of incident command and incident support are used to define coordination mechanisms within and between the tiers of MSCC, even where a direct line of authority is absent:

  - Support from beyond the ICS: Per the basic ICS and MAC System principles presented earlier, Command and Operations Section receive their primary support through the three support sections internal to the organization's incident management team (IMT) structure: Logistics, Planning, and Administration/Finance; if this is inadequate, assistance is then sought from outside the direct resources of the IMT. This support to the IMT first comes from primarily within the IMT's tier (for example, mutual aid amongst hospitals). Support in this situation includes other activities beyond just resources such as information. In large-scale or complex incidents, incident management may require additional support from entities outside the primary IMT and its immediate support system (for example, hospital assistance from a jurisdiction or Tier 3).

  - Methods for acquiring outside support: This "outside" incident support is provided through established principles described in Standardized Emergency Management Systems (SEMS),[71] NIMS and other valid ICS and Multiagency Coordination (MAC) System models (see Lesson 2.1.4 for description of MAC System). For the additional support to occur efficiently and with minimal administrative burden, it should be accomplished through pre-established relationships and procedures that are consistent with ICS and MACS principles.

  - Use of the multi-agency coordination for obtaining support: The intra-tier support to the incident management team (IMT) occurs most commonly through a **same-tier MAC system**. Essentially, the MAC system is designed to manage coordination of relevant public agencies, independent organizations, and others during emergency response. A delineated purpose for MAC systems is to support IMTs (responsible for their own organizations or for the overall incident), and also to support entities addressing incident-related issues across the affected areas within its jurisdiction. For example, a common MAC center is the Emergency Operations Center (EOC) at the jurisdiction level, supervised by the jurisdiction's emergency manager. The EOC may obtain the

[71] California Emergency Management Agency. *Standardized Emergency Management System (SEMS) Guidelines* (September 2006, accessed March 26, 2010 at: http://www.calema.ca.gov/WebPage/oeswebsite.nsf/0/7386D576C12F26F488257417006C07A7?OpenDocument

additional support for the IMT through organizations within its tier at the local level, or appeal to resources from a higher tier such as the region, its state, or the federal government if necessary. If resource allocation must be prioritized between incidents within its jurisdiction or region, the jurisdiction's leadership may participate in a MAC Group, such as a regional senior policy group, that determines the allocation priorities. The EOC also supports traffic re-direction, business relocation, and other issues in its jurisdiction not directly managed by the incident IMT.

Textbox 2.2.1.1

The Case for Better Integration of Healthcare Assets into the Overall Emergency Management Framework

Mass casualty response is rarely isolated to the medical and public health sectors. Rather, it occurs in the context of a broader local or regional governmental emergency response. Healthcare assets, therefore, must be recognized as key resources in any community, and planning should address management of response in this larger context. A community's emergency management and public safety incident management must be intertwined with the medical and health planning and response. Healthcare support needs (security, transportation, etc.) should be identified and assured through existing local and regional emergency constructs (e.g., emergency management agency, security/protection by local law enforcement, etc.) rather than through health systems trying to develop independent, stand-alone capabilities for each of these support functions during major emergencies. This type of robust coordination is, in fact, the conceptual basis for current National Incident Management System (NIMS) and National Response Framework (NRF). As medical preparedness for mass casualty and mass effect incidents becomes increasingly recognized as both a public safety function and a governmental responsibility, the need for a fully integrated emergency management system that includes medical managers is becoming more recognized at the local, State, and Federal government levels. It must also be recognized and address by hospitals and other non-governmental organizations.

- The preparedness versus the response **platform**: Across the United States, many response systems currently are involved in initiatives that enhance preparedness within and across the levels of government and among non-governmental organizations. Most of these initiatives use committee meetings, teleconferences and regular e-mail to conduct preparedness business. The management

Processes and procedures that integrate disciplines during preparedness (such as committees) are not commonly useful for coordinating actions during response.

mechanisms utilized to enhance **mitigation** and **preparedness** in this manner necessarily differ from the management mechanisms used during **response and recovery**. Together, the preparedness process and support personnel, facilities and other resources constitute the "preparedness organization" that defines the preparedness platform. While this is vital for preparedness, it is important to recognize that the preparedness platform is inadequate for effective function during emergency response. This is consistent with basic Comprehensive Emergency Management (CEM) principles but is not always well recognized. Examples of preparedness organizations' issues specifically for the Tier 2 healthcare coalitions are explored below.

- Everyday administrative nature: As locales develop their healthcare coalition, various options are available for healthcare organizations to use to meet and exchange ideas. Coordinating entities for this Tier 2, healthcare coalition preparedness have included hospital associations, EMS councils, independent non-profit organizations, and for-profit corporations. **Many of these very effective preparedness platforms are problematic as the response platform, given their administrative nature, lack of 24/7/365 availability, constrained legal status and other limitations.** It is therefore important to focus preparedness activities on developing **an effective response platform** for Tier 2 that can become immediately operational at all times, can focus upon the Tier 2 tasks, and can sustain its operations over time. This is addressed in more detail in Lesson 2.2.2.

- Conflict in priorities for the platform organization: Some locales have used the local emergency management agency, public health department, or other organization for their Tier 2, healthcare coalition preparedness platform and even for providing critical resources for the healthcare response (e.g., radio system, teleconference lines). It is important to consider, however, the competing priorities during extreme emergencies: key resources may be unavailable to a healthcare coalition if they are needed for a primary purpose by its supporting agency or organization. Mission critical systems should always be available and under the direct control of the entity that will use them during the emergency, or a back-up plan should be sufficient. This is particularly important to address for healthcare coalitions and other MACS organizations that do not have fixed, dedicated equipment and facilities.

- Transition from preparedness to response mode: This is another important issue to examine in developing the preparedness and

response platforms. Preparedness activities are accomplished using meeting space and conference call lines that are available through normal scheduling during weekday business hours. Careful attention to how personnel will be notified and the response mechanisms activated, mobilized, organized and rapidly direct operations during the early stage of incident response is important. Otherwise, the "preparedness committee approach" will become the default methodology, even though it is problematic and inefficient.

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Lesson 2.2.2 The National Response Framework & Medical Surge Capacity and Capability: A Tiered System Description

Lesson Objectives

- *List the six tiers in the MSCC organizational structure and describe the composition of each.*
- *Describe how the MSCC tiers correspond to levels of authority in the National Response Framework.*
- *Summarize how the agencies, organizations, and individual resources are organized within each tier.*
- *List the responsibilities that each tier has for intra- and inter-tier management.*

Introduction

Emergency response and recovery tiers were developed to reflect long-standing emergency management and Federal Response Plan (FRP) guidance. They remain consistent with the current National Response Framework (NRF) construct that evolved from the FRP and the National Response Plan. The only Medical Surge Capacity and Capability (MSCC)[72] "tier" not formally represented in the NRF is Tier 2, but it is encompassed by the Multi-Agency Coordination Center concept presented in NIMS (see Lesson 2.1.4).

The tiers respect legal and political boundaries, regulatory and legislated mandates, and fiduciary responsibilities of non-governmental organizations, following the layers of constitutional and legislated authority for **response** (see Exhibit 2.2.2.1):

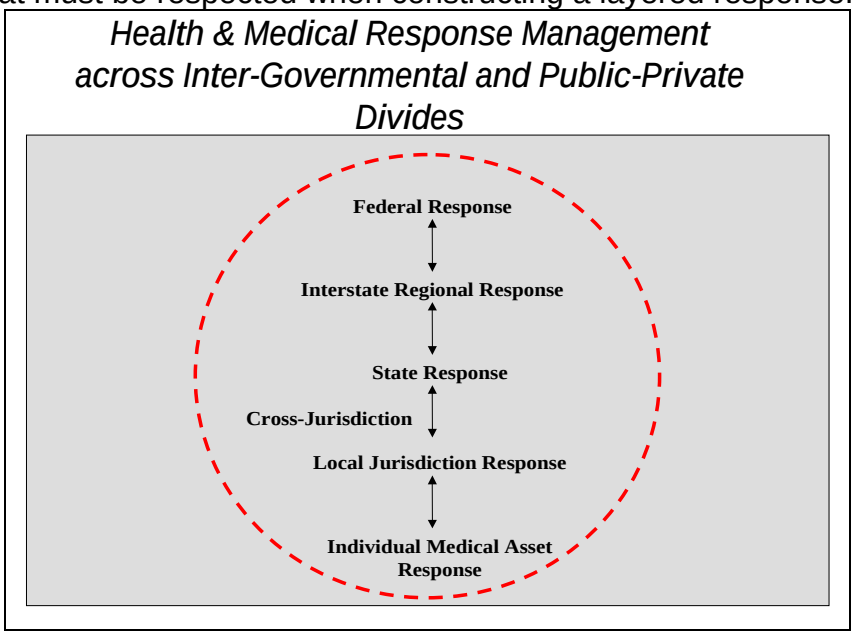
1. Agency/organization with direct responsibility to address the emergency situation
2. Local jurisdiction[73]
3. State jurisdiction
4. Interstate region
5. Federal jurisdiction.

[72] Barbera J.A., Macintyre A.G. (Knebel A, Trabert E, eds). *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources during Large-Scale Emergencies.* CNA Corporation under contract to the U.S. Department of Health and Human Services, (Second Edition, September 2007); accessed February 15, 2010 at: http://www.hhs.gov/disasters/discussion/planners/mscc/index.html

[73] A "jurisdiction" is a political subdivision (federal, State, county, parish, and/or municipality) with the responsibility for ensuring public safety, health, and welfare within its legal authorities and geographic boundaries.

This ICS- and MAC system-based tiered strategy coordinates the local, State, regional, Federal, and non-governmental healthcare resources during emergency response and recovery.

Exhibit 2.2.2.1: The levels of authority and responsibility boundaries that must be respected when constructing a layered response.



- "Management by objectives": The basic ICS principle that drives a consistent coordination process within each tier, and then across the levels of healthcare organizations and government, is management by objectives described in Unit 1. The incident objectives of the management foci at each tier may be grouped into three categories:

  - Incident Management: The incident management team (IMT) is the functional structure that manages the direct effects of the incident for that organization. For tiers above Tier 1, the "incident" at their level may *in many situations* be delineated by the objective "provide support to the lower tiers." Even at the Tier 1 level of the large healthcare organization, the hospital IMT may need to manage not just the direct hospital response, but also support the hospitals' affiliated outpatient clinics.

  - Coordination of support to incident management: This is the functional MAC system structure that provides support to the IMT **at the same tier/level**, beyond the internal ICS support from Logistics, Planning, and Finance/Administration Sections of the IMT. In the usual hospital incident management construct, the hospital command center or hospital emergency operations center generally is located away from the direct action and

Each tier can be viewed as having 3 overarching management focus areas during response:
1) Conduct incident management at their respective level,
2) Support to incident management within that tier,
3) Management of separate but incident related issues.

manages this support from across the healthcare organization.

- Management of separate but incident-related issues: The MAC system should identify incident-related issues that are outside the incident objectives of the IMT. They are either managed directly by the MAC system or, if they require complex management beyond the capability of the MAC system, by establishing a separate IMT.

- Conducting "management" at each MSCC tier:

  - How incident management is provided at each level: The Incident Management Team (IMT) at that tier level **directly manages the central "incident" as defined for that tier**. The IMT sets its incident objectives and thereby defines the "incident" that it is managing (see Lesson 2.1.2). As an example, a city provides the overall incident management team for a large subway explosion (Tier 3). However, hospitals would establish incident management teams at their facilities (Tier 1) to oversee their "incidents." These hospital IMTs should be integrated with the jurisdiction response (Tier 3), ideally through a Tier 2 healthcare coalition. Additionally, each IMT establishes its structure and function, and obtains its primary support through its IMT support sections (Logistics, Planning, and Admin/Finance Sections) or directly through tactical mutual aid.[74] Its next source for support comes from its MAC system (in a higher tier).

  - How support to Incident Command is provided at each level: Support to the IMT that comes from outside the ICS structure and direct mutual aid is provided through a Multiagency Coordination (MAC) System, consisting of one or several Multiagency Coordination Centers and possibly also a MAC Group. A MAC System is the body that **coordinates direct support to an IMT** for any indicated additional assistance per pre-plans or through requests from ICS. At the local jurisdiction and State jurisdiction levels, the MAC center is commonly an EOC. It arranges assistance through its own resources (in most EOCs, this often occurs through emergency support functions). If unable to meet the requests in this manner, the MAC center is the portal from which requests for assistance are sent to higher levels, and

[74] Tactical mutual aid is assistance obtained through standing Mutual Aid instruments between like services (such as fire departments, EMS, or healthcare facilities) that are usually from adjacent or regional jurisdictions (see glossary for Mutual Aid and Mutual Aid Agreements). Tactical mutual aid should be guided by Strategic Mutual Aid instruments.

through which the resources are obtained to meet the requests. The management organization for this important tasking varies: it may be a full EOC or a subdivision of the EOC such as a task force or group or emergency support function. The support may also be assigned by the EOC to a departmental operations center or other extension of the MAC system.

Individual Healthcare Organizations (Tier 1)

Tier 1 focuses on point-of-service healthcare organizations.

Tier 1 is composed of the cohort of individually operating hospitals, integrated healthcare systems, private physician offices, outpatient clinics, and other resources that provide **"point of service" medical care** and other medically related services that address mass casualty or mass effect incident issues. Typical field EMS resources, however, are usually distinct from Tier 1 since in the traditional role EMS is integrated through jurisdictional management systems overseeing field response. In most situations, Tier 1 organizations exist within the private sector. US Department of Defense (DoD) facilities, VA Medical Centers (VAMCs), and civilian public hospitals are also important Tier 1 elements.

- Authority to operate at the Tier 1 level: Individual healthcare organizations each carry their own inherent authority to conduct emergency preparedness and to manage their individual emergency response and recovery actions.

- Incident Management at each individual healthcare system or individual healthcare asset:

  - Incident objectives: The incident objectives for each asset in Tier 1 should address the four major capabilities for healthcare organizations: maintaining a medically safe and secure environment, continuity of operations, medical surge and adequate support to external requirements.

  - Response methods: The Tier 1 organizations' incident objectives are best accomplished by each organization through an adequate Emergency Operations Plan (EOP), effectively using ICS to manage internal resources and to obtain outside assistance as required. This tiered construct, therefore, highlights the importance of ICS-consistent processes within the EOP that facilitate coordination with other response assets in the community. In particular, robust liaison and information processing capabilities are required within each resource, to acquire and provide internal data beyond the usual "total casualties" and "bed counts" that are the common focus.

Additional information to share includes:

- Situation status reporting
- Resource status reporting beyond simple "bed counts"
- Patient tracking data
- The individual organization's IMT structure and key IMT assignments for the specific response (for integration purposes)
- The individual organization's major strategies and tactics being utilized (to avoid conflict between responding organizations or the perception of differences by the public).

In addition, the Liaison and Planning functions in the organization's IMT must also be able to receive outside data and rapidly disseminate it where needed within the organization.

See Modules 3.1 and 3.2 for extensive detail on healthcare system management during emergency operations.

- Coordination of support to the Tier 1 IMT: Resource and other assistance within the individual healthcare asset includes:

  - Internally **arranged** support: In Tier 1 assets, most support is directly provided from **within the organization's IMT** through its Logistics, Planning, and Administration/Finance sections. In the EOP for most hospitals, the IMT functions at the hospital command center or hospital emergency operations center to both manage the hospital's direct incident and to provide support through its coordination of its departments across the organization. Much of this Tier 1 support comes from mobilization of healthcare facility staff and resources pulled away from everyday service tasks, or from stored supplies and equipment or contingency contracts (e.g., agency staffing) that provide just-in-time resources.

  - Support from beyond the individual Tier 1 facility: If additional support is indicated for the situation, this is sought **through outside sources**. Under some circumstances, these may come from other organizations within Tier 1 (e.g., mutual aid) or from higher Tiers, but assistance is most effective if coordinated from within the geographic area (ideally through Tier 2 healthcare coalition activity). Resources may be obtained by:
    - Rapidly established new contracts or executing existing ones with outside vendors to meet needs (such as staffing agencies or supply vendors).
    - Individually arranged outside support from neighborhood, non-medical organizations (such as arranging loan of generators).

At the healthcare facility level, support to the hospital ICS can be internal or external through a variety of mechanisms.

- Pre-arranged support from "parent organizations" such as assistance from the Veterans Integrated Service Network (VISN) to a VAMC
- Mutual aid obtained from similar organizations. This could, for example, be accomplished between two healthcare facilities that are geographically close, with a direct mutual aid arrangement that is independent of any jurisdiction-wide agreements.
- Directly obtaining resources from medical organizations such as a local Medical Reserve Corps[75] or Disaster Medical Assistance Team.[76]
- Seeking assistance through a formal request to a Tier 2 healthcare coalition or the Tier 3 jurisdiction's authorities.

- Management of separate but incident-related issues: In any major or prolonged incident, incident-related issues not directly managed by the incident personnel. They must be recognized and assigned to appropriate personnel if not being addressed through the IMT. These are typically assigned to non-incident staff (i.e., few EOP activations require the assignment of the entire staff of a healthcare organization). Example issues include arranging for pre-scheduled patients to be re-scheduled for care at a sister or distant facility, or addressing the construction schedule for a major project that was disrupted by the incident. Some of these issues may require significant attention from senior executives, bolstering the case for personnel within the organization other than the chief executive to be trained to function as the organization's incident commander in their IMT.

Healthcare Coalition (Tier 2)

Tier 2 can be regarded as a coalition of healthcare assets at the local level that serves mainly to manage coordination between healthcare facilities and promotes assistance between them.

The healthcare coalition organizes the individual Tier 1 healthcare organizations into a single functional unit. It connects them through an effective communication system that allows robust sharing of information, discussion of individual objectives and strategies, mutual aid facilitation between the parties, and establishment of a unified front when coordinating with jurisdictional authorities. The Tier 2 goal is to facilitate

[75] U.S. Department of Health and Human Services, Office of the U.S. Surgeon General. *About the Medical Reserve Corps*; Web page accessed March 26, 2010 at: http://www.medicalreservecorps.gov/page.cfm?pageID=5

[76] U.S. Department of Health and Human Services, Assistant Secretary for Preparedness and Response. *Disaster Medical Assistance Teams (DMAT): What Is a Disaster Medical Assistance Team?; Web site a*ccessed March 26, 2010 at: http://www.hhs.gov/aspr/opeo/ndms/teams/dmat.html

support to the coalition member organizations in maximizing their healthcare continuity of operation and surge capacity/capability. This support is addressed through response objectives focused upon the processing and management of information and the facilitation of mutual aid or cooperative assistance (see candidate objectives below).

- Authority to operate at the Tier 2 level: Participating individual healthcare organizations collectively authorize the coalition preparedness initiatives, and provide the authority for the coalition's emergency response and recovery actions on their behalf.

- Management principles: Essential concepts for the Tier 2 organization include:

  - Appropriate control: Tier 2 is a functional structure that is entirely controlled by the member healthcare organizations themselves. This assures that the coalition response will have the priorities of member organizations as its primary focus. This contrasts with a jurisdiction IMT or EOC, which may have multiple priorities competing with healthcare response during a large-scale or complex incident.

  - Tier 2 incident objectives: The objectives of a Coalition response system may be generally summarized as supporting the coalition member organizations through the following:[77]

    - Facilitate information sharing among participating healthcare organizations (Tier 1) and with jurisdictional authorities (Tier 3) to promote common situational awareness.

    - Facilitate resource support by expediting the mutual aid process or other resource sharing arrangements among Coalition members, and supporting the request and receipt of assistance from local, State, and Federal authorities.

    - Facilitate the coordination of incident response actions for the participating healthcare organizations so incident objectives, strategy, and tactics are consistent for the healthcare response.

    - Facilitate the interface between the Healthcare Coalition and

Tier 2 IMT commands only itself to conduct actions that support the participating healthcare organizations. It does not exert any command or control over Tier 1 organizations.

[77] Barbera J.A., Macintyre A.G. (Knebel A, Trabert E, eds). *Medical Surge Capacity and Capability: The Healthcare Coalition in Emergency Response and Recovery.* CNA Corporation under contract to the U.S. Department of Health and Human Services, (May 2009); accessed February 15, 2010 at: http://www.remm.nlm.gov/MSCC_Healthcare_Coalition_May_2009.pdf

relevant jurisdictional authorities (Tier 3) to establish effective support for healthcare system resiliency and medical surge.

- Structure and function of the Tier 2 healthcare coalition response team: To best achieve its purpose of supporting member organizations, the coalition may establish a small IMT, such as a healthcare coalition response team, to directly **manage only its own actions in supporting coalition member organizations**.[78] Incident management at each healthcare organization remains independently conducted by each organization's IMT; support to each of the member organization's IMT is the focus of Tier 2.

  If major decisions must be made by the coalition of healthcare organizations, a coalition MAC group may be established, consisting of the senior executive or the incident commander from each of the participating healthcare organizations. This group may be designated as a healthcare coalition emergency policy group or senior policy group to reflect its role.

- Strategies to achieve the coalition response objectives: The coalition should, during development, establish strategies for achieving each of its objectives. Considerations for this are provided below.

  - Information processing: The coalition conducts actions to facilitate the acquisition and dissemination of the incident-specific information and data that the coalition member organizations need, at their level of detail, to enable them to meet their response objectives. The coalition platform should be configured to optimally share incident information and coordinate operational objectives, strategy, and concerns among healthcare organizations without depending upon other response entities. This information sharing often extends beyond hospitals to include long-term care or alternative treatment facilities, private physician offices, clinics, and any other health or medical asset that may be brought to bear during major incidents. Its reach may also, in some situations, extend beyond the geographic area of the primary responding jurisdiction (Tier 3), especially in rural settings. Information gathered by the coalition, such as situation reports from each member organization, should be rapidly aggregated and returned to the coalition members at the same time it is transmitted to jurisdictional authorities.

  - Mutual aid: The coalition provides a means for facilitating mutual aid and/or cooperative assistance so that resource sharing will be

[78] ibid

effective during mass casualty and mass effect incidents. It addresses the range of assistance, from rapid acceptance of patients from another institution to sending staff and equipment/supplies to a site needing additional surge capacity. The coalition actions in this regard are facilitation only; the coalition does not direct any healthcare organization and does not compel any specific incident actions. The coalition's supporting function is entirely dependent upon voluntary participation by member organizations and its resource sharing activities should be defined in a Coalition Emergency Operations Plan and Coalition mutual aid instrument.

By facilitating effective mutual aid, Tier 2 establishes the **ability to more rapidly move medical resources (e.g., personnel, facilities, equipment, supplies) to sites of greatest need**, as well as moving patients to locations of stable, available medical care. This is accomplished through mutual aid instruments and cooperative agreements (see Textbox 2.2.2.1). Resource **assistance** can then efficiently occur between otherwise independent healthcare organizations. For example, support arranged by one institution (a bottled water cache, a contingency contract for portable generators from a neighborhood supplier, or other resources) could potentially be shared with another institution, using transport assets from a third organization, all facilitated by the coalition as appropriate. The coalition can also assist with resource distribution from higher tiers into the community.

- Consistent strategies and tactics across coalition member organizations: The coalition, through the exchange of information and conduct of facilitated teleconferences can promote consistency in response strategy and tactics, including the public message. The shared information may be, for example, the individual incident and operational period objectives and strategies from each healthcare organization. While the purpose is to promote consistency to the extent possible given individual circumstances related to the hazard impact, it also allows recognition of potential conflicts. These can then be resolved, or the organizations can prepare an explanation for responders and the public as indicated. Examples include different levels of personal protective equipment utilized by response personnel at different healthcare organizations, which may be indicated since they have different tasks or are receiving different types of patients. This reasoning may not always be obvious to emergency workers and, if recognized, can be explained to prevent confusion or conflict.

- Integration into the larger response: The coalition provides a functional structure that both the jurisdiction and the healthcare organization can rely upon to gather and disseminate information, disseminate public health advisories/directives, and convey other incident related information. In addition, requests for assistance, rendering advice, and other information exchange activities between member organizations and the local authorities can be facilitated. The coalition establishes a planning process for this purpose that is equal and fair to all participants, giving each the opportunity for input during preparedness planning, response, and recovery. This platform allows Tier 1 organizations to coordinate with the jurisdiction and public safety agencies as a single body, more effectively addressing difficult issues than can be accomplished on an individual basis. This is especially important when addressing financial, liability, regulatory concerns, and incident information issues exacerbated by the public-private gap.

Textbox 2.2.2.1

Mutual Aid and Reimbursement

California Master Mutual Aid Agreement,[79] which has been in effect since 1950, differentiates between mutual aid, which is rendered without reimbursement, and other assistance that by prior agreement will have costs reimbursed by the receiving jurisdiction. The Master Mutual Aid Agreement does not preclude this reimbursable assistance, which in California has been commonly referred to in the past as "cooperative assistance" provided through agreements, generally after the first 12 hours of assistance through un-reimbursed mutual aid. The NRP refers to this as "reimbursed" support when describing Federal-to-Federal support.[80] Providing guidelines for reimbursement of assistance is important for multiple reasons:

- Assistance, when requested, is usually urgent, and so cost issues should already be resolved.
- Critical assistance is more likely to be rapidly offered if reimbursement can be assured.

[79] California Disaster and Civil Defense Master Mutual Aid Agreement (1950), accessed March 29, 2010 at:: http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/California%20Master%20Mutual%20Aid%20Agreement/$file/CAMasterMutAid.pdf

[80] Financial Management Support Annex, National Response Plan, (December 2004): page FIN-11, Federal Emergency Management Agency, Washington DC: "B. Operating Procedures 1. Federal agencies participating in the NRP may request and provide federal-to-federal support by executing inter-agency or intra-agency reimbursable agreements, in accordance with the Economy Act (31 U.S.C. §1535) or other applicable authorities."

- Recovering costs of response from FEMA and other sources requires documented expenses. Free mutual aid may be difficult to submit for reimbursement.

In developing mutual aid arrangements, healthcare organizations should address this important issue.

In some locations in the U.S., healthcare organizations have developed a formal relationship that is led and controlled by local or state public health. While these entities may be functional for the perceived needs of the involved parties, it is important to recognize that these differ significantly, from a management perspective, from a Tier 2 healthcare coalition. They are a **Tier 3 or Tier 4 organization based upon the lead authority of the senior governmental agency that has control authority, and should not be labeled as "coalition,"** which implies equal participants. These systems can also be effective for their purpose, but the authors still recommend the development of a "coalition within" for like organizations to exchange information, participate in mutual aid, develop common or consistent strategies, and for the other activities of a coalition described above. The following can become issues during emergencies if not addressed during preparedness.

- Different authorities and mandates: Jurisdictional agencies (Tier 3) possess legislated and regulatory authority and mandates which dictates to some degree their response operations. This may prohibit them from focusing primarily on the healthcare response, which is the primary focus of a Tier 2 coalition.

- Regulatory authority over healthcare organizations: The department of health's regulatory authority over healthcare organizations can sometimes inhibit frank and open discussion.

- Differing definitions of "emergency:" What constitutes an emergency (and hence an EOP activation) may differ between tiers. An emergency for a Tier 1 healthcare organization may not reach the level of emergency for a Tier 3 organization. In many locales, the lack of a jurisdictional EOP activation inhibits the emergency powers and spending authority of jurisdictional agencies, and this can inhibit their ability to fully support the impacted Tier 1 facilities. A Tier 2 coalition can initiate processes to facilitate Tier 1 response more quickly if its authority and management can be activated independently from Tier 3.

Federal healthcare resources may participate in healthcare coalitions in their geographic locations. The Washington DC VA Medical Center and the Washington-area Department of Defense (DoD) hospitals have actively engaged in the Washington DC healthcare coalition activities for longer than a decade. It is important for the other coalition member organizations to recognize the priority constraints for these entities, since their Federal missions may supersede coalition activities. Experience has demonstrated, however, the value to both the federal and local healthcare organizations in joint participation in Tier 2 coalition activities.

Greater detail related to the healthcare coalition is available from the US Department of Health and Human Services.[81]

The jurisdictional response at the local level should provide the services that integrate medical (often private sector) assets with the public sector response. This critical responsibility is commonly overlooked.

Jurisdiction Incident Command/Management (Tier 3)

The MSCC Tier 3 is the local jurisdictional management function that provides incident management and incident support at the local government level. It is this level that usually directly integrates healthcare response with other response disciplines (e.g., public safety, emergency management) to maximize jurisdictional medical surge and healthcare system resiliency. This is the most critical tier for integrating the full range of disciplines that may be needed in a mass casualty or complex medical event, since it is the management level closest to the incident itself that has comprehensive authority. **The incident objectives for Tier 3 (in most local jurisdictions' emergency operations plans) include preservation of life and property and, thus, a focus should be the management of the diverse jurisdictional disciplines in support of medical surge and healthcare system resiliency**.

- Authority to operate at the Tier 3 level: Local jurisdictions carry the authority to conduct emergency preparedness and to manage their emergency response and recovery actions within their jurisdiction.

- Incident Management by Tier 3 (jurisdictional response):

    - Management through ICS: In a large-scale incident where the jurisdiction is primarily responsible for addressing the emergency situation, the local jurisdiction will activate an IMT and its EOC.

[81] Barbera J.A., Macintyre A.G. (Knebel A, Trabert E, eds). *Medical Surge Capacity and Capability: The Healthcare Coalition in Emergency Response and Recovery.* CNA Corporation under contract to the U.S. Department of Health and Human Services, (May 2009); accessed February 15, 2010 at: http://www.remm.nlm.gov/MSCC_Healthcare_Coalition_May_2009.pdf

Commonly, the incident commander and lead agency are from the public safety sector, although public health or the emergency manager may staff these roles.

- Managing the primary incident at the local level: The IMT provides direct management of the public domain incident as defined by its incident objectives and strategy. Alternatively, if several distinct IMTs are deployed to manage separate scenes or manage distinct functional aspects of the same incident (for example, an IMT to manage a hazardous materials release scene and a separate IMT to manage the medical needs of the mass casualties), the jurisdictional "ICS" may in fact be an "area command" as defined by NIMS (see Lesson 2.1.4). The Area Command mission would include coordinating the multiple IMTs within the jurisdiction and determining priorities for resource distribution.

When more than one incident command structure is utilized in managing an incident, an Area Command may be established to coordinate overall management.

- Participation by medical organizations in local IMT: Mass casualty incidents commonly have incident management issues that require healthcare assets to be recognized as integral members of the Tier 3 IMT, and should be provide them the opportunity for input into the Tier 3 management even though they are primarily private sector assets. **This is important to recognize, since the medical response may not always operate effectively in the traditional role of independent resources operating "outside" the jurisdiction's ICS structure.** This issue may be especially important during incidents that are primarily health and medical in nature, such as mass casualty or infectious disease epidemics, where healthcare response is a primary operational objective. In these situations, consideration can be given to incorporating healthcare organizations directly into the jurisdiction's IMT (for example, as a Medical Services Branch under the Jurisdiction's Operations Section). Alternatively, the jurisdiction's IMT may have an explicitly stated response objective of "directly supporting the healthcare response." Having representatives from the healthcare sector acting in a Senior Advisor Role on the Command Staff may also be an effective method to assure that the jurisdiction's response is optimally supporting healthcare system continuity of operations as well as critical surge capacity and capability. Tier 1 assets may still be represented in the EOC (see below) by Tier 2 representatives ensuring comprehensive support to the involved healthcare systems and individual healthcare assets.

Tier 1 assets may be represented in the Tier 3 organizational chart in several fashions, depending on the event. One of the more critical considerations may be representation at the Tier 3 IMT level as a senior medical advisor.

- Coordination of support to Tier 3 Incident Management: Support requested by the jurisdictional IMT or a jurisdictional Area Command from outside the ICS (i.e., unavailable through ICS support sections –

Logistics, Plans, and Admin/Finance – or through direct tactical mutual aid) is primarily provided and/or coordinated through the local EOC. This is a traditional function of the EOC, and is well described in the emergency management literature. Most EOCs are now organized using ESFs to group together resources that provide support. NIMS, however, has prompted the development of ICS organization and processes for managing the support to the IMT and directing the activities of the ESFs.

The traditional ESF construct in an EOC may not be an effective means of managing the complex assistance needed by the medical sector.

- Management of incident-related issues outside the IMT focus: The EOC, in addition to providing direct support to the IMT, manages the incident-related issues in the jurisdiction that are outside the scope of the IMT. This may require a very robust management capability that integrates health and medical services into the overall EOC management and operations section as well as the support sections. For example, a major explosion and fire may generate a large number of critically injured and burned casualties that overwhelm local hospitals. The jurisdiction's IMT is likely focused upon the scene of the fire and explosion, not on support to healthcare facilities. This is commonly problematic for public health and medicine, since addressing incident-related health and medical issues usually is conducted through the narrow confines of an ESF #8, Public Health and Medical Services in an EOC. Obtaining non-medical support for these issues requires working across the stovepipes of the multiple ESFs, a very inefficient and problematic management method. To effectively address these time urgent, complex public health and medical issues, consideration should be given to establishing an additional branch, task group, or similar configuration within the EOC Operations Section dedicated to this task. This is one reason that the ESF configuration is not always optimal. Alternatively, developing a robust department operations center (DOC) in the public health agency may provide the complex multiagency support to healthcare organizations responding to a challenging situation. **This is an important issue for public health and medical organizations to address during planning, since many issues facing public health and medicine during large-scale incidents are of a complexity that exceeds the management capacity of a public health and medical ESF.**

In some incidents, the responsibility for incident command may rest at the state (Tier 4) level.

State Response and Coordination of Intrastate Jurisdictions (Tier 4)

Tier 4 describes how State-level actions support the jurisdictional incident management and support (Tier 3) responsibilities and promote coordination among multiple affected jurisdictions. In some incidents, particularly those with Statewide involvement and no discrete "scene"

(such as a widespread infectious disease outbreak), the State could conceivably be the primary incident command authority.

- Incident Management of the State response: Coordination of ICS across multiple affected local jurisdictions. This may be accomplished through several configurations:
    - "Area Command" (see Terminology Textbox in Lesson 2.1.4)
    - Coordinating management between affected jurisdictions using the State EOC without the formal structure of an Area Command
    - Assuming primary responsibility for directly managing the incident. If this option is imposed, the State's ICS structure developed for this incident should clearly indicate how the local IMTs are integrated – this would usually be through assigned positions within the operations section as geographic branches or divisions.
    - In each of these configurations, the State has the responsibility to:
        - Define overarching incident objectives and strategy: Set overall incident objectives and strategy for the State, and coordinate the incident objectives and strategy across the affected jurisdictions. This should promote balanced and comprehensive incident management and reduce the likelihood of conflicting strategy or tactics across jurisdictional borders.
        - Define allocation priorities: Establish priorities for allocation of outside resources according to the overall incident needs.
        - Promote sharing of incident information: This is important to accomplish across the entire operational area and with the general public. It includes addressing rumor and misinformation, assuring consistency of the public message, and addressing other important information needs presented in Lesson 2.1.1.
- Incident management of the State response: Providing assistance to affected local jurisdictions is accomplished by coordinating with the local EOC, and through them, the local IMT. The model for delivering this type of assistance was provided by the Federal-to-State mechanisms developed in the 1990s. The Emergency Response Team (ERT) under the FRP provided Federal representatives who

projected forward to the incident area to assist the State at the State EOC. It processed requests that could be transmitted to the Federal EOC (formerly the Emergency Support Team) to act upon. A similar arrangement may be considered by the State, with an incident support team moving forward to the incident area to facilitate assistance to local incident authorities. The complex objectives for this State-level IMT include:

- Technical expertise: Assuring that needed advice and other technical expertise is provided to all affected areas within the State.

- Resource support to lower tiers: Accepting the local jurisdictions' requests for assistance, approving or modifying the requests as indicated, acquiring the appropriate resources, and managing them until assigned to the requesting jurisdiction. These actions may include:

  - Promoting tactical mutual aid through actions such as guaranteeing reimbursement to assisting organizations.

  - Coordinating Statewide mutual aid and cooperative assistance from areas of the State or from disciplines not covered by tactical mutual aid agreements with the affected jurisdictions.

  - Providing State-based resources to assist the local affected jurisdictions.

  - Directly providing State services and supplies in parallel with the local IMTs, including in-State National Guard assistance.

  - Serving as the primary interface for requesting and receiving Federal assistance, both civilian and military.

- Coordination of support to Tier 4 Incident Management: Resource assistance to the State IMT may have several configurations:

  - If the State is the primary IMT: If the State is providing the primary ICS for the incident, the State EOC must function similar to a jurisdictional EOC in supporting the jurisdictional ICS.

  - If the State is supporting a local primary IMT and EOC: If the State is supporting the local response as its primary mission, the State EOC is tasked with acquiring assistance that has been requested through the local EOC to the State IMT (if it exists) or directly to the EOC. These may be available through the State's

direct resources (e.g., cached items), through State contracting mechanisms (e.g., vendor inventory that can be ordered and delivered rapidly) or from local jurisdictions away from the impact area. For example, healthcare resources may be requested from hospitals in another part of the State, and supported in their deployment to the requesting organizations.

- Management of incident-related issues at the State level:

  - Addressing State-wide incident related issues: Similar to the task description for a local EOC above, the State EOC must also 1) support the State-level incident response, and 2) address Statewide incident-related issues not being managed by the affected local jurisdictions. These may include minimizing impact of the incident on sectors of the economy (tourism, for example), or assistance in maintaining supply chains for industry that is otherwise uninvolved in the emergency. For health and medical incident where widespread geographic isolation or quarantine has been imposed, these issues will be very significant.

- Development issues related to Tier 4: The following could be addressed during preparedness planning for State agencies to facilitate arrangements between jurisdictions and to coordinate response assets.

  - Mutual aid and cooperative agreements: The use of State-level strategic mutual aid agreements and/or strategic cooperative agreements may standardize the implementation of tactical mutual aid between jurisdictions and individual agencies. This could benefit all sectors, including healthcare resource mutual aid/cooperative assistance discussed in Tier 2.

  - Intrastate regional jurisdictions: A State may also develop intrastate "regional response entities" to promote coordination and resource assistance during large-scale incidents. This adds a layer of complexity to Tier 4, but has been found beneficial in high-frequency disaster event States such as California and Florida. The relationship between intrastate regions should be determined through a Statewide emergency management system and established through State regulations and legislation. This must be distinguished from interstate regional management coordination described in Tier 5.

Tier 4 should be an effective platform for guiding intra-State mutual aid and cooperative agreements.

The Veteran Health Administration (VHA) Veterans Integrated Service Network (VISN) manages the regional VA assets for the US

Department of Veterans Affairs.[82] Through its relevant VISN, VHA may play a key role in assisting a requesting State with necessary healthcare resources. Additionally, many of the Federal Coordinating Centers in the National Disaster Medical System (NDMS) are VA Medical Centers. They perform the function of receiving patients from NDMS as they arrive from a distant disaster, and distributing the patients to participating hospitals in their geographic NDMS Patient Reception Area. [83]

Interstate Regional Management Coordination (Tier 5)

MSCC Tier 5 describes the State function that maximizes interstate coordination to support incident response. This tier focuses on how to manage interstate medical and health assistance and examines how mutual aid, cooperative assistance, incident management coordination, and information sharing can enhance medical surge capacity and capability as well as promote healthcare system resiliency.

- Basis for cooperation between States: The primary responsibility for regional sharing through mutual aid and information exchange is carried by the involved States. The Federal government generally plays a facilitating role. The basis for regional coordination and cooperation must be mutual self-interest, assuring that the sum of the regional assets creates a stronger overall capacity and capability, as well as strengthening each individual jurisdiction. Regional management coordination may therefore be legally and conceptually based upon mutual aid and cooperative assistance concepts.

- Incident management of interstate coordination between affected States:

    - Political and legal boundaries: Interstate regional coordination must recognize and respect the individual legal and political responsibilities of each individual "State" (Washington, D.C. and U.S. territories are treated as "State" jurisdictions). Each political jurisdiction has primary legal and political responsibility to its own citizenry such that it is unlikely to abrogate that responsibility or subrogate to other State jurisdictions, to a "region," or to a Federal

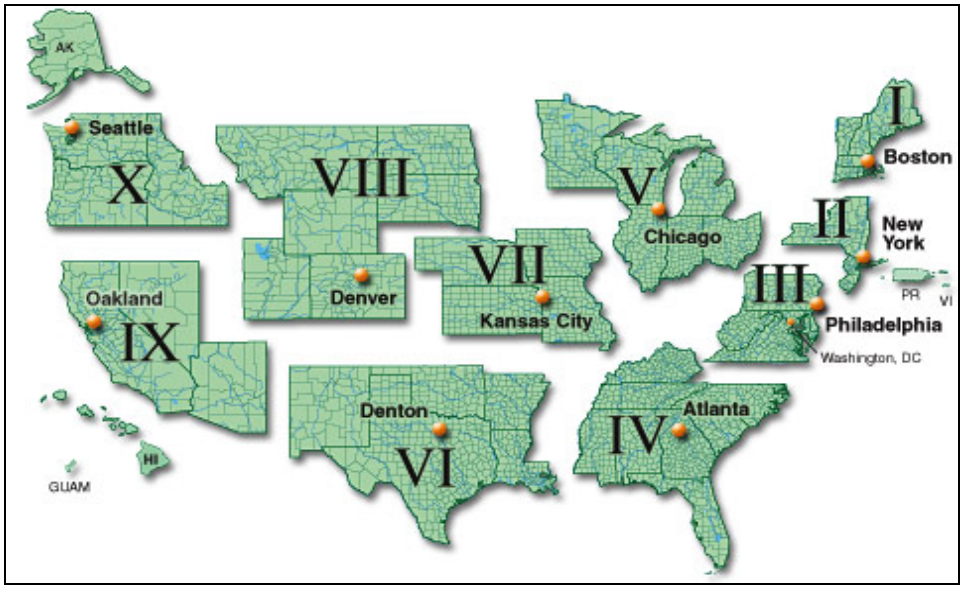
[82] US Department of Veterans Affairs. *Emergency Management: Veterans Health Administration Comprehensive Emergency Management Program.* Office of Public Health and Environmental Hazards; accessed April 18, 2010 at: http://www.publichealth.va.gov/emergencymanagement/index.asp

[83] US Department of Health and Human Services. *National Disaster Medical System Federal Coordinating Center Guide ()7 July 2006.* National Disaster Medical System; accessed April 18, 2010 at http://fhp.osd.mil/ndms/docs/fccGuide.pdf

response agency. Because "unified command" between jurisdictions of an interstate region cannot override the jurisdictional command responsibility, regional management has historically been limited to strategic issues that traverse jurisdictional boundaries. The underlying key concept for regional response, therefore, is **management coordination**: identifying the inter-jurisdictional issues and addressing the management coordination (objectives and strategies) required for these issues.

- The Federal regionalization concept: The development of Federal Administrative regions (see Exhibit 2.2.2.2) in the1990s, with the subsequent regionalization of the U.S. Department of Health and Human Services (see Tier 6 description) and other Federal departments, is consistent with this interstate regional coordination.

Exhibit 2.2.2.2: FEMA Regions. FEMA has ten regional offices and two area offices: A Pacific Area Office in Region IX (Honolulu) serving Hawaii and the U.S. Pacific territories, and a Caribbean Area Office in Region II (Puerto Rico) serving Puerto Rico and the U.S. Virgin Islands. Each region serves several States, and regional staff members work directly with the States to help plan for disasters, develop mitigation programs, and meet needs when major disasters occur. [84]



- Promoting regionally coordinated management decisions: Interstate regional emergency management may be

[84] FEMA regions are delineated at Federal Emergency Management Agency. *Regional Operations;* accessed April 18, 2010 at: http://www.fema.gov/about/regions/index.shtm

conceptualized as a "system" for a fully integrated master mutual aid plan that includes information management. Equally available, openly shared, trusted information will enhance the ability to make regionally coordinated management decisions. The management decision process for priority assignment of resources in an interstate region may best be determined as the one with the bulk of the jurisdictional responsibility (i.e., the jurisdiction most affected if it is a multiple jurisdictional issue) or by the bulk of the specific need (potentially more law enforcement in one jurisdiction, more medical needs in another). This decision-making process is more likely to be consensual if appropriate information management is addressed.

- Coordination of support at the interstate (Tier 5) level:

  - Emergency Management Assistance Compacts: In the past, coordination of interstate resource assistance generally depended on ad hoc arrangements, goodwill at the time of an incident, and other less-than-predictable mechanisms. This less-than-satisfactory approach was formally supplanted when Congress enacted the Emergency Management Assistance Compact in 1996 (Public Law 104-321). EMAC,[85] as it is commonly known, provides the framework for this State-to-State mutual aid, and has now been accepted by all States. It provides legal authority, financial mechanisms, and operational guidance to establish the ability to request and receive emergency assistance from other States. The hurricanes of 2004 and 2005 provided opportunities to demonstrate this capability.[86] EMAC was originally designed to address the sharing of public sector resources. As medical assets are commonly private sector, important changes have been or are being addressed.

  - Federal entities that may facilitate interstate coordination of support to healthcare system response: The U.S. Department of Health and Human Services (HHS) has established Regional Emergency Coordinators,[87] under the HHS Assistant Secretary for Preparedness and Response (ASPR), for each of the Federal regions. Their roles include facilitating regional health resource coordination during preparedness as well as response and

[85] Further information on EMAC is available through the EMAC web site, accessed April 18, 2010 at http://www.emacweb.org/

[86] The EMAC 2004 and *2005* Hurricanes After Action Reports are available on the EMAC web site, accessed April 18, 2010 at http://www.emacweb.org/

[87] U.S. Department of Health and Human Resources. *Regional Emergency Coordinators.* Assistant Secretary for Preparedness and Response; accessed April 18, 2010 at: http://www.hhs.gov/aspr/opeo/regions/index.html

recovery. Both the Federal Regional Resource Coordination Center and Joint Field Office (see Tier 6), while primarily Tier 6 focused, may act as MAC Centers to coordinate regional as well as national and Federal resource support during a major incident. The Veteran Health Administration (VHA) Veterans Integrated Service Network (VISN), mentioned in Tier 4 support, may also provide interstate regional support through the coordination of VHA resources from multiple States to address the requests for incident resources.

- Contiguous international jurisdictions: For the purposes of this type of coordination, cross-border coordination between the U.S. States and contiguous jurisdictions in Canada or Mexico has often been treated as a Tier 5 activity.

Federal Support to State and Local Jurisdiction Management (Tier 6)

The Federal government maintains health and medical resources to support State and local jurisdictional authorities during a mass casualty or complex incident. The goal of the Federal government is to maximize medical surge and healthcare system resiliency. This is provided during non-response periods through guidance and training in mitigation, preparedness, response, and recovery. During an incident, it is accomplished through support to State, local, and non-governmental healthcare resources, and by establishing optimal integration and management of Federal health and medical assets needed for the incident.

- Incident Management in Federal response: The National Response Framework and the NIMS provide the controlling operational guidance for Federal action.[88]

- Coordination of support (resource assistance):

  - ESF #8: In the NRP, the Emergency Support Function #8 – Public Health and Medical Services Annex[89,90] provides the coordinating

[88] US Department of Homeland Security. *National Response Framework (NRF).* (January 2008). Washington, D.C.; accessed February 15, 2010 at: http://www.fema.gov/emergency/nrf/

[89] National Response Framework (NRF- 2008) page ESF #8-1; NRF Resource center, FEMA; accessed April 18, 2010 at: http://www.fema.gov/pdf/emergency/nrf/nrf-esf-08.pdf

[90] Federal Emergency Management Agency. *National Incident Management System (December 2008).* NIMS Resource Center; accessed April 18, 2010 at http://www.fema.gov/emergency/nims/

authority and mechanisms for Federal health and medical assistance to State, local, and Tribal authorities.

- The Regional Response Coordination Center (RRCC): This is the organizing entity delineated in the NRF that is designed to provide regional assistance through FEMA supervision (with HHS participating through its ESF #8 responsibility) until a Joint Field Office is established in the area of the disaster.

- HHS regional preparedness and response: HHS has a strongly developed regional presence, with a Regional Health Administrator and Regional Emergency Coordinators to promote regional emergency response coordination in health and medical arenas.

  - Federal authorities: Activation of Federal assistance may occur through implementation of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (424 USC 5121, et seq.) or through independent authority of the HHS to declare a public health emergency or disaster. These authorities, and the Federal resources available through them, are presented in the NRF and related documents.

  - Federal resources: Federal resources that can be made available are varied and include the deployment of Federal personnel (e.g., CDC, commissioned Corps USPHS personnel) or personnel serving in a temporary Federal role (e.g., DMATs). Of note, VA resources are often an integral component of Federal assistance to State response.

Lesson 2.2.3 Concept of Operations for Managing Strategic Coordination

Lesson Objectives

- *List ICS-based strategy, principles, and management processes for coordinating across the jurisdictional, intergovernmental, and public-private boundaries.*
- *Describe the responsibilities that each tier has for inter-tier management coordination.*
- *Describe the management capability required by each participating organization and resource so that they are fully integrated into the overall management process.*

Introduction

The MSCC framework provides a strategy to integrate the many medical capabilities and coordinating mechanisms that have already been established in most localities, such as medical case reporting to public health and syndromic surveillance programs. This is accomplished by coordinating their individual management to create more powerful tools for overall healthcare incident management. The underlying capability that powers this single system construct is managing the adequate sharing of incident information and managing the coordination of incident planning efforts.

- ICS principles between tiers: The operation of the overall MSCC management system is dependent upon competent incident management system applications that coordinate organizations within and across the multiple tiers of a major medical response. For example, in the aftermath of a major hurricane impact, the same ICS principles (management by objectives, incident action planning, and others) used by individual healthcare facilities may be used to manage coordination with the local jurisdiction (usually a city, county, or parish) authorities, between local and State medical authorities, and between State and Federal medical response authorities. Individual healthcare organizations may effectively coordinate their individual strategy and tactics and have resources assigned equitably according to their need. This coordination can be efficiently accomplished by sharing incident information and incident action plans developed and documented through ICS process.

Incident action planning is a critical process that helps to coordinate across the tiers.

- Incident action planning as the key to coordination: The controlling ICS principle is **"Action Planning" at all levels of incident command and incident support, and thus applying**

"Management by Objectives" at each management node. This will establish a consistent coordination process across the levels of government.

The use of "Action Plans"[91]: Action planning is best accomplished at this level of complexity through the use of written documents rather than only oral reporting of action plans. Textbox 2.2.3.1 reflects the longstanding concept of incident action plans at both the ICS and the MAC entity. Exhibit 2.2.3.1 provides a composite presentation of these applied action planning concepts.

SEMS distinguishes between the action planning conducted at the field response level and action planning conducted within EOCs.

Textbox 2.2.3.1

Action Planning (SEMS)[92]

Action planning should be used at all SEMS levels. There are two types of action plans in SEMS:

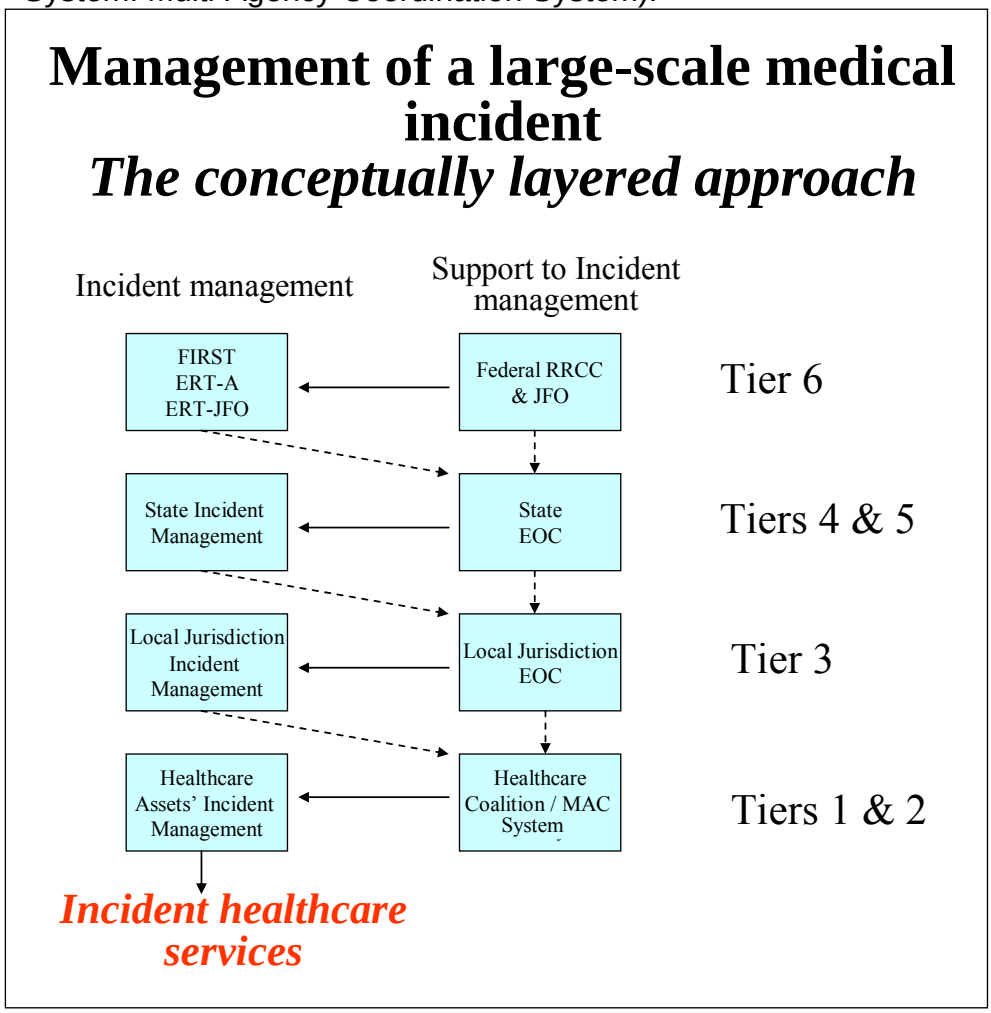
- Incident action plans: At the field response level, written or verbal incident action plans contain objectives reflecting the overall incident strategy and specific tactical action and supporting information for the next operational period. Incident action plans are an essential and required element in achieving objectives under ICS.

- EOC Action Plans: At local, operational area, regional, and State levels, the use of EOC action plans provide designated personnel with knowledge of the objectives to be achieved and the steps required for achievement. Action plans not only provide direction, but they also serve to provide a basis for measuring achievement of objectives and overall system performance. Action plans can be extremely effective tools during all phases of a disaster.

[91] In this text, the terms "action plan" and "action planning" refer specifically to the principles and process of incident action plans presented in ICS. Since an "incident" has only one "incident action plan" for each operational period, other action plans may be qualified by the organization or function (e.g., "Hospital X Action Plan" or "medical care action plan" or some other qualifier that differentiates it from "the" action plan.

[92] From: California Emergency Management Agency. *Standardized Emergency Management System (SEMS) Guidelines, Part I. System Description*: page 5; accessed May 12, 2010 at http://www.calema.ca.gov/WebPage/oeswebsite.nsf/ClientOESFileLibrary/Plans%20and%20Publications/$file/2006-SEMSGdlins-Part1A.pdf

Exhibit 2.2.3.1: Conceptual action planning relationship between Federal, State, local jurisdictions, and healthcare organizations during large-scale incident response. (FIRST: Federal Incident Response Support Team; ERT-A: Emergency Response Team – Advanced; RRCC: Regional Response Coordination Center; JFO: Joint Field Office; EOC: Emergency Operations Center; MAC System: Multi-Agency Coordination System).



- Understanding incident command resource management issues for public health and medicine: Traditional descriptions of emergency management and ICS organize their assets around a defined scene. For healthcare response, these concepts must be adapted and defined to be more applicable to large-scale medical response where there is no defined scene, or where multiple incident scenes may exist (e.g., infectious disease outbreaks). Health and medical professionals should understand the utility of emergency management and incident command concepts as they relate to public health and medical disciplines. To achieve this conceptual integration and assure that all tasks in the three key management objective

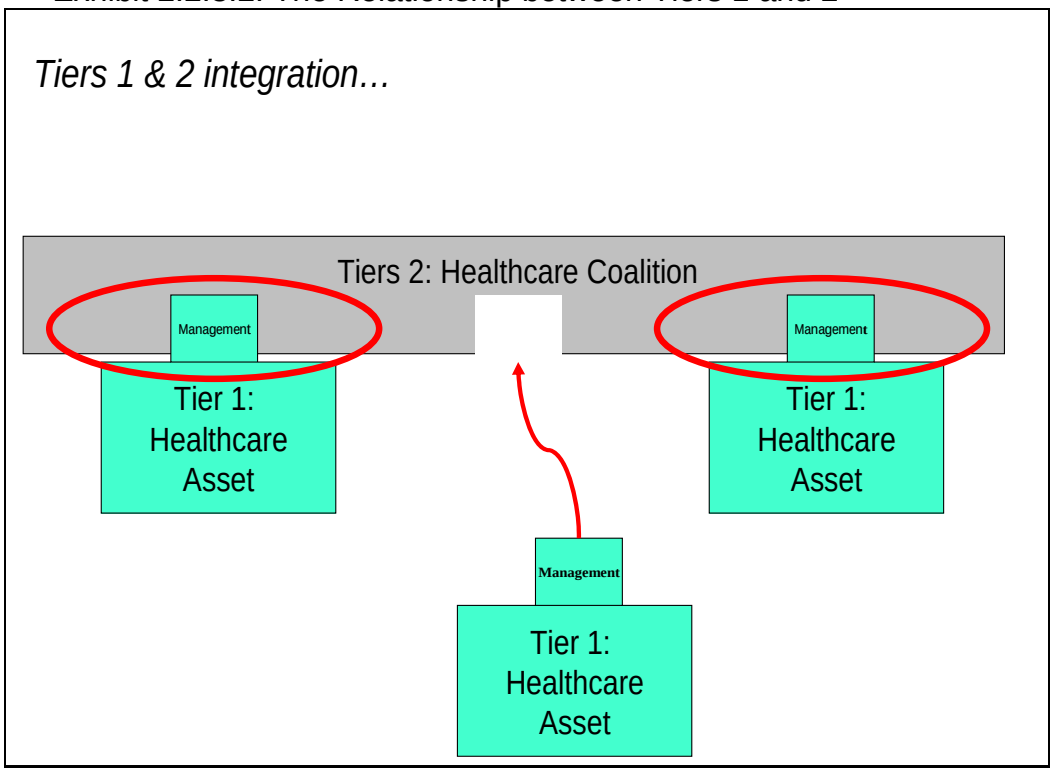
categories above are accomplished, each layer must have an assigned entity to accomplish the three management objective categories described in the preceding lesson

Tiers 1 and 2 Integration:

- ICS within each participating entity: Healthcare organizations and individual healthcare systems must have an inherent incident command capability within each independent healthcare resource. For these healthcare organizations, the outside support is primarily provided by other individual healthcare facilities and other healthcare assets via their multiagency coordination (MAC) system, the Tier 2 coalition of healthcare systems (see Exhibit 2.2.3.2).

Tier 2 can be considered the Multi-Agency Coordination Entity for healthcare assets in a jurisdiction.

Exhibit 2.2.3.2: The Relationship between Tiers 1 and 2



- The healthcare coalition as the healthcare MAC System: In the usual response, this MAC System organizes the otherwise independent healthcare resources to coordinate strategy, tactics, requesting and receiving assistance, and other key tasks while maintaining "sovereign" control of their individual organizations. As described in the preceding lesson, it contains a MAC group function and a MAC/EOC function to address Tier 2 management and support, respectively. If the jurisdiction is primarily providing this service to the healthcare organizations, the coalition's service mandate shrinks to

being a facilitator of information sharing and cooperative planning described in Lesson 2.3.2. **While hospital associations and other organizations may host the healthcare coalition, it is important that the control of the MAC System be maintained directly by the healthcare organizations.**

Local Jurisdiction Integration

- Critical role of the local jurisdiction's ICS: The effectiveness of jurisdictional incident command system and its emergency operations support (Tier 3) in establishing management processes is centrally important to the overall system. As presented in Lesson 2.3.1, the local jurisdiction is commonly in the best position for defining incident objectives and the parameters of the response, and for timely application of resources to support urgent medical interventions. Even more important, Tier 3 is the management level that can most effectively coordinate across the many disciplines needed in a complex medical incident. The actual hands-on medical evaluation and intervention occurs primarily in private medical facilities in Tier 1, and the individual management of each unit must be capable of managing support provided by Tier 2 and Tier 3. As an example, a hospital that receives information from the healthcare coalition (Tier 2) or jurisdiction (Tier 3) will only maximally benefit from this information if it is adequately disseminated internally.

Tier 3 is the management level that can most effectively coordinate across multiple disciplines.

- The county or city EOC as the local MAC System: In the local Jurisdictional response (Tier 3), the term "Emergency Operations Center" is applied to the Multi-Agency Coordination Center that functions as primary support to the "incident command system" or the IMT at the jurisdictional level (See Exhibit 2.2.3.3).

    - Outside assistance: This includes coordinating assistance from outside resources (Federal, State, and other jurisdictions) that cannot be obtained through tactical mutual aid.

    - Incident-related issues: The EOC directly manages emergency issues related to the incident, but that are outside the scope of the incident as defined by the IMT at their level. This may be determined geographically (outside a scene perimeter) or functionally (beyond the scope of the IMT objectives when no single scene exists or when the impact is diffuse). These include:

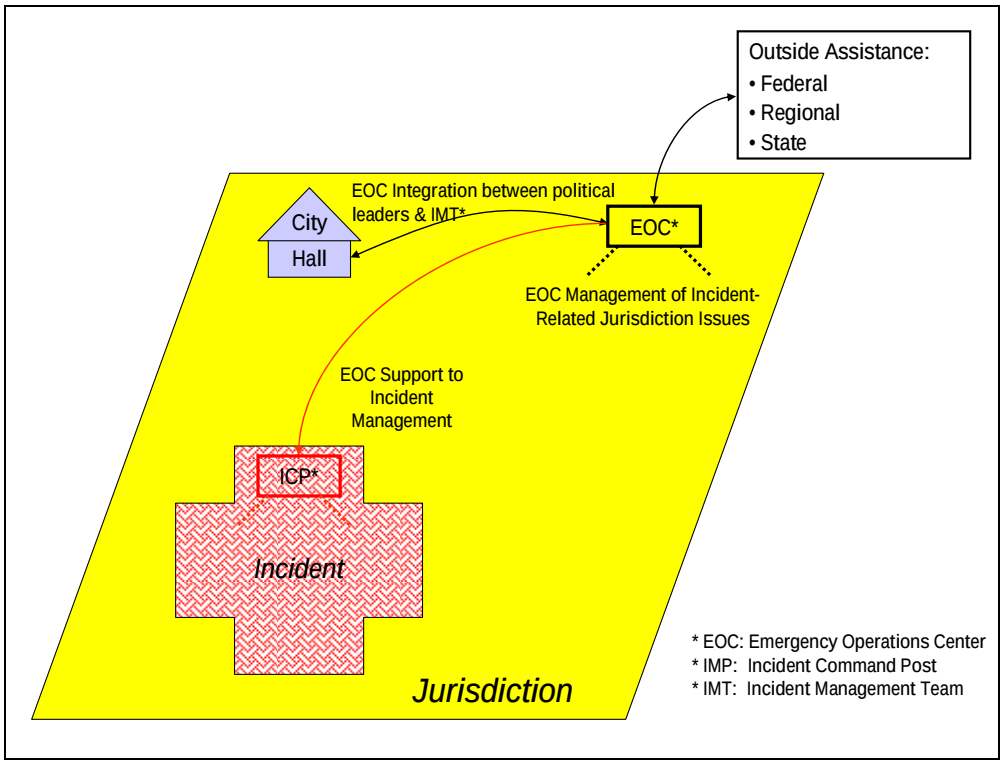
        - Providing integration between political leaders at that level and the IMT at that level.

EOCs typically manage issues that may be incident related but that are outside the scope of the incident as defined by the IMT at their level.

- Addressing traffic management issues outside the IMT's control perimeter.

- Addressing disruptions to tourism and other critical jurisdictional businesses, resumption of public schooling, and others.

Exhibit 2.2.3.3: The Jurisdiction's IMT at the ICP is supported by the Jurisdictions EOC.



Different ICS configurations demonstrating the role of the healthcare coalition are presented for consideration.

- The ICS configuration of support to the healthcare coalition: The direct support to Tier 2, conceptually presented in Exhibit 2.2.3.4 below, could be functionally configured in multiple ways:

  - Integrated branch or group: Tiers 1-3 (including tier 3 health and medical assets) could be viewed as an integrated branch or group under a Jurisdiction's IMT Operations Section (as a Medical Services Branch or Group), if the jurisdiction committed to fully supporting the healthcare assets and they in turn agreed to "be managed" within the parameters of ICS (see Exhibit 2.2.3.5). This would be a very unusual situation.

  - Functionally separate: The IMT remains functionally separate from the healthcare coalition, which performs as its own MAC System for the healthcare organizations. It is connected through a liaison function with jurisdiction's IMT Command Staff, or

through another designated liaison within the IMT Operations, Logistics, or Plans Section (see Exhibit 2.2.3.6).
5.56"

- Completely distinct: The IMT is completely separate from the coalition, which is performing as a MAC System that is connected through only a weak liaison function with the jurisdiction IMT and the primary support to the coalition is provided through the EOC (see Exhibit 2.2.3.7). The usual point of contact for healthcare within the EOC is through an ESF #8 functional position. While this may be enough to provide straightforward assistance, it is preferable to have the healthcare organizations connected to a management function within the EOC that can manage complex issues requiring significant financial support.

Exhibit 2.2.3.4: Conceptual Integration of Tiers 1, 2, and 3

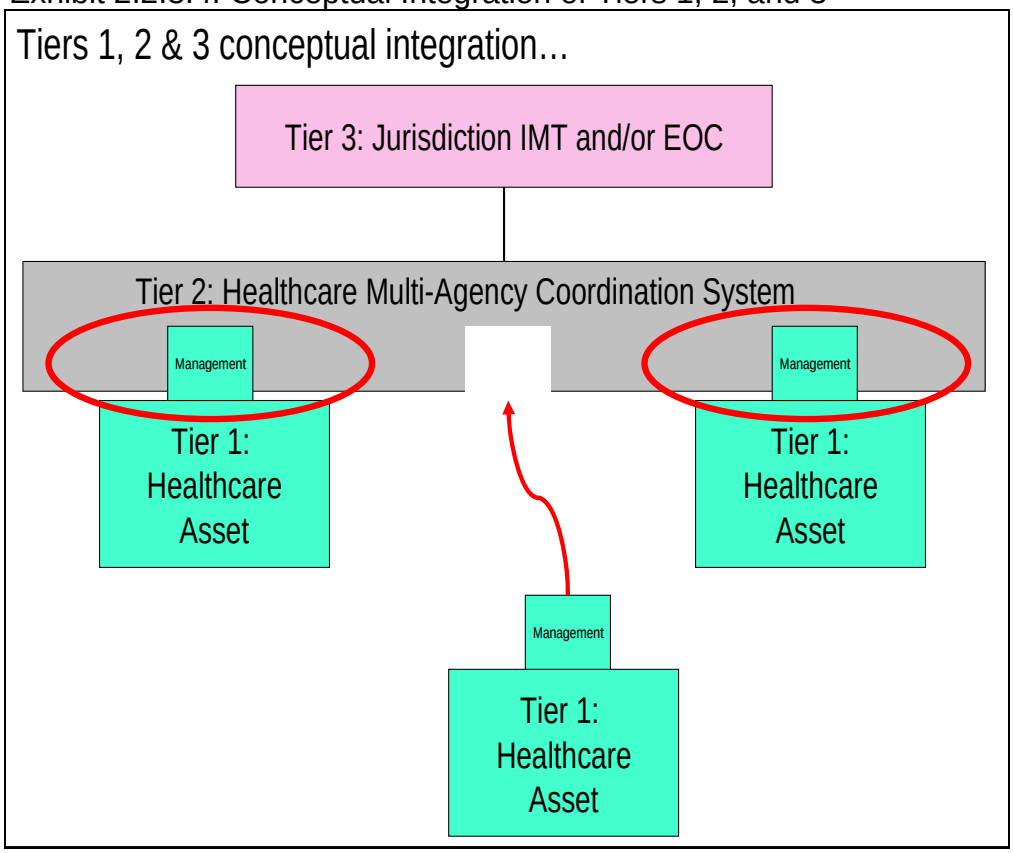


Exhibit 2.2.3.5: Tiers 1 & 2 integrated into the Tier 3 Incident Management Team as a branch of the IMT Operations Section.

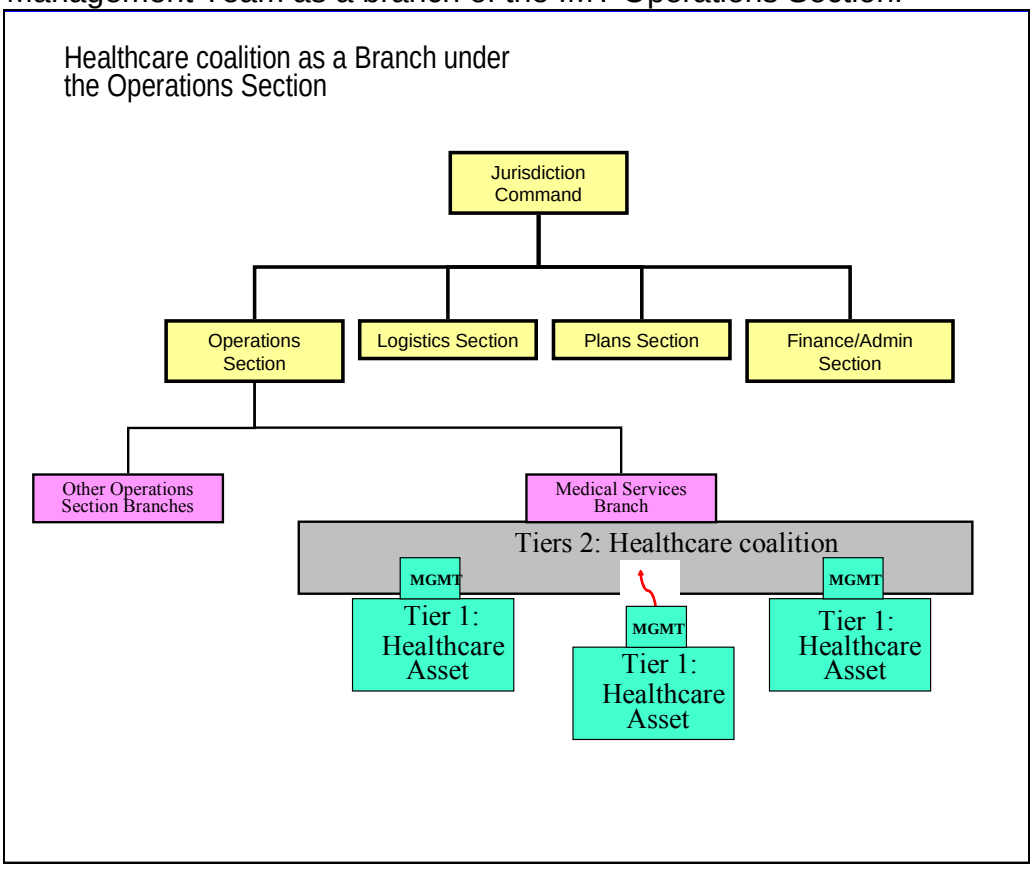


Exhibit 2.2.3.6: Tiers 1 & 2 as a Multi-Agency Coordination Entity, coordinating with the Command Staff (Senior Liaison) or Operations Section (tactical liaison) of the Tier 3 Incident Management Team.

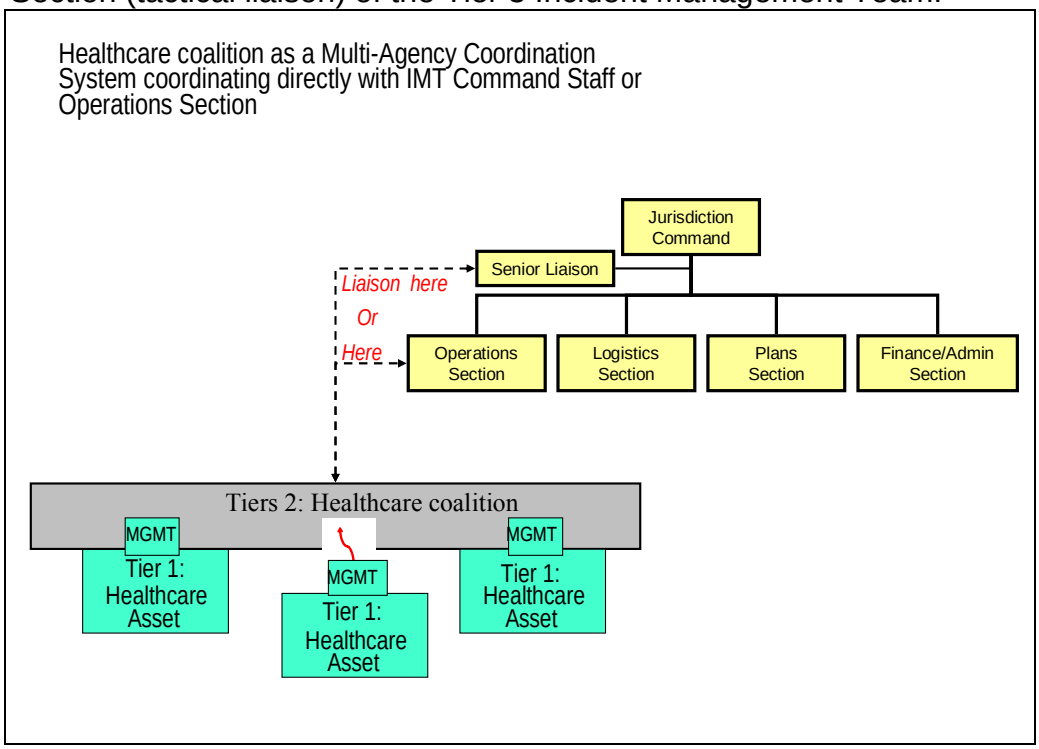
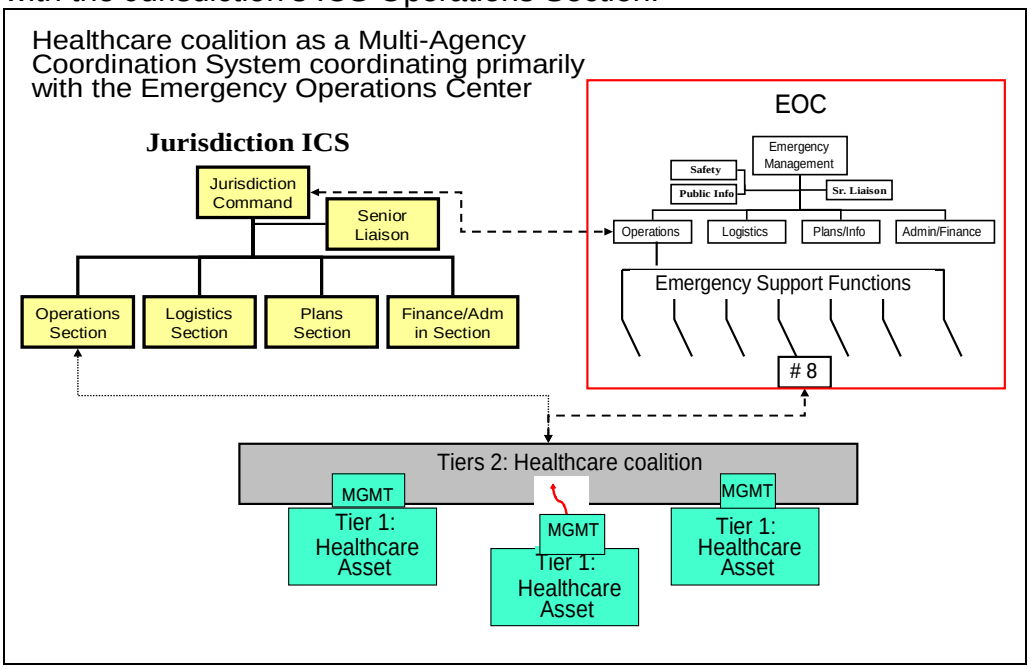


Exhibit 2.2.3.7: The Healthcare coalition with primary interface with the EOC (ESF #8), and a secondary (tactical) operational interface with the Jurisdiction's ICS Operations Section.



State Management Integration

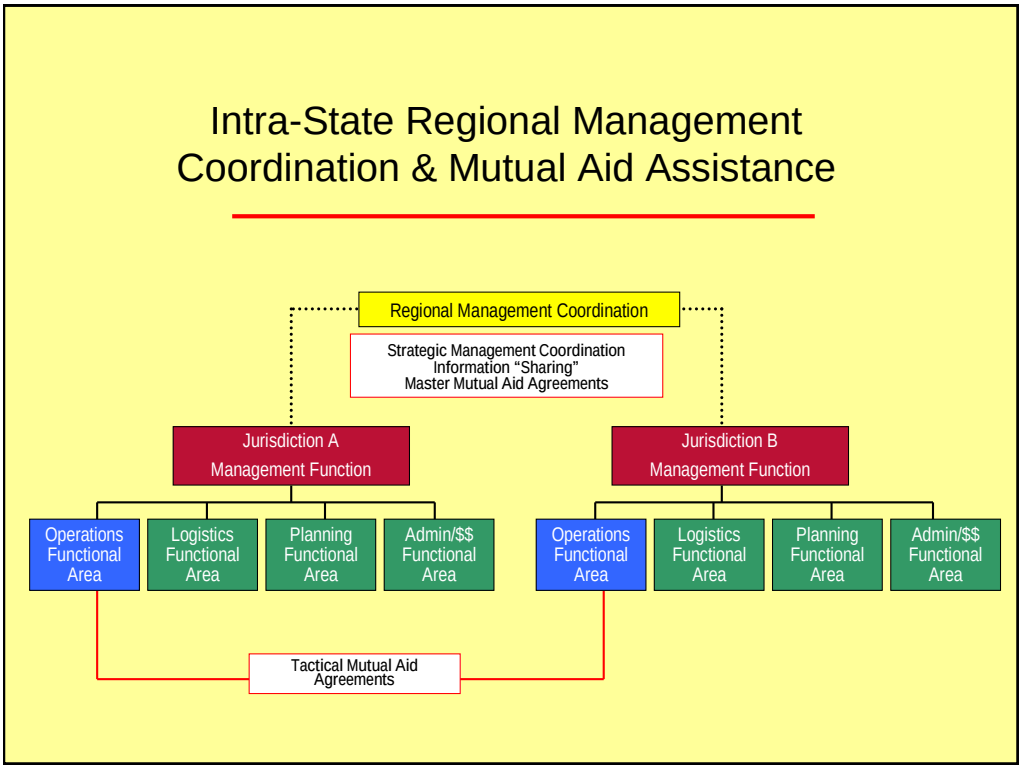
- ICS plus EOC at the State level: The State-based response should have a similarly defined incident command/incident management function as well as an EOC support function. The State IMT manages:

  - State resources support: Provided to affected local jurisdictions, usually through the local EOCs.

  - Intrastate regional coordination: Achieved through mechanisms defined by the individual State (see Exhibit 2.2.3.8 for a conceptual depiction).

  - State-level incident-related issues not managed by the local jurisdictions: For example, the management of the EMAC process is becoming an increasingly important and complex task. This must be carefully managed to deter unneeded and unqualified resources from self-deploying or deploying after seeking a verbal request from individuals who work for impacted local jurisdictions.

Exhibit 2.2.3.8: State level tasking that promotes intrastate regional coordination and effective local mutual aid.



- Intrastate regional coordination: Intrastate **regional** coordination may facilitate rapid surge capacity for management resources to assist impacted jurisdictions. This has been a longstanding, very successful concept for California public safety response. Since each local jurisdiction will have its own management as well as response system, each region will have "redundant" management personnel within each region of a State that can be used for management surge capacity. It is beneficial if State planners promote the development of local management with similarities between their capacities, systems, equipment, and procedures across each jurisdiction in the region. Standardization promotes regional coordination and more-effective **management mutual aid**, as well as more cost-effective resource acquisition, training, and exercises. This is particularly important for public health and healthcare management personnel, who are usually thinly staffed in each jurisdiction.

Intra-State regional coordination may facilitate rapid surge capacity.

Interaction between Operational Assets from Different Levels

- Mutual Aid strategy: Mutual aid is commonly used to develop surge and specialized capacity in EMS and other traditional public safety disciplines. It is much less common in medical, public health, and health-related services. This must be addressed, since mutual aid

and cooperative assistance (reimbursed mutual aid) is the single most available and cost-effective way to obtain surge capacity after maximizing the output of individual assets. Because mass casualty injury profiles commonly include a significant number of patients with medical conditions where time-to-adequate-medical-treatment is of the essence, mutual aid strategy should first emphasize a local sharing of assets. Subsequently, regionally based capabilities are emphasized (intrastate through the State IMT/EOC; interstate through EMAC mechanisms), and then finally a national mutual aid system through the NRF.

- Master mutual aid strategic direction: Lower level (tactical) inter-facility and inter-jurisdictional coordination and resource sharing may be accomplished through function or organization-specific mutual aid agreements, but these should follow the strategic direction delineated by a master mutual aid plans (see Lesson 3.3.2). Mutual aid may be coordinated from multiple possible positions (see Textbox 2.2.3.2).

Textbox 2.2.3.2

Coordination of Mutual Aid (SEMS)[93]

Mutual aid coordinators may function from an EOC, their normal departmental location, or other locations depending on the circumstances. Some incidents require mutual aid but do not necessitate activation of the affected local government or operational area EOCs because of the incident's limited impacts. In such cases, mutual aid coordinators typically handle requests from their normal work location. When EOCs are activated, all activated discipline-specific mutual aid systems should establish coordination and communications with the EOCs… Mutual aid system representatives at an EOC may be located in various functional elements (sections, branches, groups, or units) or serve as an agency representative depending on how the EOC is organized and the extent to which it is activated.

- Assignment of resources between tiers: Resources from one management level may be assigned to work for another organization,

[93] California Emergency Management Agency. *Standardized Emergency Management System (SEMS) Guidelines, Part I. System Description*: page 10; accessed May 12, 2010 at: http://www.calema.ca.gov/WebPage/oeswebsite.nsf/ClientOESFileLibrary/Plans%20and%20Publications/$file/2006-SEMSGdlins-Part1A.pdf

even in a different "tier" to promote the delivery of quality and timely medical care (see Exhibit 2.2.3.9 below).

- Example: Federal assets, such as Disaster Medical Assistance Teams (DMATs, USPHS Commissioned Corps, or other), may be assigned to support medical care within severely challenged hospitals to address shortages of specific skilled personnel (e.g., ICU nurses during the 2001 Houston floods, burn nurses after the 9-11 Pentagon attack).

- Example: Field-deployed healthcare resources such as Federal Medical Shelters[94] supplied by Federal agencies (through the Stafford Act), medical resources from other States (through EMAC), or within the State (through State processes) should be assigned to a position within the tier structure. **This assignment would be based upon whom the resource reports to operationally (i.e., at the tactical level) in the incident. This reporting may be different from whom they report to administratively based upon their origin and on where their direct incident support and service integration occurs.**

- Example: A similar situation would be represented by a healthcare facility mutual aid system providing clinicians to work at an individual facility. **Traditionally, the tactical management of the assigned assets has been transferred to the unit where it is assigned (e.g., clinical personnel reporting to the hospital IMT if directly assigned to the hospital's clinical services)**.

Although tactical management may be transferred, administrative and financial management of the asset remains with the home agency at that level of government or non-governmental organization.

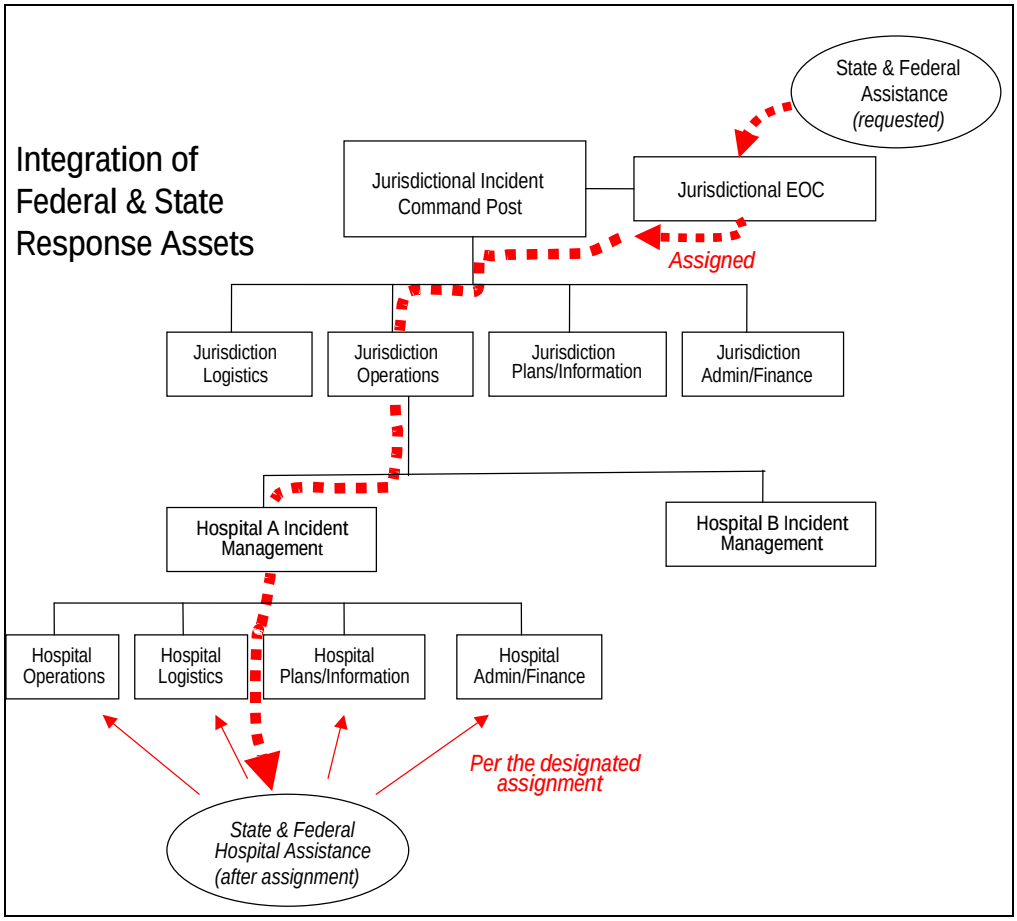
Administrative and financial management of an asset remains with the home agency.

- Guidelines: Similar guidelines usually exist for State resources. However, individual consultants from health agencies, such as the CDC, may operate differently, so the operational management and reporting assignment of all outside resources should be determined during their introduction (i.e., initial assignment briefing) to the activated incident command system. In the CDC example, they continue to report to their home organization (both

[94] US Department of Health and Human Services (DHHS). *HHS Designates First Medical Shelters and Provides Vital Medical Supplies and Medical Assistance*(September 2, 2005). DHHS Press Office, US Department of Health and Human Services, Washington DC; accessed May 21, 2010 at: http://archive.hhs.gov/news/press/2005pres/20050902.html

tactically and strategically) but serve as an advisor to the designated State or local entity.

Exhibit 2.2.3.9: Integration of outside Federal and State assets into the tactical ICS structure of the response.



Configuring the Management Scheme in Each Local Jurisdiction

- Defining incident-specific organizational relationships: Exactly how the resources used to respond to an incident are structured into the IMT will vary widely from jurisdiction to jurisdiction, and within a jurisdiction may vary from incident to incident within the parameters of the jurisdiction's template.

  - Incident factors: Factors such as incident circumstances, how and where the incident started, local and State traditions and laws/regulations, jurisdictional capacity to manage, and others.

  - Response decisions: An "incident" may not even be considered a single incident. It may have begun as several incidents, and so

could have multiple incident management teams that should be coordinated through an area command or other accepted approach as discussed earlier in this Unit.

- ○ Local versus State authority: Incident management and emergency management support for emergencies and disasters is traditionally based at the local level (county or municipality) with State assistance. Public health, however, has often been constructed with State authority overriding local jurisdictions. These digressing lines of authority and reporting between public health and emergency management/public safety must be specifically addressed and resolved within each State and its local jurisdictions.

Most of these decisions are beyond the control of healthcare system leaders and the healthcare system emergency managers, but decisions may be influenced by good-faith participation in community preparedness planning.

- The assignment of patient care within the local ICS structure: It is sobering to note that patient care, once transferred to healthcare facilities, has not generally been considered a jurisdictional or other governmental ICS responsibility in most mass casualty and mass effect incidents (e.g., Oklahoma City Bombing, 9-11 events, 2001 anthrax incident in the national capital area, Hurricane Katrina). In all of these incidents, healthcare facilities operated outside any formal local incident command system, essentially on their own during the critical early periods of patient surge and mass effect.

  - ○ Understanding the potential ICS configurations: It is imperative, therefore, that healthcare system managers understand the various ICS and MAC system arrangements in which their organization could participate, and prepare to maximally benefit from available choices. **Recognize that healthcare systems working together based upon mutual aid, cooperative assistance, coordination of management strategies, and seeking jurisdictional support through a cohesive Tier 2 platform is very attractive. This coalition approach provides a more powerful method to influence how medical care services are incorporated into the jurisdictional ICS.**

  - ○ Configuration determinants: For many of these scenarios, achieving optimal management participation is largely dependent upon the management capability of the healthcare system and how they interact with the outside agency commanders during the very early stage of response. Competent management of the

Healthcare System managers must understand the various ICS arrangements in which their organizations may participate.

healthcare system, and confident understanding of management roles promotes optimal involvement at the appropriate level of participation.

The exact configuration for management of an incident can vary dependent upon the incident details. The bullets below provide examples of effective healthcare system participation in ICS configurations. These should ideally be available as optional configurations within a jurisdiction's template decision-support tool, presenting options for the configuration of ICS as it is implemented during incidents.

- Small incident within the healthcare system itself: The entire IMT is provided by healthcare system personnel.

- Larger hazard impact or threat to the facility itself: This type of incident (such as a fire, infant abduction, and others) involves major responsibility on the part of public safety agencies as well as the healthcare organization. These incidents may best be managed in a unified command arrangement. This is much more appropriate than the failed models of the past, where public safety "took over" the incident, or where healthcare system response operated independently of the public safety actions.

- Community-wide incident with independent healthcare organizations: Healthcare organizations operate completely independent from the jurisdiction's incident command system and from other healthcare organizations, receiving casualties through EMS, walk-in, and civilian transportation. Communication comes almost entirely from EMS, and is focused on patients that they intend to deliver to the healthcare facility. This has, unfortunately, been the common practice in most jurisdictions in the past. In many, the formal management connection to the jurisdiction ICS has been nonexistent, or very weakly allied with the emergency support function in the EOC, not directly with the ICS management or operations section leadership. This should be addressed at least through a **direct liaison relationship** between the jurisdiction's ICS and the incident command for the healthcare system (the healthcare organization itself if it is the only healthcare facility involved in the response; otherwise through the coalition if multiple organizations are involved).

- Community-wide incident management with coordinated healthcare organizations included: Healthcare organizations

operate in a coordinated arrangement with each other through a healthcare coalition, and within the **Operations Section of jurisdiction's IMT.** Management direction is provided by the incident command Operations Section Chief, and support provided through the incident command Logistics Section. In this arrangement, the hospital coalition could be designated a branch or a group, with each individual healthcare organizations treated as a resource or as a task force. This would be unusual, since hospitals tend not to place themselves below the direct authority of public agency personnel.

  - For medical and other healthcare resources that are independent of the normal public safety response system (hospitals, independent healthcare systems, medical practices, healthcare supply corporations, and others) their primary day-to-day responsibility is to current patients, clients, shareholders, and others. This responsibility cannot be subrogated to public safety concerns and public management without prior arrangements that protect the primary stakeholders. Systems that incorporate private, voluntary, health and medical resources must address this issue and may need to assure information and resource support to those organizations if they become part of the formal response system.

- Community-wide incident management with coordinated healthcare organizations external to the IMT: Healthcare organizations work in a coordinated arrangement with each other (through the healthcare coalition) but **outside the jurisdiction's IMT.** They coordinate with the IMT through a **single liaison to jurisdiction's ICS Command Staff (their senior liaison) or Operations Section**. Alternatively (and less desirable), the primary coordination could be through the EOC, usually through an ESF #8 liaison. In these arrangements, the healthcare system coalition would function as a Multiagency Coordination System under the NIMS classifications.

Capturing these concepts in response guidance

Once these management issues have been evaluated and concepts developed to address them, the guidance for these structures and processes should be incorporated into the Emergency Operations Plan (EOP) for all relevant organizations. As discussed in Lesson 1.5.2, the

format of the EOPs should be standardized so that this inter-organizational guidance can be incorporated into EOPs in a standard fashion. This is particularly important for large, multi-level organizations such as the VA and nationwide corporate hospital systems. Each level should be assessed for the tier within which it best fits in the MSCC scheme. The EOP should address the methods for interface with that tier during emergency response.

Each level should have an EOP with the same formatting so that it can be easily understood how each level of the organization interfaces with its higher and lower levels. For example, in the VA system, using the same EOP format at the headquarters, all VISNs and all VA Medical centers may promote better standardization and more effective interface across the system.

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