

COUNTY OF LOS ANGELES DEPARTMENT OF HEALTH SERVICES
EMERGENCY MEDICAL SERVICES AGENCY
DISASTER SERVICES



CONDUCTING DRILLS AND EXERCISES
A GUIDE FOR HOSPITALS

Disclaimer

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The scenarios and guidance on exercise planning contained in this guidebook were adapted from the following excellent resource documents:

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CHAPTER 1

WHY DISASTER EXERCISES ARE AN IMPORTANT PART OF
TERRORISM PREPAREDNESS AND PLANNING FOR HOSPITALS



Chapter 1

WHY DISASTER EXERCISES ARE AN IMPORTANT PART OF TERRORISM PREPAREDNESS AND PLANNING FOR HOSPITALS

Emergencies are a daily occurrence in a busy hospital environment. Staff time and training funds are at a premium for most hospitals. It is easy to understand why disaster exercise planning can get pushed to the bottom of the priority list. Nevertheless, disaster exercises, particularly those using terrorism incident scenarios, are one of the best ways to evaluate your hospital's emergency management plans, equipment, and systems. In addition to the obvious training and preparedness advantages, having an effective exercise program is also a Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requirement under EC 4.10.2 and EC4.10.15. The California State code, Title 22 70741 (b) also requires that hospitals participate in the annual state-wide Emergency Medical Services Agency (EMSA) exercise.

Planning exercises requires acquiring some basic tools. These tools help the exercise planner to develop, conduct, evaluate, and follow-up on "after action" tasks identified during an exercise. This guidebook includes basic information on exercise design and provides you with sample scenarios, evaluation tools, and after action report formats that can be adapted for use in your hospital. In addition to this guidebook, hospitals are encouraged to contact the staff from the Los Angeles County Emergency Medical Services Agency, Disaster Management section to assist with exercise planning and evaluation (see Acknowledgements).

Hospital disaster exercises also test the Hospital Emergency Incident Command (HEICS) plans and procedures. (For more information on HEICS, please see Appendix E in the back of this guidebook.)

CHAPTER 2

TYPES OF EXERCISES



Chapter 2

TYPES OF DISASTER EXERCISES

Introduction

In this chapter, you will find an overview of all of the types of exercise-related activities that your hospital disaster planning team can include as a part of your yearly exercise program. Disaster exercises can be grouped in two categories: discussion-based exercises, and operations-based exercises. A discussion of the disaster exercise planning process, including the steps for exercise planning, facilitation, and response improvement planning is found at the end of this chapter.

1. Discussion-Based Exercises

Discussion-based exercises are normally used as a starting point in the building block approach to the cycle of exercises that hospitals should use. Discussion-based exercises include seminars, workshops, tabletop exercises (TTX), and games. These types of exercises typically highlight existing plans, policies, mutual aid agreements, and procedures. Thus, they are exceptional tools for familiarizing hospital personnel with current or expected capabilities. Discussion-based exercises typically focus on strategic, policy-oriented issues; while operations based exercises tend to focus more on response-related issues. Facilitators and/or presenters usually lead the discussion, keeping participants on track while meeting the objectives of the exercise.

a. Seminars

Seminars are generally employed to orient participants to, or provide an overview of, authorities, strategies, plans, policies, procedures, protocols, response resources, or concepts and ideas. Seminars provide a good starting point for hospitals that are developing or making major changes to their plans and procedures. They offer the following attributes:

- Low-stress environment employing a number of instruction techniques such as lectures, multimedia presentations, panel discussions, case study discussions, expert testimony, and decision support tools.
- Informal discussions led by a seminar leader.
- Lack of time constraints caused by real-time portrayal of events.
- Effective with both small and large groups.

b. Workshops

Workshops represent the second tier of exercises in the building block approach. Although similar to seminars, workshops differ in two important aspects: participant interaction is increased, and the focus is on achieving or building a product (such as a plan or a policy).

Workshops provide an ideal forum for:

- Collecting or sharing information.
- Obtaining new or different perspectives.
- Testing new ideas, processes, or procedures.
- Training groups in coordinated activities.
- Problem solving complex issues.
- Obtaining consensus.
- Team building.

In conjunction with exercise development, workshops are most useful in achieving specific aspects of exercise design such as:

- Determining program or exercise objectives.
- Developing exercise scenario and key events listings.
- Determining evaluation elements and standards of performance.

A workshop may be used to produce new standard/emergency operating procedures (SOPs/EOPs), Mutual Aid Agreements, Multiyear Exercise Plans, and Improvement Plans (IP). To be effective, workshops must be highly focused on a specific issue and the desired outcome or goal must be clearly defined. Potential relevant topics and goals are numerous, but all workshops share the following common attributes:

- Low-stress environment.
- No-fault forum.
- Information conveyed employing different instructional techniques.
- Facilitated, working breakout sessions.
- Goals oriented toward an identifiable product.
- Lack of time constraint from real-time portrayal of events.
- Effective with both small and large groups.

c. **Tabletop Exercises (TTXs)**

Table Top Exercises (TTXs) involve management and senior staff, important County and/or city partners, or other key personnel or hospital partners in an informal setting, discussing simulated situations. This type of exercise is intended to stimulate discussion of various issues regarding a hypothetical situation. It can be used to assess plans, policies, and procedures or to assess types of systems needed to guide the prevention of, response to, and recovery from a defined event. TTXs typically are aimed at facilitating understanding of concepts, identification of strengths and shortfalls, and/or achieving a change in attitude. Participants are encouraged to discuss issues in depth and develop decisions through slow-paced problem solving rather than the rapid, spontaneous decision making that occurs under actual or simulated emergency conditions. In contrast to the scale and cost of operations-based exercises and games, TTXs can be a cost-effective tool when used in conjunction with more complex exercises. The effectiveness of a TTX is derived from the energetic involvement of participants and their assessment of recommended revisions to current policies, procedures, and plans. TTX methods are divided into two categories: basic and advanced. In a basic TTX, the scene set by the scenario materials remains constant. It describes an event or emergency incident and brings discussion participants up to the simulated present time. Players apply their knowledge and skills to a list of problems presented by the leader/moderator, problems are discussed as a group, and resolution is generally agreed on and summarized by the leader. In an advanced TTX, play revolves around delivery of pre-scripted messages to players that alter the original scenario. The exercise controller (moderator) usually introduces problems one at a time in the form of a written message, simulated telephone call, videotape, or other means. Participants discuss the issues raised by the problem, using appropriate plans and procedures. TTX exercised provide hospitals with the opportunity to:

- Practice group problem solving.
- Familiarize senior officials with a situation.
- Conduct a specific case study.
- Examine personnel contingencies.
- Test group message interpretation.
- Participate in information sharing.
- Assess interagency coordination.
- Achieve limited or specific objectives.

2. Operations-Based Exercises

Operations-based exercises represent the next level of the exercise cycle; they are used to validate the plans, policies, agreements, and procedures solidified in discussion-based exercises. Operations-based exercises include drills, functional exercises (FEs), and Full Scale Exercises (FSEs). They can clarify roles and responsibilities, identify gaps in resources needed to implement plans and procedures, and improve individual and team performance. Operations-based exercises are characterized by actual response, mobilization of apparatus and resources, and commitment of personnel, usually over an extended period of time.

a. Drills

A drill is a coordinated, supervised activity used to test a single specific operation or function in a hospital or other organization. Typical drills for hospitals include setting up the decontamination, triage, and/or treatment areas. Drills can also be used to provide training on new equipment, develop or test new policies or procedures, or practice and maintain current skills. For this type of exercise, hospitals typically choose to test their communication and notifications systems and equipment.

b. Functional Exercises

The Functional Exercise (FE) is designed to test and evaluate individual capabilities, multiple functions or activities within a function. FEs are generally focused on exercising plans, policies and procedures by providing the opportunity for key staff to practice their assigned function in the Hospital Emergency Incident Command System (HEICS). Generally, events are projected through an exercise scenario with event updates that drive activity at the management level. Movement of personnel and equipment is simulated. The objective of the FE is to execute specific plans, policies, and procedures under crisis conditions, within a particular functional team(s). An FE simulates the reality of operations in a functional area by presenting complex and realistic problems that require rapid and effective responses by trained personnel in a highly stressful environment. Functional Exercises help hospitals to:

- Evaluate HEICS functions.
- Evaluate your hospital's Emergency Command Center and staff.
- Reinforce established policies and procedures.
- Measure resource adequacy.
- Examine hospital relationships with key partners (County and/or city governments, other hospitals, vendors, etc).

c. Full Scale Exercises

The Full Scale Exercise (FSE) is the most complex step in the exercise cycle. FSEs test many facets of the hospitals emergency response and recovery plans and procedures. They include the actual use of the Hospital Emergency Incident Command System (HEICS) to effectively and efficiently respond to, and recover from, an incident. A FSE focuses on implementing and analyzing the plans, policies, and procedures developed in discussion-based exercises and honed in previous, smaller, operations-based exercises. The events are projected through a scripted exercise scenario with built-in flexibility to allow updates to drive activity. It is conducted in a real-time, stressful environment that closely mirrors a real event. Hospital resources are mobilized and deployed to where they conduct their actions (decontamination, triage, EOC, etc) as if a real incident had occurred. The FSE simulates the reality of operations by presenting complex and realistic problems requiring critical thinking, rapid problem solving, and effective responses by trained personnel in a highly stressful environment. Other entities that are not involved in the exercise, but who would be involved in an actual event, can “play” in the exercise as a “simulated” resource. A FSE provides an opportunity to execute HEICS plans, procedures, and cooperative (mutual aid) agreements in response to a simulated live event in a highly stressful environment. FSE help hospitals to:

- Assess organizational and individual performance.
- Demonstrate inter-hospital cooperation.
- Practice allocating resources and personnel.
- Assess equipment capabilities.
- Activate personnel and equipment.
- Assess key hospital partner relationships (County and or city partners, local Law and Fire agencies, key vendors, etc).
- Exercise public information systems.
- Test communications systems and procedures.
- Analyze Memorandums of Understanding (MOUs), Standard Operating Procedures (SOPs), plans, policies, and procedures.

The level of support needed to conduct an FSE is greater than needed during other types of exercises. The exercise site at the hospital is usually extensive with complex site logistics. Food and water must be supplied to participants and volunteers. Safety issues, including those surrounding the use of props and special effects, must be monitored. FSE controllers ensure that participants’ behavior remains within predefined boundaries. Simulation Cell (SIMCELL) controllers continuously inject scenario elements to simulate real events. Evaluators observe behaviors and compare them against established plans, policies, procedures, and standard practices (if applicable). Safety controllers ensure all activity is executed within a safe environment.

CHAPTER 3

EXERCISE PLANNING PROCESS



Chapter 3

EXERCISE PLANNING PROCESS

Introduction

The exercise planning process involves considerable coordination among participating hospital(s) and key staff. The planning process includes managing the project, convening a planning team, conducting planning conferences, identifying exercise design objectives, developing the scenario and documentation, assigning logistical tasks, and identifying the evaluation methodology.

1. Foundation

To establish a foundation for designing, developing, conducting, and evaluating an exercise, project management is essential and involves the following tasks: developing a project management timeline and establishing milestones, identifying a planning team, and scheduling planning conferences.

2. Exercise Planning Timelines

Timelines for workshops and seminars will generally be shorter than for a Table Top Exercise (TTX) whereas the timelines for complex or multi-hospital Full Scale Exercises (FSEs) could be longer than those for drills.

3. Exercise Planning Team

The exercise planning team is responsible for designing, developing, conducting, and evaluating all aspects of an exercise. The planning team determines exercise design objectives, tailors the scenario to the hospital's needs, and develops documents used in exercise evaluation, control, and simulation. Planning team members also help with developing and distributing pre-exercise materials and conducting exercise briefings and training sessions. Due to this high level of involvement, planning team members are ideal selections for controller and evaluator positions during the exercise itself.

The exercise planning team is managed by a Lead Exercise Planner (also referred to as the Exercise Director or Exercise Planning Team Leader). The team should be a manageable size and include a representative from each major participating hospital and disaster response partner. The membership of an exercise planning team should be modified to fit the type or scope of an exercise. For example, an operations-based exercise may require more logistical coordination than a discussion-based exercise. A successful exercise planning team uses the Hospital Emergency

Incident Command System (HEICS) structure; employs project management principles; clearly defines roles, responsibilities, and functional area skills; highlights leadership and team work; follows a standardized exercise design/development process; and calls on the support of senior management.

4. Types of Exercise Planning Conferences

This section describes the types of planning conferences that have been found to be the most useful in exercise design and development. The scope, type (operations or discussion-based), and complexity of an exercise should determine the number of meetings necessary to successfully conduct an exercise. Planning conferences are listed in typical chronological order.

a. Concept and Objectives (C&O) Meeting

The Concept and Objectives (C&O) meetings are used to identify the type, scope, objectives, and purpose of the exercise. The C&O meetings are typically attended by the sponsoring hospital(s), lead exercise planner, key staff and senior management representative(s), and key disaster response partners. C&O meetings provide the foundation for exercise development and are used to gather input from the exercise planning team on the scope, design, objectives, and scenario variables (e.g., hazard selection, venue) for the exercise. The lead exercise planner obtains the planning team's input on exercise location, schedule, duration, and other details required to develop exercise documentation. Planning team members should be assigned responsibility for the tasks outlined in the meeting.

Note: Improvement tasks identified by participants of the hospital's last exercise should be included in the objectives to test for the next exercise.

b. Mid-Term Planning Conference (MPC)

Typically employed for operations-based exercises (e.g., drills, functional exercises, and Full Scale Exercises), the Mid-Term Planning Conference (MPC) presents an additional opportunity in the planning timeline to settle logistical and organizational issues that arise during planning such as staffing concepts, scenario and timeline development, scheduling, logistics, administrative requirements, and reviewing draft documentation. A Master Scenario Events List (MSEL) Conference meeting can be held in conjunction with or separate from the MPC to review the scenario timeline for the exercise.

c. Final Planning Conference (FPC)

The Final Planning Conference (FPC) is a structured meeting to review the procedures for conducting the exercise, final drafts of all exercise materials, and all logistical requirements. By the time a FPC meeting is conducted, there should be no major changes to either the design or the scope of the exercise or to any supporting documentation.

5. Design and Development

This section describes all of the necessary steps and documentation tasks needed in building an exercise. The design and development process for the exercise should focus on identifying objectives, designing the scenario, creating documentation, coordinating logistics, planning exercise conduct, and selecting an evaluation and improvement methodology.

a. Objectives

Exercise objectives define specific goals, provide a framework for scenario development, guide individual organizational objective development, and provide exercise evaluation criteria. Generally, planners will limit the number of exercise objectives to enable timely execution, facilitate design of a reasonable scenario, and adequately support successful completion of exercise goals.

b. Scenario

A scenario provides the backdrop and storyline that drive an exercise. The first step in designing the scenario is determining the type of threat/hazard (e.g., chemical, biological, radiological, nuclear, explosive, cyber, or other). Thought should be given to creating a scenario that involves local incidents and local facilities and is based on exercise objectives derived from the hospital's (and local city and/or County) risk and vulnerability assessment. For example, if the risk/vulnerability assessment identified a critical infrastructure at a local facility (such as a refinery or chemical plant) as a vulnerable target, the scenario could describe a terrorist event or disaster at that facility. Each type of hazard presents its own strengths and weaknesses for evaluating different aspects of prevention, response, and recovery, and is applicable to different exercise objectives. The next step is to determine the venue (facility or site) that the scenario will affect. Venue selection should be based on the type of hazard used. For example, if a non-persistent chemical agent (e.g., Sarin) is selected, the venue should not be an open-air facility (e.g., stadium, park) because of the agent's dissipating characteristics.

c. Documentation

The list below briefly describes typical exercise products. Documentation materials such as meeting minutes, presentations, agendas, and media releases have been omitted because these documents typically are created while developing the primary products.

(1) Situation Manual (SITMAN)

A Situation Manual is a participant handbook for discussion-based exercises, particularly Table Top Exercises. It provides background information on the exercise scope, schedule, and objectives. It also presents the scenario narrative that will drive participant discussions during the exercise. The SITMAN should mirror the multimedia briefing, supporting the scenario narrative and allowing participants to read along while watching events unfold.

(2) Exercise Plan (EXPLAN)

The Exercise Plan typically used for operations-based exercises, provides an exercise synopsis and is published and distributed prior to the start of the exercise. In addition to addressing exercise objectives and scope, the EXPLAN assigns tasks and responsibilities for successful exercise execution. The EXPLAN should not contain detailed scenario information, such as the hazard to be employed. This document is generally intended for exercise players and observers.

(3) Controller and Evaluator (C/E) Handbook

The Controller and Evaluator Handbook supplements the EXPLAN and contains more detailed information about the exercise scenario and describing exercise controllers' and evaluators' roles and responsibilities. Because the C/E Handbook contains information on the scenario and exercise administration, it should be distributed only to those individuals specifically designated as controllers or evaluators. Larger, more complex exercises may use Control Staff Instructions (COSIN) and an Evaluation Plan (EVALPLAN) in place of, or to supplement, the C/E Handbook.

(4) Master Sequence of Events List (MSEL)

The Master Sequence of Events is a chronological timeline of expected actions and scripted events to be injected into exercise play by controllers to generate or prompt player activity. It ensures necessary events happen so that all objectives are met.

Note: An example MSEL is found in Chapter 4 of this guidebook.

(5) Exercise Evaluation Guides (EEGs)

The Exercise Evaluation Guides helps with exercise evaluation. These guides incorporate the critical tasks that should be completed in an exercise. The EEGs are developed for use by experienced exercise evaluators, as well as by practitioners who are subject-matter experts but have little or no exercise evaluation experience. EEGs provide evaluators with information on what they should expect to see, space to record observations, and questions to address after the exercise as a first step in the analysis process.

(6) Policies

Exercise policies are developed to provide guidance or parameters of acceptable practices for designing, developing, conducting, and evaluating exercises. They are designed to prevent, or at a minimum mitigate, the impact of an action that may cause bodily harm to participants, destruction of property, or embarrassment to the facility or local community. Local hospitals should develop policies appropriate to the type of exercise that address safety, media, cancellation, and weather.

CHAPTER 4

EXERCISE CONDUCT



Chapter 4

EXERCISE CONDUCT

Introduction

This section describes the process of conducting the exercise including setup, briefings, facilitation/control/evaluation, and wrap-up activities.

1. Setup

The planning team should visit the exercise site(s) on the hospital grounds a day prior to the event to set up the site (if possible). If more than one hospital is involved in the exercise, then the exercise planning team should visit all of the sites that will be used at each location. Such a site visit is particularly important for functional exercises. On the day of the exercise, planning team members should arrive several hours before the scheduled start to handle any remaining logistical or administrative items pertaining to setup and to arrange for registration. The room layout for a discussion-based exercise is of particular importance. The facility should be large enough to accommodate all participants, observers, and facilitators/presenters, with enough tables and chairs available. Table arrangement varies according to exercise type. For a Table Top Exercises, the number of tables should be based on the number of participating functional areas. The layout should allow for as much participant and facilitator interaction as possible. Facilities should be reserved solely for exercise purposes (if possible) and should be free from distractions. In the setup for an operations-based exercise, planners must consider the assembly area, response route, response operations area, parking, registration, observer/media accommodations, and a possible Simulation Cell (SIMCELL) facility. Restrooms and water should be available to all participants, observers, and actors. All individuals permitted at the exercise site should wear some form of identification. Perimeter security and site safety during setup and conduct are essential.

2. Presentations/Briefings

Presentations and briefings are important tools for delivering information. A discussion-based exercise generally includes a multimedia presentation to present the scenario and accompany the SITMAN. An operations-based exercise may include briefings for controllers/evaluators, hospital staff, actors, players, and observers/media. A briefing and/or presentation is an opportune time to distribute exercise documentation, provide necessary instructions and administrative information, and answer any outstanding questions.

3. Facilitation/Control/Evaluation

In both discussion-based and operations-based exercises, facilitators and controllers guide exercise play. During a discussion-based exercise, the facilitator is responsible for keep-

ing participant discussions on track with the exercise design objectives and making sure all issues and objectives are explored as thoroughly as possible despite operating under time constraints. In an operations-based exercise, controllers plan and manage exercise play, set up and operate the exercise incident site, and possibly take the roles of response individuals and agencies not actually participating in the exercise. Controllers give key data to players and may prompt or initiate certain player actions (as listed in the MSEL) to ensure that objectives are met and the exercise maintains continuity. Controllers are the only participants who should provide information or direction to the players. All controllers should be accountable to one senior controller. If conducting an exercise requires more controllers or evaluators than are available, a controller may serve as an evaluator; however, this typically is discouraged. Evaluators are selected from various agencies and/or hospital disaster partners to evaluate and comment on designated functional areas of the exercise. Evaluators are chosen based on their expertise in the functional area(s) they will review. Evaluators have a passive role in the exercise and only note the actions/decisions of players; they do not interfere with exercise flow. Evaluators should use EEGs to record observations and notes.

4. Players

Players have an active role in responding to an incident by either discussing (in a discussion based exercise) or performing (in operations-based exercises) their regular roles and responsibilities.

5. Actors

Actors are volunteer victims who simulate specific roles, including injuries from a disaster, to add realism to an exercise.

Note: If you are a children's hospital or you have a pediatrics unit, consider including some children as "actors" in your exercise. Children of employees, a local school or girl/boy scout troops are all good sources of volunteers. For example, it is helpful for staff to practice decontamination procedures with the age group likely to be part of the hospital's "surge" following a terrorist event.

6. Simulators

Simulators act on behalf of an agency or organization that is not participating in the exercise.

7. Evaluation

As evaluated practice activities, exercises provide a process for continuous improvement. Evaluation is the cornerstone of exercises; it documents strengths and opportunities for improvement in a jurisdiction's preparedness and is the first step in the improvement process. The evaluation process for all exercises includes a formal exercise evaluation, integrated analysis, and an After Action Report (AAR)/Improvement Plan (IP). The AAR and IP improvements from the last exercise should be used as a starting point for future exercises. It is important that hospital emergency management and exercise planning staff follow through with AAR/IP recommendations obtained from exercise participants. This helps staff to see their participation in disaster exercises as a vital and necessary part of improving the hospital's disaster and emergency response capabilities.

8. Debrief/Hot Wash

A debrief (for facilitators or controllers/evaluators) and/or hot wash (for players) should occur following both discussion and operations-based exercises. The debrief/hot wash is a forum for planners, facilitators, controllers, and evaluators to review and provide feedback on the exercise. It should be a facilitated discussion that allows each person an opportunity to provide an overview of the functional area they observed and document both strengths and areas for improvement. The debrief should be facilitated by the Lead Exercise Planner or the Exercise Director; results should be captured for inclusion in the AAR. Other sessions, such as a separate debrief for hospital management staff (during an operations-based exercise), may be held as necessary. A hot wash occurs immediately following an operations-based exercise and allows players/responders the opportunity to provide immediate feedback. It enables controllers and evaluators to capture events while they remain fresh in players' minds and to ascertain players' level of satisfaction with the exercise and determine any issues or concerns and proposed improvement items. Each functional area should conduct a hot wash, which should be facilitated by the lead controller for that area. The debrief and/or hot wash provides an ideal time for facilitators, controllers, evaluators, and players to complete and submit their completed exercise evaluation forms. Information from these forms should be included in the AAR.

Note: Suggestions on the Post-Exercise Hot Wash can be found in Appendix C of this guidebook.

9. After Action Analysis and Report

The After Action Report (AAR) is used to provide feedback to exercise participants and key management staff on the results of the exercise. The AAR summarizes what happened and analyzes performance of the tasks identified through

the planning process as critical and the demonstrated capacity to accomplish exercise objectives. The AAR includes recommendations for improvements. An AAR should be prepared for each TTX, drill, FE, and FSE conducted. A summary report should be produced for workshops and seminars.

To prepare the report, the exercise evaluation team will analyze data collected from the hot wash and/or debrief, participant feedback forms, and other sources (e.g., plans, procedures) and compare the actual results with the intended outcome. The level of detail in an AAR reflects the exercise type and size. AARs describe the exercise scenario, player activities, preliminary observations, major issues, and recommendations for improvement.

Note: An example of an AAR can be found in Appendix D of this guidebook.

10. Improvement Planning

Post exercise activities are essential to garnering the benefits of an exercise. Careful analysis and prioritization should go into developing the AAR recommendations and the Improvement Plan (IP) content.

a. Improvement Plan

The IP converts lessons learned from the exercise into concrete, measurable steps that result in improved response capabilities. It is developed by the planners and specifically details the actions that will be taken to address each recommendation presented in the AAR, who or what department will be responsible for taking the action, and the timeline for completion. This information should be derived from an After Action Conference conducted after the draft AAR is completed.

b. Improvement Tracking and Planning

Once the IP has identified recommendations and action items and responsibility and due dates have been assigned, the hospital facility and/or department(s) should ensure that each action item is tracked to completion. Each facility/department should review all exercise evaluation feedback and resulting IPs to assess progress on enhancing preparedness and incorporate the information into its planning process. This review process may identify needs for additional equipment, training, exercises, coordination, plans, and procedures.

CHAPTER 5

SCENARIOS



Chapter 5

SCENARIOS

Introduction

In the previous sections of this guidebook, we defined the various types of drills and exercises and discussed the exercise planning process. This section contains suggestions on how to select a scenario to fit your exercise objectives as well as a number drill and exercise scenarios that your hospital can adapt for use in your exercise program.

1. Developing a Scenario

All good drills and exercises begin with selecting the objectives. What systems, plans, procedures, or equipment does the Exercise Planning Team want to test this year? What emergency or disaster situations are Hospital or clinic staff the least comfortable responding to? What tasks or procedures should the hospital or clinic staff know how to complete more effectively as a result of the drill/exercise/training? The Exercise Planning Team must discuss these questions to determine the best objectives for the exercise, or series of exercises they are going to plan. The scenario(s) that the Exercise Planning Team chooses to develop can be simple with few details and a narrow scope of impact, or can be a complex scenario involving many departments, other hospitals, and other external response agencies. The rule of thumb is to make the scenario sufficiently challenging to test the systems, plans, and procedures selected to fully accomplish the exercise objectives.

All scenarios should include descriptions of the following elements:

- Environmental
- Infrastructure
- Occupational and Staffing
- Political and Strategic

In addition, Mass Casualty and catastrophic disaster incident scenarios have some unique factors that should be included.

Below is a list of planning factors that can be used to develop a scenario and expected or required responses. These circumstances may precipitate a disaster or mass casualty incident, may exist during an incident, or may arise as the response to an incident as the scenario progresses.

a. Environmental

Environmental elements in a scenario include the following:

(1) Time

- Time of day (day shift vs. night shift)
- Day of the week
- Lunar/tidal cycles (if the hospital is close to a ocean or river flood area)
- Season of the year
- National or local holiday
- Day of the week (weekday vs. weekend)

(2) Weather - either directly causing or occurring during and compounding the difficulty of response to a mass casualty event):

- Precipitation with heavy volume and accumulation
- Restricted visibility
- Temperature and wind chill
- Extraordinary phenomena:
 - o Flooding
 - o Earthquakes, tremors
 - o Thunderstorms, lightning strikes
 - o Tornadoes
 - o Winter storm with accumulation of ice and snow
 - o Extreme sustained heat and humidity

b. Infrastructure

Infrastructure elements include:

(1) Transportation - Emergence of a situation that causes damage to, or restricts access or use of:

- Public transportation (aviation including helicopter flight, trains, subways, bus lines)
- Highway system (Interstate, State or County)
- City streets

(2) Utilities - Failure of public services that causes or is caused by an incident resulting in mass casualties:

- Water
- Sewage
- Electrical power
- Natural gas and home heating oil

- Gasoline, diesel fuel, aviation fuel
- (3) Communications - Failure of communications systems or inability to establish communications via one or more of the following:
- Telephone—landline
 - Telephone—cellular
 - Internet
 - Radio
 - Television

c. Occupational and Staffing

The scenario should include a description of staffing levels and elements that are unique to the type of disaster or the setting where the incident is taking place. These elements include the following:

- (1) Time of Day - Events occur at a time of day/night when staffing—particularly specialists and executive management is reduced or unavailable.
- (2) When Staff Can Not Respond - Events occur in such a fashion that staff is directly affected and therefore unavailable because of the following:
- Inability to arrive on scene at the medical facility
 - Contamination or exposure requiring immediate prophylaxis, decontamination, and/or treatment
 - Absenteeism due to previous illness, travel, holiday or leave status, or death or injury as a casualty of the event involved
 - Unresponsive or unable to gain notification through damage to communications or transportation systems

d. Political and Strategic

Political and Strategic elements include descriptions of the local, state, national or world events surrounding the scenario where preparedness for, or diagnosis of certain conditions might be prompted or anticipated:

- An outbreak of a disease or condition elsewhere in the nation or region
- Alerts or warnings issued by Federal, State or local officials
- Alerts or warnings issued by the Center for Disease Control or Public Health Service
- Alerts or warnings issued by the Department of Homeland Security or local law enforcement officials

2. Unique Factors for Mass Casualty and Catastrophic Disaster Incident Scenarios.

The most challenging exercises typically use mass casualty scenarios and scenarios featuring natural and human-caused catastrophic incidents. Mass casualty scenarios, especially those with a wide scope involving multiple hospitals, large numbers of incoming patients, worried family members, Weapons of Mass Destruction (WMD), terrorism, wide-spread disease outbreak, radiation, surge capacity, staffing issues, etc, can provide an in depth learning opportunity for staff. The following is a list of questions and issues (also raised in the examples of exercise scenarios in the following section) that should be considered during exercise planning using any mass casualty or catastrophic disaster incident scenario. These factors include:

- Operations and Initial Response
- Communications and Data Management
- Logistics and Resource Management
- Public Relations and Public Information
- Long Range Planning and Liaison
- Security
- Sustained Operations
- Recovery Phase

The following questions/issues can be used as part of the scenario the Exercise Planning team is developing, or can be used as “discussion items” for any scenario:

a. Operations and Initial Response

- Upon notification of a mass casualty incident, what immediate actions should be taken by the hospital staff? What should be their second and third priorities?
- What is the role your hospital or medical facility should take in the response to the incident and the treatment of victims? How can your facility best aid the situation?
- How much additional medical equipment and personnel will be required for the next 12 hours of support during the current crisis (ER, ICU, surgical, radiology, lab, pharmacy, respiratory, decontamination, facility, etc.)? What steps should be taken now to plan for the next 12-hour shift?
- What general medical support will be in the most urgent demand? What additional services of a specialized or exceptional nature will be required that your facility lacks?

- Are there special considerations/plans your hospital must address (for decontamination, etc.) if a large number of the expected casualties are children?
- At what point does your hospital activate your Hospital Emergency Incident Command System (HEICS) and begin making preparations for special emergency medical routines?
- What threshold would determine the establishment of a hospital Emergency Command Center? Who makes that determination during the normal routine or during off-hours such as late-night shift or on holidays or weekends?
- What assistance should be requested of nearby medical facilities and hospitals? Who should be notified and how should status reports and updates be provided?
- In the event of a fire or other catastrophe in the near vicinity of your facility, how can you mitigate the effects of the smoke and fire? Is evacuation the only option?
- What is the emergency evacuation plan for your facility, and how quickly could it be implemented?
- How would the arrival of a large number of firefighting and emergency response vehicles in your neighborhood affect your ability to manage this emergency?
- Should a hospital in the vicinity of a fire or other catastrophe designate itself as the primary response facility for the emergency, or should that function be delegated to a facility elsewhere? Who decides?

b. Communications and Data Management

- What are the capabilities of your hospital to communicate with emergency management personnel at the scene of an incident and to communicate with the County Department of Health Services Department Operations Center?
- Who in your facility is responsible for maintaining that communication, and for coordinating the facility's efforts with other area medical facilities?
- Via what medium does your facility receive initial reports and updates on a mass casualty incident? How do you send status reports regarding the immediate availability of assets such as burn treatment facilities available at your hospital? To whom do you send such reports?
- If the medical facility nearest to a mass casualty incident becomes overwhelmed with the casualties, how can you learn of this situation and make known your ability to lend assistance and capability?

- If another hospital in the region is evacuated, what is your hospital's role in assisting? How is that assistance coordinated?
- What obligations does the hospital have for reporting a specific incident to higher/other authority, and when should those reports be initiated?

c. Logistics and Resource Allocation

- Where does specialized medical equipment such as extra ventilators come from, and how quickly can they be obtained? Are there any potential conflicts over availability of supplies for specialized equipment between your facility and other local medical facilities?
- Are current hospital resources adequate for a mass casualty incident involving hundreds or thousands of patients? If not, which ones should receive priority attention?
- If the Strategic National Stockpile were activated for distribution of emergency medicines, which agency is responsible for distribution and how would you access these supplies?
- What is your hospital's role in this undertaking? What training in logistics and coordination has been held?

d. Public Relations and Public information

- Does your hospital have a Public Information/Risk Communications plan to use during disasters or local emergencies? Does your hospital have press release templates with information that can be immediately released during disasters? Do any of these templates specifically address terrorism?
- What actions do you recommend your hospital take to assist the school system, individual businesses and the local community in preparing for or dealing with routine medical problems such as an outbreak of flu? What actions could be taken to alleviate potential overloading of area medical facilities? What similar activities would assist the public in preparing for mass casualty emergencies or epidemics?
- At what point do you expect to see County Health Department authorities jointly making public service announcements about the outbreak of a disease identified in your region?
- What do you expect to occur as a result of public service announcements?
- What requirements are there for reporting medical emergencies to Public Health, and who should make that determination? When or how soon should such reports be made?

- What recommendation would you make regarding your hospital's involvement with local media? Does the hospital have any responsibilities to the public in this regard?

e. Long Range Planning and Liaison

- Which medical services, functions and wards would your hospital terminate or defer in order to provide staff, equipment and facilities to support more urgently needed medical care?
- What type of preparation would you insist be undertaken by organizations and agencies outside your own medical facility?
- For very large-scale mass casualty incidents, what type of state or federal assistance might you need, and how and at what point do you request it?
- Will there be requirements for supporting fire-fighting activities like first aid and triage?
- What agencies exterior to the hospital, if any, should be notified of a given medical emergency, or of the hospital's need for assistance? Who is empowered to make those sorts of decisions?
- How does your facility involve the American Red Cross in rapidly activating emergency blood supplies?
- What are the capabilities of your facility to decontaminate victims who are suffering from exposure and injury?
- How quickly can a decontamination area be established at your facility? Who is in charge of making this happen? Is that person available and if not, how can they be reached? If the decon area is not available for immediate use, what happens to the patients in the interim?
- What steps should be taken in anticipation of an influx of non-injured persons who may require decontamination and monitoring? What priority are they given relative to the injured? Where are they kept while awaiting decontamination or medical screening?
- How are these persons identified, tracked, and recorded? What happens to their personal effects and clothing during decontamination? What is returned, and what is disposed of?
- What is the hospital's legal liability to respond to an overwhelming demand for diagnostic testing like radioactive decontamination and monitoring?
- What are the hospital's obligations to its staff, traffic control personnel, assisting police and security officers in ensuring they do not become contaminated?

- What is your facility's plan for managing the arrival of relatives and loved ones of the injured and killed? What special services can you call on to assist in controlling this problem?
- What is your facility's plan for managing an influx of volunteers? How would you maintain control of potential blood donors and other volunteers? Who at your facility is charged with this responsibility?
- Is there a plan in place to assist grieving family members who are looking for loved ones who may have been sent to other hospitals? Who at your facility is charged with that responsibility? Would hospital staff such as Social Workers and Chaplains assist with this task? What other staff might be involved? Is there a place in your hospital where families can meet with Social Workers, Chaplains, and other appropriate hospital staff that is away from the Emergency Department?
- What sort of medical positions and responsibilities could you delegate to civilian volunteers in a mass casualty situation? What measures could you take now to prepare for such a mobilization of the community? What civic organizations could you look to for assistance in the event of a full mobilization? What facilities in your community could be turned into emergency medical facilities and shelters?
- Assuming that assistance could be expected from outside agencies (federal, state, international) which responsibilities or functions would you choose to delegate to those agencies? Which would be essential to reserve to your own local talent and knowledge? How would you organize and coordinate this effort?
- What special precautions must be taken to preserve the value of crime evidence? Specifically, what becomes of the personal effects of victims arriving at your facility to ensure that their value as evidence is not lost? What advanced planning and training has been undertaken to educate medical personnel of this dimension of a terrorist attack?
- What procedures or protocols exist for handling of injured victims who may be suffering from prior medical conditions or diseases such as hepatitis or HIV/AIDS? How are large quantities of contaminated tissues, fluids or body parts from mass casualty sites to be handled? What facilities or capabilities exist for the treatment/assistance of first responders who may have been exposed to the suspected agent?
- What facilities does your hospital maintain for aiding in forensic identification of remains?

- What agreements or protocols exist between your area's hospitals and those of adjacent states to assist in managing emergency situations that cross state boundaries? Are there any additional or extraordinary conditions that must be met for bi-lateral medical support between your hospital and that in a nearby state?
- Assuming that your medical facility was fully prepared for a "normal" mass casualty event, what extra preparations would be essential for dealing with a scenario where casualties could measure in the tens of thousands?
- How would your medical facility muster the professional staff required to sustain basic medical services for an extended period of time (weeks or months)? Who would you consider "qualified" and how would you mobilize them? How would your hospital verify the credentials of volunteers who show up at the hospital wanting to help?
- Recognizing that no current or future resources are likely to be allocated to preparing for low-probability events such as epidemic outbreaks of an exotic disease, or terrorism involving weapons of mass destruction, what long-term, low-cost organizational changes and conservation methods might be implemented that could mitigate the effects of disasters of this magnitude?
- If you knew with certainty that a mass casualty incident would occur in your neighborhood or region within one year what measures should your hospital institute now to prepare for it?

f. Security

- What security procedures have been established at your facility to screen incoming patients and visitors following a disaster or terrorism event? If there has been a bio-terrorism disaster, will Security staff at your hospital need to wear Personal Protective Equipment (PPE) in the location where they are directing visitors?
- What is the relationship between your hospital staff and the hospital's security personnel? How much authority are security officers given in protecting your hospital from intrusion and possible targeting by a terrorist or dangerous person?
- What assurances and training has been given to your hospital's security personnel, and what procedures have been initiated to ensure their safety and health while they are maintaining hospital security under conditions of epidemic, radiological contamination, chemical contamination, or during times when large numbers of concerned people are converging on the hospital?
- How would Security handle an influx of media wanting to interview families and survivors?

g. Sustained Operations

- What plans does the hospital have to respond to a disaster or terrorist attack that lasts for more than a day, a week, or over several months?
- What core hospital services would your facility decide to continue and what services would your facility curtail following a large disaster or terrorist attack? Who in your hospital would make that decision?
- What documentation does hospital staff need to keep during the disaster response?
- What financial documentation must be kept in order to document the hospital's cost for the disaster response?
- Will the hospital need to request mutual aid for additional hospital staff? If so, what are the procedures to request mutual aid and to what organization would this request be directed?

h. Recovery Phase

- What actions need to be taken to conclude the hospital's disaster response and recovery activities and transition back to normal activities?
- Are plans in place to take care of the mental health needs of staff who are dealing with the emotional impact of the disaster?

3. Mass Casualty Exercises: Explanation with Exercise Examples

The following example exercises can be used for table top, functional, or full scale exercises.

a. Assumptions

Unless otherwise noted, the following conditions should be assumed for all scenarios contained in this information guide. Variations to these conditions can be altered either at the outset, or as an exercise progresses.

- (1) Environmental
- Weather is clear with no precipitation.
 - Temperature is mild (above freezing) and wind chill is not a factor.
 - Visibility is good with no local or general restrictions.

(2) Infrastructure

- Area public and highway transportation systems are under no restrictions.
- Highway and street vehicular traffic are normal for the time of day.
- There are no restrictions to civil infrastructure systems, and local services and public utilities are being provided according to normal routines.

(3) Occupational and Staffing

- Normal staff, support and executive personnel are present or available according to routine schedules. Health conditions for immediate staff are unexceptional.
- Public interaction, client relationships and patient loading are all normal for the time of day and season of the year.
- Response times for emergency services such as police, fire emergency medical services, and airlift and helicopter flight operations are normal.
- Extraordinary conditions such as emergency declarations, National Guard deployments, police or security force reserve activations are achievable only within normal timeframes.

(4) Political and Strategic

- National, international and regional political conditions are in accordance with real-world events and press reports.
- Local media relations and presence is normal.
- There are no technologies or devices available that are not currently in production. Real world prototype systems or uncertified medical procedures may be assumed available, but cannot be used without customary justifications and legal exceptions.

EXERCISE # 1

DETONATION OF A TERRORIST DEVICE: VEHICLE BOMB

Exercise objectives:

The following are examples of exercise objectives that could be used for exercise # 1. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include one or more of the following objectives:

- Exercise the Hospital Emergency Incident Command System (HEICS)
- Exercise the hospital's ability to coordinate with local public agencies (Local Police, Fire, Local Government, FBI, Public Health, EMS-Agency)
- Exercise the hospital's Disaster Response Plan
- Test procedures for obtaining resources from the local Blood Bank
- Test the hospital's internal and external communication capability
- Test the hospital's ability to respond to a large influx of casualties

Scenario

3:30 p.m.

A suicide bomber detonates an explosive vest inside the Downtown County Court House killing several people and wounding 14 others. With the explosion, people start to panic because of a possible secondary Improvised Explosive Device (IED) and start evacuating the building on their own. The local Police Department (PD) dispatch receives numerous calls about the explosion. PD and the local Fire Department (FD) are dispatched to the incident with the Bomb Squad. PD arrives on scene, sets up a perimeter, and follows their Standard Operation Procedures with Los Angeles Sheriff's Department (LASD) to evacuate the rest of the courthouse personnel. Los Angeles County Terrorism Early Warning (TEW) group and the FBI are notified. LASD begins searching for a secondary device. Local FD first responders arrive on scene and set up a triage area for the injured and contacts the Medical Alert Center (MAC) for patient destination and hospital bed availability. FD Incident Commander and the EMS Captain request additional ambulances for the injured. An ambulance with unusual markings was able to get through the security tape and parks across the street from the Court House. The ambulance explodes into a fireball; people along the street who had evacuated from the Court House as well as passersby, first responders, and county officials are blown to the ground from the concussion with people injured from flying debris. In the office buildings in the surrounding area, workers that had crowded the windows to watch the commotion below are injured, as glass windows implode in the office spaces. On the street there is chaos. Arriving first responders and citizens attempt to converge on the scene of the explosion, only to have to fight crowds attempting to escape.

(For reference see: <http://www.globalsecurity.org/military/intro/ied.htm>)

4:00 p.m.

The crowd on the street grows quickly as uninjured personnel and the walking wounded begin evacuating from the three intact sides of the building. Soon the other buildings in the area also begin to empty, as does the county annex across the street from the main courthouse. From the extent of the damage to the street and to the building, injuries will be extensive and serious. Many people lie unmoving on the street. Blood, clothing, debris and human body parts lie scattered along the entire block. A fire truck that was across the street from the ambulance that exploded is extensively damaged and several firefighters are injured. A FD ambulance lies on its side in the middle of the street.

4:10 p.m.

LASD and PD completed their search and do not find any more IED's. The Incident Commander and the EMS Captain notifies the MAC that there is an increase of injuries and more beds will be needed. The MAC begins polling all the hospitals in the area (including yours) for bed availability using the ReddiNet. The MAC also uses the H.E.A.R. radio to notify all hospitals to prepare for the influx of casualties. Emergency Management Plans to respond to this incident are put into action.

4:15 p.m.

The first victims begin arriving at your ED. Three (3) have major chest trauma, five (5) have suffered trauma to the lower extremities. Your trauma capability is now at capacity.

4:20 p.m.

You are notified that five (5) more patients are in-route with less severe injuries. All beds in your ED are filled. Unannounced, fifteen walking wounded arrive at the ED.

4:30 p.m.

The Medical Director is notified that blood product supplies are becoming critical. The internal phone system goes down. Communication is limited to handheld radios.

4:45 p.m.

Thirty to forty people show up to volunteer to help, some offering to donate blood.

4:50 p.m.

Families of the injured begin arriving at the hospital, some frantically seeking information about loved ones.

4:55 p.m.

Local Police and the FBI arrive and inform you that they are there to collect evidence from the victims.

5:10 p.m.

The ED is notified by the MAC that 4 more trauma victims are en-route to your facility.

5:15 p.m.

The ED is notified that all victims have been transported from the disaster site.

5:30 p.m.

Exercise terminated.

Discussion Items

1. For an incident of this magnitude:

- What measures will be taken immediately by your facility to assist?
- Who initiates these measures?
- What standard routines are activated and what is your specific responsibility?

2. Blood will be needed immediately. How does your facility meet the demand? How is the American Red Cross involved in rapidly activating emergency blood supplies?

3. What are the most urgent demands for special medical resources for this incident? What services of a specialized or exceptional nature can your medical facility provide?

4. Much literature on disaster response management indicates that one of the greatest disaster challenges is the management of civilian volunteers who arrive to assist. If your facility was the nearest hospital to this incident:

- How would you process potential blood donors and other volunteers?
- Who at your facility is charged with this responsibility?

5. Assuming that your medical facility is the nearest to this incident:

- What is your facility's plan for managing the arrival of relatives and loved ones of the injured and expectant?
- What special services can you call on to assist in addressing this issue?

6. Since the bombings are a crime, all patient belongings are considered by law enforcement agencies to be evidence. What advanced training has been given at your hospital to educate your hospital personnel about the following issues:

- What special precautions must be taken to preserve the value of crime evidence?
- What becomes of the personal effects of victims arriving at your facility to ensure that their value as evidence is not lost?

EXERCISE # 2

DETONATION OF A TERRORIST DEVICE: SUICIDE BOMBER

Exercise objectives:

The following are examples of exercise objectives that could be used for exercise # 2. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include one or more of the following objectives:

- Exercise the Hospital Emergency Incident Command System (HEICS)
- Exercise the hospital's ability to coordinate with local public agencies (Local Police, Fire, Local Government, FBI, Public Health, EMS Agency)
- Exercise hospitals Disaster Response Plan for surge capacity
- Test procedures for recalling staff for after hours and on weekends
- Test the facilities security procedures

SCENARIO

7:00 p.m.

Lines at the local Theater Complex have begun filling for the first showing of the evening, and people are beginning to pour into a nearby restaurant adjacent to the theater. As the crowd moves about, a lone man wearing a heavy jacket enters the restaurant. He walks past the hostess and into the center of the dining room where, without hesitating, he detonates a powerful bomb that is hidden beneath his jacket. There is a terrific explosion that demolishes the restaurant. From outside, the front of the building simply disappears behind a brief flash and a hail of smoke and debris. Glass, metal and wood fragments from the restaurant fly through the air injuring scores of people on the sidewalks and along the street in front of the restaurant. Inside there is momentary silence as debris settles from the collapsed roof. Seconds later a few muffled cries for help can be heard from within. There is pandemonium on the street, as the more distant passersby instinctively run from the damage. Dozens of people are lying on the street, some injured, some merely stunned. Moments later, other people run toward the damaged restaurant in an effort to help. Sirens begin to sound in the distance. The now darkened building and street front is littered with a random mixture of motionless bodies, building materials, human body parts, tables and chairs, and broken glass. The Medical Alert Center (MAC) receives a call from the first responders on scene, and is informed of the mass carnage. The estimates are at least thirty immediate injured persons who will require bed availability. MAC was informed that XYZ is the nearest hospital and TUV is the nearest trauma center. MAC sends out a MCI General Informational Notification over the ReddiNet:

The following MCI may affect your facility, please stand by for further information: Explosion at a Theater Complex. Victims (estimate) 30+ hospitals will be polled in the area including Trauma Centers for bed availability. Within 15 minutes MAC advises the First Responders on bed availability at XYZ Hospital, TUV Trauma Center, and the rest of the Hospitals in the area.

(For reference see: <http://www.globalsecurity.org/military/intro/ied.htm>)

7:10 p.m.

HEICS is initiated. Hospital Command Center is activated. Recall of staff initiated.

7:40 p.m.

Ambulances are arriving at the various designated hospitals, and the victims are being transported into the ED receiving area. At that moment, there is a terrific explosion felt in the hospital that shakes the walls of the ED. From the main entrance of the hospital, there are the sounds of panic and screaming. Smoke and dust begin to fill the air. Word comes that a suicide bomber has detonated an Improvised Explosive Device (IED) bomb vest in the main reception area of the hospital at the start of the evening's visiting hours. There is massive damage to the front of the hospital, to the main entrance and reception area, and dozens of visitors, patients and hospital staff are injured.

7:45 p.m.

ED notifies the MAC that they are unable to receive victims and request ambulances be diverted to other facilities due to the facility having been attacked by a suicide bomber.

7:50 p.m.

Hospital Command Center has notified the local Fire and Police agencies of the explosion. Hospital security sets up a perimeter, secured all entrance and exit points and began evacuating the non-injured to a holding area. Available staff begin moving the injured to the ED for triage and treatment.

7:55 p.m.

Fire and police units are on scene. A search for secondary devices is begun.

8:05 p.m.

The area is declared clear of additional devices. Search and rescue efforts begin at the hospital. More victims are found in the rubble and taken to the Triage area outside of the ED. The ED staff is quickly over whelmed, the ED supervisor requests additional personnel.

8:15 p.m.

The ED physician notifies the Medical Director that eight (8) patients need to be transferred to other facilities. The MAC is requested to arrange for the transfer of the eight (8) patients.

8:30 p.m.

The MAC notifies the ED that they are in the process of arranging the transfers and transportation.

9:00 p.m.

Exercise terminated.

Discussion Items

1. What immediate steps should you take to prepare the Emergency Department Room and staff for this influx of patients?

2. On a “routine” Saturday night in early summer, what capacity does your ED have to manage a sudden casualty situation of this magnitude?

3. Given the degree of trauma to these victims, what steps do you need to take at this time of night to ensure that adequate blood supplies are available?

4. What procedures or protocols exist for handling injured victims who may be suffering from existing medical conditions or diseases such as:
 - Hepatitis or HIV/AIDS?
 - How are large quantities of contaminated tissues, fluids or body parts from mass casualty sites to be handled at your facility?
 - What capabilities exist for the treatment and/or decontamination of first responders as well as uninjured bystanders who may have become exposed or contaminated?

Establishing the identity, motivation and origin of the perpetrator(s) is of crucial (and most likely, national-level) importance, and will require the immediate intervention of police and investigators while on-scene emergency efforts are still in progress.

5. What special precautions must be taken by EMS and hospital personnel;
 - What training has your facility’s personnel received in cooperating with and supporting law-enforcement personnel and investigating officers?

6. What is the immediate responsibility of your ED staff to the arriving victims from the primary terrorist incident, and to those at your own facility?

7. What security procedures have been established to:

- Screen incoming patients and visitors, to ensure that another event of this sort is prevented?

8. What is the relationship between your hospital staff and the hospital's security personnel? How much authority are security officers given in protecting your hospital from intrusion and possible targeting by a terrorist or dangerously imbalanced patient?

9. What kind of interaction exists between hospital security personnel and local law enforcement?

EXERCISE #3

TERRORIST ATTACK USING A CHEMICAL AGENT

Exercise objectives:

The following are examples of exercise objectives that could be used for Exercise # 3. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include one or more of the following objectives:

- Exercise the Hospital Emergency Incident Command System (HEICS)
- Exercise the hospital's ability to coordinate with local public agencies (Local Police, Fire, Local Government, FBI, Public Health, EMS Agency)
- Exercise hospitals Disaster Response Plan for terrorist incident using a chemical agent
- Exercise the facilities plan for obtaining the CHEMPACK from the DRC
- Test procedures for decontamination
- Exercise facilities Public Information/Media procedures

SCENARIO

7:30 a.m.

The first day of the annual conference of the Police Association, and (YourCity) is hosting the event at the Forrest Conference Room in the Excelsior Hotel. Delegates from the state branches of the Police Association begin arriving by 8:00. The hotel lobby, reception area and Conference Room are filling in anticipation of the 8:30 convening of the conference.

8:15 a.m

A man enters the hotel lobby from the elevators, carrying a backpack. He leaves the backpack against the wall in the corner of the lobby, and proceeds to check out of his room. He takes his car keys from his pocket and walks out to the parking lot, gets into his car and drives away. A few minutes later, there is an explosion in the hotel lobby, as a bomb inside the abandoned backpack explodes.

Dozens of people in the lobby are injured, and the exploding windows of the hotel front injure many more in the hotel entrance and parking lot. The hotel lobby, conference room, dining area and ground floor hallways are instantly filled with smoke, dust and flying debris. Immediately, those not injured by the blast begin to stream out from the conference room, from ground floor rooms and from the stairwells from upper floors. Most of the guests and conference attendees attempt to find their way to exits, but many

people converge in the lobby and hallways and attempt to help those immediately hurt by the blast. Many other uninjured people begin to file into the hotel lobby from the parking lot to lend assistance. Traffic has come to a standstill. Within minutes many of those uninjured by the detonation are suddenly clutching at their throats and chests, and stumbling for the exits. Some fall down unconscious; others begin convulsing. People farther from the lobby suddenly begin salivating, coughing and gagging. In the hotel lobby injured people are unable to move and begin to lapse into unconsciousness. Amid the noise, smoke and confusion, police officers and local emergency medical technicians begin to arrive. Fire and ambulance sirens can be heard approaching. All are immediately overcome by a sudden feeling of congestion in the chest, rapid, shallow breathing and an inability to go on. It is clear that the bomb contained a toxic chemical or gas, and people now begin to panic at the scene. The crowd spills out into the street just as fire and rescue officials begin to arrive. The word is passed along to the arriving responders that a bomb has detonated that contained a toxic gas. Rescue teams spend extra minutes ensuring their self contained breathing apparatus and masks are securely fitted. Meanwhile, local police begin to move traffic from the streets surrounding the hotel. (For reference see: <http://www.bt.cdc.gov/agent/agentlist.asp>)

8:30 a.m.

MAC notification via ReddiNet

The following MCI may affect your facility, please stand by for further information: Explosion at a Hotel. Victims (estimate) 20+ hospitals will be polled in the area including Trauma Centers for bed availability.

8:45 a.m.

The ED is notified by the MAC that three (3) ambulances are in-route to your facility with victims in respiratory distress. Decontamination was completed at the scene.

8:50 a.m.

Five (5) people show up at the ED and state that they were at the hotel when the bomb exploded. They are requesting to be treated but have no symptoms at this time.

9:00 a.m.

The first two (2) ambulances arrive at the ED.

9:05 a.m.

The third ambulance arrives at the ED. Local television news vans begin to arrive.

9:15 a.m.

The driveway to the ED is congested with multiple news vans blocking access for arriving ambulances. Six (6) additional walk up casualties arrive at the hospital. Some of the victims complain of muscle weakness, extreme salivation and choking.

9:30 a.m.

The ED is notified by MAC that all casualties have been transported.

10:00 a.m.

Exercise terminated

Discussion Items

1. Your ED has been advised of the incident by the Medical Alert Center (MAC).

- What are your immediate actions?
- Upon what indication will you activate the hospital's Incident Command System?
- Given the distance of your facility from the scene of the incident, does it make sense to act now, or to simply monitor reports until a clear decision can be made?

2. Your facility receives a call from the MAC stating that people are beginning to flood emergency departments in many local hospitals demanding immediate treatment for suspected exposure to a toxic gas or chemical weapon. They say decontamination is needed and want to know how many patients an hour you can handle. What is your response?

3. Reports begin to arrive via waiting room television news later confirmed by communications from the County Department of Health Services Department Operations Center that nearly 30 persons were initially killed, either by the bomb or by the gas and another 120 have suffered various degrees of injury. Initial reports are that the gas used was Sarin identical to that used in the Tokyo subway attack in 1994.

- What is the hospital treatment regime for this gas?
- Is it readily available?
- Does your facility have reference books, CD-ROMs and/or Internet access to use as references (for chemical and biological agents) in the ED and in your hospital's command center?
- Does your facility have a point of contact at a poison control center or industrial emergency facility with specialized capabilities that can be called upon for chemical incidents?

4. If your hospital were the nearest to this incident, what immediate actions would you take to prepare for managing this crisis?

5. How quickly could you establish a decontamination area for the victims? What would be the priority of care for those arriving? Who makes that decision?

6. What preparations have been made for dealing with the media?

EXERCISE #4

DETONATION OF A RADIOLOGICAL DEVICE IN THE ENVIRONMENT

Exercise objectives:

The following are examples of exercise objectives that could be used for Exercise # 4. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include one or more of the following objectives:

- Exercise the Hospital Emergency Incident Command System (HEICS)
- Exercise the hospital's ability to coordinate with local public agencies (Local Police, Fire, Local Government, FBI, Public Health, EMS Agency)
- Exercise your hospital's Disaster Response Plan for an accident or terrorist incident with a radiological device or material
- Exercise procedures for decontamination and isolation
- Exercise plans and procedures for obtaining assistance from Public Health and the EMS-Agency
- Exercise the hospital's plan for obtaining additional resources (pharmaceuticals, etc).
- Exercise the plan for handling and triage of the non-injured worried well who may or may not be contaminated
- Exercise the plan for providing psychological support to staff members and their families

Scenario

6:00 p.m.

Along Imperial Highway, the usual auto and truck traffic is making its way through the Imperial/Paramount intersection as commuters are heading home and truckers are beginning to exit the highway in search of a brief rest and the evening's dinner. An eighteen-wheel tractor-trailer carrying a large Sea-Land container is approaching the intersection when suddenly there is an explosion that rips the container apart. The tractor is blown completely clear of the trailer, and into the center of the intersection. A dozen cars adjacent to the trailer are hurled through the air in all directions, and several burst into flames. Traffic in all directions comes to an abrupt halt, and people exit from stopped cars to escape the scene and its fires and destruction. Sheet metal and debris from the container, tractor and damaged cars is scattered in all directions, and smoke and dust fill the evening air. Along the streets and at the intersection there is pandemonium. People are running everywhere, many in a state of confusion. From several diners and business establishments along the highway, people rush outside to see the commotion, and to render

aid to the injured and trapped victims. On both sides of the intersection, injured people lie about in a daze, some attempting to move, others lying perfectly still, blood, human body parts and remnants of clothing are scattered around the roadways.

Within minutes, police, Fire and EMS providers begin to arrive, and the shoulders of the roads in all four directions quickly fill with emergency vehicles. The firefighters radiation dosimeters are activated. The Incident Commander is informed of radiation in the area. The Incident Commander advises all responding agencies of the radiation and requests that a perimeter be set per the radiation readings. Police immediately begin clearing traffic and directing the evacuation of the area by those who can leave. The area is cordoned off and gathering crowds are kept at a distance. Traffic is unable to move in the area, as first responders begin to setup a temporary morgue, and prepare a DECON area for the contaminated and injured victims. Reports of the explosion begin to arrive at your hospital by the ReddiNet, and from the news media. Within minutes, most area hospitals are alerted by the County Medical Alert Center (MAC) and begin preparations to assist with an influx of emergency patients. Immediate reports from the scene indicate that there may be as many as 10 dead, twice that many critically injured and immobile, and at least another 20 with injuries requiring immediate medical attention.

7:15 p.m.

Hospitals in the area receive follow-up information from the MAC, alerting them that the (Your City or county) Police Department's Bomb Squad has determined that the explosion was caused by the detonation of a large bomb, and that the weapon contained a radiological contaminant, probably Americium (For reference see: <http://pearl1.lanl.gov/periodic/elements/95.html>).

7:30 p.m.

Administration is notified. The decision is made to activate HEICS.

7:45 p.m.

The IC activates the Decontamination Team and request that a holding/triage area be established.

(For reference see: <http://www.emsa.ca.gov/aboutemsa/emsa233.pdf>).

8:15 p.m.

Motorist who were in the area of the explosion begin arriving at the hospital. It is determined that both the victims and their vehicles are contaminated. How will the vehicles be dealt with?

8:20 p.m.

The first ambulance arrives with one (1) critically injured patient with head trauma, flash burns and multiple penetrating wounds. What other injuries might these victims have? Additional victims arrive by vehicle and the victims and vehicles are contaminated. What actions would you take?

8:25 p.m.

Two more ambulances arrive with critical patients with similar injuries as the first critical patient.

8:45 p.m.

The MAC notifies the ED that all patients have been transported.

9:00 p.m.

Exercise terminated.

Discussion Items

1. What immediate steps should be taken to handle the arriving patients? What are the priorities for managing the initial care of seriously injured patients who may have been exposed to radiation?
2. How quickly can a decontamination area be established at your facility? Who is in charge of making this happen? Is that person available and if not, how can they be reached? If the decontamination area is not available for immediate use, what happens to the patients in the interim? Within 30 minutes of the arrival of the first victims, people begin arriving at the hospital who have heard over local radio and television that a dirty bomb was detonated along Imperial Highway. Most of the arriving patients had either been close enough to witness the explosion or had driven through the smoke and debris along the road. They fear they may have been contaminated by radiation.
3. What steps must now be taken in anticipation of an influx of non-injured persons who may require decontamination and monitoring? What priority are they given relative to the injured? Where are they kept while awaiting decontamination?
4. How are these persons identified, tracked, and recorded? What happens to their personal effects and clothing during decontamination? What is returned, and what is disposed of?
5. What is the hospital's legal liability to respond to an overwhelming demand for diagnostic testing like radioactive decontamination and monitoring?
6. What are the hospital's obligations to its staff, traffic control personnel, assisting police and security officers in ensuring they do not become contaminated? What is the hospital's plan that is activated in an event of this type?
7. What resources are available external to the hospital to aid in dealing with a situation of this magnitude? How quickly can those resources be accessed, and who initiates that action?

EXERCISE #5

DETONATION OF A RADIOLOGICAL DEVICE IN A PUBLIC TRANSPORTATION AREA (AIRPORT)

Exercise objectives:

The following are examples of exercise objectives that could be used for exercise # 5. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include one or more of the following objectives:

- Exercise the Hospital Emergency Incident Command System (HEICS)
- Exercise the hospital's ability to coordinate with local public agencies (Local Police, Fire, Local Government, FBI, Public Health, EMS-Agency)
- Exercise your hospital's Disaster Response Plan for an accident or terrorist incident with a radiological device or material
- Exercise procedures for decontamination and isolation
- Exercise plan and procedures for obtaining assistance from Public Health and the EMS Agency notification
- Exercise plan for Chain of Custody and preservation of evidence

SCENARIO

8:38 a.m

At (Your City or county) International Airport, a twin-engine commuter airliner, is taxiing to its debarkation point adjacent to the American Airlines terminal. Moments after the plane stops at the terminal, there is a massive explosion from the fuselage, the force of which is so great that it blows the tail section off the aircraft and shatters glass windows throughout the terminal. Passengers waiting in the departure gates are blown away; debris is flung along the entire extent of the terminal building. The glass doors at the bottom of the three nearest departure gates are blown in by the explosion, and smoke, debris and broken glass surge throughout the terminal. The air inside the terminal fills with smoke and dust, and the noise of the explosion and settling debris is replaced by the screams of injured and panicked passengers. Within the airport there is instant pandemonium. People are running everywhere and the noise is deafening. The exit doors are suddenly filled with people attempting to evacuate, while passengers who are able to move, flood the central terminal attempting to reach the exits. At the same time, airport officials, security officers, first aid personnel and some passengers immediately begin running toward the wreckage to assist. Around the terminal, injured people lie in a daze; some attempt to move, others remain perfectly still. Blood, human body parts and remnants of clothing are scattered along six adjacent boarding platforms. Within minutes, arriving fire and EMS first responders notice that their radiation dosimeters are activating. The Incident Commander is informed that there is radiation in the area. All responding agencies are

advised that there is radiation and that a perimeter has been be set up. The Airport Police are notified to secure the Airport. The emergency vehicles begin to crowd the roadways. A Mass DECON area is setup by Fire first responders. The police immediately secure the airport preventing buses, vehicles, and people from departing or entering the contaminated area. The area is cordoned off and gathering crowds and media are kept at a distance. Incoming aircraft are immediately diverted, departing aircraft are held on the runways, and airport operations come to a halt. Reports of the explosion begin to arrive at area hospitals via telephone calls, from e-mail communications and from news reports on waiting room televisions.

9:00 a.m.

Area hospitals are alerted by the county Medical Alert Center (MAC) via the ReddiNet and H.E.A.R. radio and are polled for bed availability. They are also informed of the influx of emergency patients who are expected to overwhelm the region's emergency departments. Immediate reports from the scene indicate that there may be as many as 50 dead, twice that many injured and immobile, and at least another 100 with injuries requiring immediate medical attention.

9:40 a.m.

Initial calls to hospitals are followed with a report from the Police Department indicating that the Bomb Squad has determined that the explosion was caused by a bomb aboard the aircraft and that it appears to have contained a radiological contaminant. Initial surveys indicate that a high level of radiation has been detected in the immediate vicinity of the damaged aircraft, and throughout the airport terminal, and it appears certain that the smoke and debris carried some level of radiation into the central terminal and surrounding areas.

9:45 a.m.

The decision is made by hospital administration to initiate HEICS.

10:00 a.m.

The ED is notified that the first casualties have been decontaminated and that you will be receiving three (3) of the most critical. The IC request that a decontamination area be established and the hospital DECON Team is activated. (For Reference see: <http://www.emsa.ca.gov/aboutemsa/emsa233.pdf>)

10:15 a.m.

The first ambulance arrives with the most critically injured patient. Patient has severe head trauma, burns over most of the upper torso and smoke inhalation.

10:23 a.m.

The additional two (2) ambulances arrive. Patients have multiple fractures to lower extremities, flash burns to face and hands and nasal-pharyngeal burns. People (25-30) begin arriving at the hospital claiming to have been in the vicinity of the dust plume and were covered with dust.

10:30 a.m.

The ED has been notified by the MAC that no further patients are scheduled for your facility.

11:00 a.m.

Exercise terminated.

Discussion Items

1. What immediate steps should be taken to handle the arriving patients? What are the priorities for managing the initial care of seriously injured patients who may have been exposed to radiation?
2. How quickly can a decontamination area be established at your facility? Who is in charge of making this happen? Is that person available and if not, how can they be reached? If the decontamination area is not available for immediate use, what happens to the patients in the interim? Within 30 minutes of the arrival of the first victims, people begin arriving at the hospital who heard over local radio and television that a bomb was detonated. Most of the arriving patients had either been close enough to witness the explosion. They fear they may have been contaminated by radiation.
3. What steps must now be taken in anticipation of an influx of non-injured persons who may require decontamination and monitoring? What priority are they given relative to the injured? Where are they kept while awaiting decontamination?
4. How are these persons identified, tracked, and recorded? What happens to their personal effects and clothing during decontamination? What is returned, and what is disposed of?
5. What is the hospital's legal liability to respond to an overwhelming demand for diagnostic testing like radioactive decontamination and monitoring?
6. What are the hospital's obligations to its staff, traffic control personnel, assisting police and security officers in ensuring they do not become contaminated? What is the hospital's plan that is activated in an event of this type?
7. What resources are available external to the hospital to aid in dealing with a situation of this magnitude? How quickly can those resources be accessed, and who initiates that action?

EXERCISE #6

NUCLEAR ATTACK ON A POPULATION CENTER

Exercise objectives:

The following are examples of exercise objectives that could be used for Exercise # 6. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include the following objective:

NOTE: This scenario is not intended as a mass casualty exercise, but rather as a means for thinking about how to organize resources and muster professional and community strength of will when dealing with a situation that appears utterly hopeless. The first reaction to any scenario of this sort is either that “it can’t happen here” or that “there is nothing that can be done about this.”

- Discuss your hospital’s plan for a major catastrophic event using the discussion items at the end of this scenario.

SCENARIO

220 miles off Long Beach a lone foreign-flag tanker slows nearly to a stop. Crewmen open two large cargo hatches on the main deck. Below decks, men bathed in red light complete pre-launch assembly of four Scud-B missiles. Within thirty minutes a small, fast sport fishing boat arrives within five miles of the merchantman. Messages are exchanged between the two ships via a satellite internet link. Suddenly, the surrounding water is lit by a brilliant white light followed by two more, as three of the missiles leave their launchers. Immediately, the fishing boat approaches the tanker, the crew of eleven men, hurriedly depart the ship in rubber life rafts. They are quickly recovered by the fishing boat, which then speeds away for a rendezvous with a larger ship twenty miles farther out to sea.

12:50 a.m.

One of the missiles detonates five hundred feet above (Your City) three miles from downtown. The 7-kiloton warhead raises a blinding fireball that lasts for ten seconds. Within a 1-mile radius of the hypocenter, all buildings and structures are either incinerated or flattened. Two miles away, structures other than those of reinforced concrete are demolished. Glass panels and windows as far as four miles away are shattered.

The International Airport and its facilities are blown over, as are the hotels, businesses and service facilities that surround it.

The Port area is instantly demolished; the Freeway Interchange collapses; the roadbed sags. Fuel tanks and storage areas adjacent to the airport are ruptured, and massive petroleum fires erupt, engulfing more than a square mile, causing an enormous updraft of debris and smoke.

The nearby Electrical Power Generating Station is knocked off the line due to damage and the instantaneous load caused by massive short-circuits in the electrical grid.

(Your City) sub stations suffer similar surges and electrical power is lost throughout the city, and progressively throughout the state and subsequently to neighboring states.

Throughout (Your City) the streets are strewn with overturned automobiles, electrical wiring, fallen trees and debris from collapsed roofs and the walls of the weaker buildings. While the newer and taller buildings survive the blast, virtually no glass windows remain intact on the southern exposure. Rail lines south of the main terminal are either demolished, or are so littered with debris they are declared unusable.

By sunrise, (Your City) is an inferno. Streets, roads and highways in Los Angeles County are utterly impassable.

In adjacent Orange County, the scene is the same, with fire, smoke and destruction visible in every direction.

The harbor is aflame with ignited petroleum. Smoke from the fires rises to an altitude of 20,000 feet, and extends across an area of 400 square miles. Roads and highway systems leading to the north, south and west are grid-locked as citizens from unaffected areas attempt to evacuate to safety.

With the detonation, 20,000 people in (Your City) instantly perish from gamma radiation, from the pressure wave and intense radiant heat, and from collapsing buildings and flying debris. Before sunrise, an additional 15,000 people die from injuries and shock.

Within the next 24 hours nearly 50,000 people in the Valley area will be made homeless, 10,000 will require immediate medical attention from traumas of every description, and another 12,000 will be seeking urgent care for a loved one or someone they are attempting to assist. Firefighters, emergency medical technicians, police and city officials are overwhelmed.

Main Street is established as the immediate firebreak, with the intention of containing the destruction and fires to the area south of that line. A secondary line is established along Front Street. To the west, the railway line is established as the first line of defense, with the park areas defining the secondary perimeter.
(For reference see: <http://www.bt.cdc.gov/radiation>).

Discussion Items

Regarding a catastrophe of this magnitude:

1. What steps could be initiated now that could help prepare the area medical system or that of the nearest large metropolitan area from your medical facility for such an event one year from now?
2. How could the medical community best serve the disaster recovery process? What steps could be taken now to mitigate its effects?
3. Assuming that your medical facility was fully prepared for a “normal” mass casualty event, what extra preparations would be essential for dealing with a scenario where casualties could measure in the tens of thousands?
4. Which medical services, functions and wards would your hospital terminate or defer in order to provide staff, equipment and facilities to support more urgently needed medical care during a disaster of this sort? In other words, what would be the effect on your operations during the immediate event and for the long term?
5. How would your medical facility muster the professional staff required to sustain basic medical services for an extended period of time? Who would you consider “qualified” and how would you mobilize them?
6. What sort of medical positions and responsibilities could you delegate to civilian volunteers in a situation of this magnitude? What measures could you take now to prepare for such a mobilization of the community? To which civic organizations could you look for assistance in the event of full mobilization? What facilities in your community could be turned into emergency medical facilities and shelters?
7. Assuming that assistance could be expected from outside agencies (federal, state, international) which responsibilities or functions would you choose to delegate to those agencies? Which would be essential to reserve to your own local talent and knowledge? How would you organize and coordinate this effort?
7. Recognizing that no current or future resources are likely to be allocated to preparing for such a low-probability event as the foregoing, what long-term, low-cost organizational changes and conservation methods might be implemented that would nevertheless mitigate the effects of a disaster of this magnitude?
9. How would your medical facility react to an event such as this if it happened in the nearest large city in your area? How about another American city very distant from yours?

EXERCISE #7

BIOLOGICAL ATTACK

Exercise objectives:

The following are examples of exercise objectives that could be used for exercise # 7. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include one or more of the following objectives:

- Provide training and familiarization to hospital personnel in the use of the Hospital Emergency Incident Command System (HEICS).
- Exercise the prophylaxis of healthcare workers.
- Exercise the appropriate use of PPE and decontamination procedures.
- Exercise the plans and procedures for a large influx of patients.
- Exercise plan and procedures for obtaining assistance from Public Health and the EMS Agency.
- Exercise the hospital's plan for obtaining additional resources (pharmaceuticals, etc).
- Exercise the plan for handling and triage of the non-injured worried well who may or may not be contaminated.
- Exercise the plan for providing psychological support to staff members and their families.

SCENARIO

Between 18,000 and 20,000 basketball fans attended a game at the local Sports Center in downtown Los Angeles. A disturbance erupts about mid-way through the second period. Two men start yelling and screaming, then set off multiple aerosol containers and throw them into the crowd from opposite sides of the venue. Virtually everyone in the building inhales the spray. In the ensuing confusion the two men run from the building and get away. The Police are called and they determine that the HAZMAT team should be called in to handle the canisters. Health Hazmat is called in to take samples for testing. Samples are sent to the County Public Health laboratory. Over the next four days people who attended the event begin showing up in Emergency Departments throughout the Los Angeles basin. All report having been at the game four days prior.

One day post event

12:00 p.m.

A 35 year old male patient presents to the hospital ED with complaints of cough, chills, fever and difficulty breathing. Lab test, including blood and sputum cultures, and chest X-Rays are done. The patient is started on antibiotics and admitted to the hospital and placed in isolation.

Two Days post event

9:00 a.m.

You have thirty patients in your ED with high fever, chills, malaise, hypotension, and a productive cough. Two patients complain of severe nausea, vomiting, abdominal pain and diarrhea. The 911 system becomes inundated with calls, there are now more patients than you can handle. It has become obvious that there is a greater medical problem than first suspected. After news reports of the medical situation are released an extremist group calls a local radio station and claims responsibility and state's that it was a biological that was released but refuses to identify the agent.

9:15 a.m.

Area hospitals are alerted by the county Medical Alert Center (MAC) via the ReddiNet and H.E.A.R. radio and are polled for bed availability. They are also informed of the influx of emergency patients who are expected to overwhelm the region's emergency departments.

Three days post event

The State laboratory notifies the local Public Health agency the aerosol canisters contained *Yersinia pestis*.

(For reference see: <http://www.cdc.gov/ncidod/dvbid/plague/facts.htm>).

Four days post event

6:00 a.m.

Over 300 patients with flu like symptoms have been seen in emergency departments through out the county. Hospital census is at maximum.

Discussion Items

1. At this point:

- What actions might your healthcare facility or clinic begin considering?
- At what point would you place those plans into action?

2. What actions might your facility take to reassure the public in your community?

- How should that information be disseminated?
- Does your healthcare facility have a public relations specialist, spokesman or designated physician who is known throughout your community and who regularly speaks on behalf of your facility?

3. What concrete actions could your facility recommend that individual citizens take to reduce the likelihood of their being exposed to a contagious illness of this sort?

4. What are the vulnerable populations in your community, and what actions might be taken on their behalf?

5. What are your hospital's procedures for providing prophylaxis to your workforce?

EXERCISE #8

SMALLPOX OUTBREAK

Exercise objectives:

The following are examples of exercise objectives that could be used for exercise # 8. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include one or more of the following objectives:

- Exercise the Hospital Emergency Incident Command System (HEICS)
- Exercise the hospital's ability to coordinate with local public agencies (Local Police, Fire, Local Government, FBI, Public Health, EMS Agency)
- Exercise hospitals Disaster Response Plan for terrorist incident using a Biological agent.
- Exercise procedures for isolation.
- Exercise plan and procedures for obtaining assistance from Public Health and the EMS Agency.
- Exercise your hospital's plan for obtaining pharmaceutical resources.

SCENARIO

It is mid-July during one of the hottest summers on record. Midday temperatures have been consistently above 100 degrees for a period of ten days. In this region, in particular, hospitals and clinics have been swamped with heat-related illnesses and injuries. County-wide there have been four deaths from heat-related causes, all involving elderly persons. Precautions are being taken at all sporting events, youth programs, and group activities. Attendance at malls, in movie theaters even art galleries and museums is setting records. This pattern has been replicated in all metropolitan areas of the region, where the most popular activities generally include anything in proximity to water, whether the seashore, lakes or state parks along rivers.

On a Thursday morning, your hospital receives an urgent call from the Physician's Assistant (PA) at a local children's day school, reporting what is potentially a case of smallpox. The PA reports that she received a call from the young mother of a seven-year old who had been absent from school for two days with a case of chickenpox. This morning the child's mother called the PA urgently requesting advice on whether to take the child to an emergency room. During the night, the child began vomiting, and now has a temperature of 101.4F. The "spots" from the chicken-pox have deepened and spread to all the limbs, and the child is in a great deal of discomfort.

That evening, national network news carries stories about the outbreak of smallpox among local area children. CDC Health Network message reported as "Breaking News" on all major network channels, including joint statements from DHS Secretary, U.S. President, and CDC Director to say a possible attack has occurred. By the end of the week, there have been reports of smallpox outbreaks in six other major metropolitan areas, including Boston, New York, Cleveland, Atlanta, District of Columbia, and Baltimore. By this time, the Centers for Disease Control and Prevention have been involved in diagnosis and in the implementation of appropriate preventive and treatment measures. The National Disaster Medical System (NDMS) has been activated in response to the threat of an outbreak. (For reference see: <http://www.cdc.gov/agent/smallpox/>)

Discussion Items

1. What is your advice to the PA? What actions should you take based on this information? What actions are required? What requirements exist for higher notification?
2. The PA has instructed the mother to take the child immediately to your hospital's emergency room for an examination. What actions do you take in preparation to receive this patient? Upon their arrival, the child is immediately cleared through the emergency room and is placed in an isolation ward. Initial examination indicates that the child is, in fact, suffering from smallpox.
3. What is needed in order to confirm this diagnosis? If confirmed, what actions are required of your hospital? Over the next 48 hours, an investigation reveals that four other children at the day school have been infected with smallpox. Moreover, three other area hospitals report similar cases. In all, 11 cases of smallpox are reported among school-age children within the local area.
4. At what point do you expect to see County Health Department authorities jointly making uniform public service announcements about the outbreak of this disease? Should those measures be adopted early or later after more information is gathered and a strategy worked out?
5. What recommendations would you make regarding your hospital's own involvement with local media? Does the hospital have any responsibilities to the public in this regard? What do you expect to see as a result of public service announcements?
6. What are your hospital's procedures for vaccinating your hospital staff? Does the plan include the care of the family members of your hospital staff?

EXERCISE #9

UNKNOWN ILLNESS FROM A COMMON SOURCE

Exercise objectives:

The following are examples of exercise objectives that could be used for exercise # 9. You will need to determine what your agency/facility objectives are in order to meet your training needs. Your hospital may wish to include one or more of the following objectives:

- Provide training in the collection of information to confirm potential diagnosis of communicable disease.
- Practice the proper procedures for the reporting of potential disease outbreak to the local Public Health agencies.
- Review hospital policy and procedures for handling potential communicable disease situations.

SCENARIO

A group of 100 persons return from a 14 day tour of France and Germany. There were a total 225 passengers on board the flight that arrives at Los Angeles International Airport. Of the 100 persons on the tour all but ten live in the greater Los Angeles area. Of the remaining passengers 50 live in the Los Angeles area, the remaining 75 passengers caught connecting flights to other areas in California, Oregon and Washington State. Two (2) days after their return four members of the tour group began feeling ill and presented to your Emergency Department with the following symptoms; high fever, chills, malaise, hypotension and a productive cough. One (1) patient complains of severe nausea, vomiting abdominal pain. Over the next two (2) days six (6) more members of the tour group go to area Emergency Departments presenting with similar symptoms as the first group.

Discussion Items

1. Which agencies exterior to the hospital, if any, should be notified of the current situation, and who is empowered to make that decision?
2. At what point do you assess that these circumstances may indicate an outbreak?
3. What resources are available and needed to assist in diagnosing or confirming the diagnosis of an illness?
4. What are your hospital's greatest concerns in responding to this type of incident?

Appendix A

MASTER SEQUENCE OF EVENTS LIST



Appendix A

MASTER SEQUENCE OF EVENTS LIST (MSEL)

Introduction

As discussed in Chapter 3 of this guidebook, under Exercise Planning Process, the Master Sequence of Events (MSEL) is a chronological timeline of expected actions and scripted events to be injected into exercise play by controllers to generate or prompt player activity. It ensures necessary events happen so that all exercise objectives are met. The MSEL identifies evaluators/observers and the area they are responsible for. Also included in the MSEL are the rules of engagement (i.e., safety, areas in-play and those out of play, what to do in case of a real world injury, etc). Additional information that will be helpful to the participants is also included. An example of a MSEL is provided on the next pages. This example is not complete, but it does provide the format to get you started in planning your exercise.

EXAMPLE OF A MASTER SEQUENCE OF EVENTS LIST (MSEL)

Event	Time	Event/Purpose	Participants	Requirements and resources	Notes
1.	Start EX	Initiate HEICS	All	Set up of EOC and establish communication links internally and externally	
2.		Situational briefing	HEICS section Chiefs and staff	ED, Lab, RT, admin, supply, Pharmacy, food service, security	
3.		Establish decontamination operations	Decontamination Team	Set up and operate decontamination center	
4.		Establish Triage	Triage team	Set up and operate triage center	
5.		Patient Care and treatment	Patient Care Team	Receive patients from triage treat as required.	
6.		Damage assessment	Damage control officer and team.	Assess damage, make status report and recommendations to the IC	

Appendix B

HOSPITAL EXERCISE EVALUATION FORMS



Appendix B

HOSPITAL EXERCISE EVALUATION FORMS

1. Introduction

A set of examples of exercise evaluation forms that the exercise planning team can adapt for your hospital's table top, functional and full-scale exercises are included in this section.

2. Examples of Hospital Disaster Exercise Evaluation Forms

The example Incident Command system evaluation forms can be used to assess the exercise performance of the following HEICS functions:

a. Command Structure

- (1) Incident Command
- (2) Operations
- (3) Plans and Intelligence
- (4) Logistics
- (5) Administration/Finance
- (6) Communications

b. Response Sites

Evaluation forms have also been included to assess the exercise performance in the following areas:

- (1) Decontamination Area
- (2) Triage Area
- (3) Treatment Area

c. Participant Evaluation Form

The final example of an evaluation form is for exercise participants:

- (1) Participant Evaluation Form

Hospital Disaster Exercise Evaluation
Incident Command System
INCIDENT COMMAND

Observer: _____ Date: _____

Observer Title: _____

Hospital: _____

Type of event: (check one) Drill () Local or Statewide Exercise () Table Top ()

Period of time of evaluation - From: ___:___ []AM []PM To: ___:___ []AM []PM

1. Time the drill/exercise began: ___:___ []AM []PM

2. Time the hospital disaster plan was initiated: ___:___ []AM []PM

3. Time Communications were operational: (telephone, cell phones, e-mail, radio) ___:___ []AM []PM

4. Time that incident command was operational: ___:___ []AM []PM

5. Did someone take charge of this area? () Y () N () U

If someone took charge of this area, how many minutes after the drill activities in this area began did this person take charge? (select one)

() < 10 min () 10-29 min () 30-59 min () 1-2 hrs () > 2 hrs

6. If someone took charge of this area, was it the officially designated person? () Y () N () U

7. How was the person in charge of the area identified? (check all that apply)

Hat ()

Vest ()

Name Tag ()

Not Identified ()

Other () specify _____

8. If the hospital disaster plan was available, how was it accessed? (check all that apply)

Computer/Internet ()

Disaster Manual ()

Personal Data Assistant (PDA) ()

Not Accessed ()

Other () specify _____

9. Were the following or similar Forms/Records being utilized? (check all that apply)

Activities Log ()

Situation Reports (SITREP) ()

HEICS Action Plan ()

Message Form ()

10. Time drill/exercise ended: ___:___ []AM []PM

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation Decontamination Area

Observer: _____ Date: _____

Observer Title: _____

Hospital: _____

Period of time of evaluation - From: ___:___ []AM []PM To: ___:___ []AM []PM

1. Time the drill began: ___:___ []AM []PM

2. Time the hospital disaster plan was initiated in this area: ___:___ []AM []PM

3. Time this area was ready to accept victims: ___:___ []AM []PM

4. Time this area was notified that incident command was operational: ___:___ []AM []PM

5. Time the first victim notified that incident command was operational: ___:___ []AM []PM

6. Where was this area located? (check all that apply)

Ambulance ramp ()

Inside the hospital ()

Parking lot ()

Street / road ()

Other () specify _____

7. Was the boundary for this area defined? ()Y ()N ()U

Barricade(s) ()

Security personnel ()

Sign(s) ()

Tape ()

Vehicle(s) ()

Wall(s), permanent ()

Wall(s), temporary ()

No boundary ()

Other () specify _____

8. Were providers able to move easily through this area? ()Y ()N ()U

9. What type of area was used for decontamination? (check all that apply)

Covered designated outdoor decontamination area ()

Open outdoor decontamination area ()

Designated indoor decontamination room(s) ()

Specify number of rooms _____

Other () specify _____

10. How close was the Emergency Medical System (EMS) offload to the decontamination area? (enter approximate distance) _____ Feet

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation Decontamination Area

1. Draw a picture of the decontamination area setup.

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation
Decontamination Area

12. Did someone take charge of this area? ()Y ()N ()U
If someone took charge of this area, how many minutes after the drill activities in this area began did this person take charge? (select one)

() < 10 min () 10-29 min () 30-59 min () 1-2 hrs () > 2 hrs

13. If someone took charge of this area, was it the officially designated person? ()Y ()N ()U

14. How was the person in charge of the area identified? (check all that apply)

Hat ()

Vest ()

Name tag ()

Not Identified ()

Other () specify _____

15. Were the following drill participants identifiable?

a. Drill evaluators ()Y ()N ()U

b. Drill organizers ()Y ()N ()U

c. Media ()Y ()N ()U

d. Medical personnel ()Y ()N ()U

e. Mock victims ()Y ()N ()U

f. Observers ()Y ()N ()U

g. Security ()Y ()N ()U

16. How many hospital drill participants were initially assigned to this area? (give approximate numbers)

Physicians: _____ Nurses: _____

Ancillary personnel (registrars, security, cleaning staff, etc.): _____

17. Were additional drill participants added during the drill? ()Y ()N ()U ()NA

If additional area staff were added during the drill, what were their approximate numbers?
(leave blank if not applicable)

Physicians: _____ Nurses: _____

Ancillary personnel (registrars, security, cleaning staff, etc.): _____

Comments: (if comment refers to a specific item, give the item number)

Hospital Disaster Exercise Evaluation Decontamination Area

18. When was the location of this area determined? (check one)
Determined before the drill () Determined during the drill ()
19. Was the hospital disaster plan available? ()Y ()N ()U
20. If the hospital disaster plan was available, what was its format? (check all that apply)
- | | |
|-------------------------------|-------------------|
| Computer/Internet | () |
| Disaster Manual | () |
| Personal Data Assistant (PDA) | () |
| Not accessed | () |
| Other | () specify _____ |
21. Was there a radiation incident component to the hospital disaster plan? ()Y ()N ()U
22. Was the space allocated for the zone adequate? ()Y ()N ()U
23. If not enough space for the area, where did area activities overflow to? (check all that apply)
- | | |
|-----------------------------|-------------------|
| Adequate space allotted | () |
| Conference room | () |
| Hallways | () |
| Outside hospital | () |
| Treatment/victim care areas | () |
| Waiting rooms | () |
| No overflow | () |
| N/A | () |
| Other | () specify _____ |
24. Did clinical staff interact directly with families of victims? ()Y ()N ()U
25. Were families of victims referred to specially designated staff? ()Y ()N ()U
26. How was victims' privacy ensured? (check all that apply)
- | | |
|------------------|-------------------|
| Curtains | () |
| Individual areas | () |
| Privacy screens | () |
| Not ensured | () |
| Other | () specify _____ |
27. Was the decontamination area set up prior to arrival of first victim? ()Y ()N ()U
28. Were all victims sent immediately through decontamination on arrival in this area? ()Y ()N ()U
If not sent immediately to decontamination, explain in the comments box at the end of the section.
29. How many victims were able to undergo decontamination simultaneously? (give approximate numbers)
- | | | | |
|------------|-------|----------------|-------|
| Ambulatory | _____ | Non-ambulatory | _____ |
|------------|-------|----------------|-------|
30. How were non-ambulatory victims decontaminated? (check all that apply)
- | | |
|---|-------------------|
| Victims and means of transport were put through decontamination | () |
| Victims were transferred to another means of transport and then put through decontamination | () |
| No non-ambulatory victims | () |
| Other | () specify _____ |

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation Decontamination Area

31. Were non-ambulatory victims repositioned to ensure decontamination of all surfaces? () Y () N () U
32. Were separate provisions made for male and female victims? () Y () N () U
33. Were victims' clothing and personal belongings removed during decontamination? () Y () N () U

If yes, what was done with their clothing and personal belongings? (check all that apply)

Clothing

- a. Chain of custody initiated * ()
- b. Contained ()
- c. Discarded ()
- d. Held for later retrieval ()
- e. Identified ()
- f. Marked as hazardous materials ()
- g. Returned after decontamination ()
- h. Secured in storage ()
- i. Unclear ()
- j. NA ()
- k. Other () specify _____

Personal Belongings

- l. Chain of custody initiated * ()
- m. Contained ()
- n. Discarded ()
- o. Held for later retrieval ()
- p. Identified ()
- q. Marked as hazardous materials ()
- r. Returned after decontamination ()
- s. Secured in storage ()
- t. Unclear ()
- u. NA ()
- v. Other () specify _____

* Chain of custody is defined as securing items continuously and marking evidence gathered by date, time, location, and when, how, and by whom acquired. It includes signatures of all persons successively responsible for custody. It must be conducted so the validity of the chain of custody will hold up in court.

34. If victims' items were contained, what materials were used for containing clothing and personal items? (check all that apply)

- Aluminum foil wrapping ()
- Cotton hampers ()
- Paper bags ()
- Plastic bags ()
- NA ()
- Other () specify _____

35. Time drill/exercise ended: ____:____ [] AM [] PM

Comments (if comment refers to a specific item, give the item number):

Hospital Disaster Exercise Evaluation Triage Area

Observer: _____ Date: _____

Observer Title: _____

Hospital: _____

Period of time of evaluation - From: ___:___ []AM []PM To: ___:___ []AM []PM

1. Time the drill/exercise began: ___:___ []AM []PM

2. Time the hospital disaster plan was initiated: ___:___ []AM []PM

3. Time triage area was ready to receive victims: ___:___ []AM []PM

4. Time when triage area was notified that incident command was operational: ___:___ []AM []PM

5. Time first victim arrived in the triage area: ___:___ []AM []PM

6. Where was the triage area located? (check all that apply)

Ambulance ramp ()

Inside the hospital ()

Parking lot ()

Street / road ()

Other () specify _____

7. Was the boundary for this area defined? ()Y ()N ()U

Indicate the type of boundary used: (check all that apply)

Barricade (s) ()

Inside the hospital ()

Signs ()

Tape ()

Vehicle (s) ()

Wall (s), permanent ()

Wall (s), temporary ()

No boundary ()

Other () specify _____

8. Were providers able to move easily through this area? ()Y ()N ()U

9. What type of area was used for treatment? (check all that apply)

Covered designated outdoor triage area ()

Open outdoor triage area ()

Designated indoor triage room (s) ()

Specify number of rooms _____

Other () specify _____

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation

Triage Area

10. How close was the Emergency Medical System (EMS) offload to the treatment area? (enter approximate distance) _____ Feet
11. Did someone take charge of this area? ()Y ()N ()U
If someone took charge of this area, how many minutes after the drill activities in this area began did this person take charge? (select one)
() < 10 min () 10-29 min () 30-59 min () 1-2 hrs () > 2 hrs
12. If someone took charge of this area, was it the officially designated person? ()Y ()N ()U
13. How was the person in charge of the area identified? (check all that apply)
- Hat ()
Vest ()
Name tag ()
Not Identified ()
Other () specify _____
14. Were the following drill participants identifiable?
- a. Drill evaluators ()Y ()N ()U b. Drill organizers ()Y ()N ()U
c. Media ()Y ()N ()U d. Medical personnel ()Y ()N ()U
e. Mock victims ()Y ()N ()U f. Observers ()Y ()N ()U
15. How many hospital drill participants were initially assigned to this area? (give approximate numbers)
Physicians: _____ Nurses: _____
Ancillary personnel (registrars, security, cleaning staff, etc.): _____
16. Were additional drill participants added during the drill? ()Y ()N ()U ()NA
If additional area staff were added during the drill, what were their approximate numbers?
(leave blank if not applicable)
Physicians: _____ Nurses: _____
Ancillary personnel (registrars, security, cleaning staff, etc.): _____
17. When was the location of this area determined? (check one)
Determined before the drill () Determined during the drill ()
18. Was the hospital disaster plan available? ()Y ()N ()U
If the hospital disaster plan was available, what was its format? (check all that apply)
- Complete manual ()
Flow diagram ()
Job action sheets ()
No disaster plan ()
Other () specify _____
19. If the hospital disaster plan was available, how was it accessed? (check all that apply)
- Computer/Internet ()
Paper ()
Personal Data Assistant (PDA) ()
Not accessed ()
Other () specify _____

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation Treatment Area

Observer: _____ Date: _____

Observer Title: _____

Hospital: _____

Period of time of evaluation - From: ____:____ []AM []PM To: ____:____ []AM []PM

1. Time the drill/exercise began: ____:____ []AM []PM

2. Time the hospital disaster plan was initiated: ____:____ []AM []PM

3. Time triage area was ready to receive victims: ____:____ []AM []PM

4. Time when treatment area was notified that incident command was operational: ____:____ []AM []PM

5. Time first victim arrived in the treatment area: ____:____ []AM []PM

6. Where was the treatment area located? (check all that apply)

Ambulance ramp ()

Inside the hospital (ED) ()

Parking lot ()

Street / road ()

Other () specify _____

7. Was the boundary for this area defined? () Y () N () U

Indicate the type of boundary used: (check all that apply)

Barricade (s) ()

Security personnel ()

Sign (s) ()

Tape ()

Vehicle (s) ()

Wall (s), permanent ()

Wall (s), temporary ()

No boundary ()

Other () specify _____

8. Were providers able to move easily through this area? () Y () N () U

9. What type of area was used for treatment? (check all that apply)

Covered designated outdoor treatment area ()

Open outdoor treatment area ()

Designated indoor treatment room (s) ()

Specify number of rooms _____

Other () specify _____

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation

Treatment Area

10. How close was the Emergency Medical System (EMS) offload to the treatment area? (enter approximate distance) _____ Feet

11. Did someone take charge of this area? ()Y ()N ()U
If someone took charge of this area, how many minutes after the drill activities in this area began did this person take charge? (select one)

() < 10 min () 10-29 min () 30-59 min () 1-2 hrs () > 2 hrs

12. If someone took charge of this area, was it the officially designated person? ()Y ()N ()U

13. How was the person in charge of the area identified? (check all that apply)

Hat ()

Vest ()

Name tag ()

Not Identified ()

Other () specify _____

14. Were the following drill participants identifiable?

a. Drill evaluators ()Y ()N ()U b. Drill organizers ()Y ()N ()U

c. Media ()Y ()N ()U d. Medical personnel ()Y ()N ()U

e. Mock victims ()Y ()N ()U f. Observers ()Y ()N ()U

g. Security ()Y ()N ()U

15. How many hospital drill participants were initially assigned to this area? (give approximate numbers)

Physicians: _____ Nurses: _____
Ancillary personnel (registrars, security, cleaning staff, etc.): _____

16. Were additional drill participants added during the drill? ()Y ()N ()U ()NA

If additional area staff were added during the drill, what were their approximate numbers?
(leave blank if not applicable)

Physicians: _____ Nurses: _____
Ancillary personnel (registrars, security, cleaning staff, etc.): _____

Comments: (if comment refers to a specific item, give the item number)

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation
Treatment Area

17. When was the location of this area determined? (check one)

Determined before the drill () Determined during the drill ()

18. If the hospital disaster plan was available, how was it accessed? (check all that apply)

Computer/Internet ()

Disaster manual ()

Personal Data Assistant (PDA) ()

Not accessed ()

Other () specify _____

19. Was the disaster plan reviewed by any of the assigned personnel? () Y () N () U

20. Were the following or similar Forms/Records being utilized:

Activities log ()

Situational Reports (SITREP) ()

HEICS Action Plan ()

Message Form ()

Personnel Time Sheet ()

Resource Accounting Record ()

20. Time drill/exercise ended: ____:____ [] AM [] PM

Comments: (if comment refers to a specific item, give the item number)

Hospital Disaster Exercise Evaluation
Incident Command System
LOGISTICS

Observer: _____ Date: _____

Observer Title: _____

Hospital: _____

Type of event: (check one) Drill () Local or Statewide Exercise () Table Top ()

Period of time of evaluation - From: ___:___ []AM []PM To: ___:___ []AM []PM

1. Time the drill/exercise began: ___:___ []AM []PM

2. Time the hospital disaster plan was initiated: ___:___ []AM []PM

3. Time Communications were operational: (telephone, cell phones, e-mail, radio) ___:___ []AM []PM

4. Time that Logistics Section was operational: ___:___ []AM []PM

5. Did someone take charge of this area? ()Y ()N ()U
If someone took charge of this area, how many minutes after the drill activities in this area began did this person take charge? (select one)

() < 10 min () 10-29 min () 30-59 min () 1-2 hrs () > 2 hrs

6. If someone took charge of this area, was it the officially designated person? ()Y ()N ()U

7. How was the person in charge of the area identified? (check all that apply)

Hat ()

Vest ()

Name Tag ()

Not Identified ()

Other () specify _____

8. Was the hospital disaster plan was available? ()Y ()N ()U

If the hospital disaster plan was available, what was its format? (check all that apply)

Computer/Internet ()

Disaster Manual ()

Personal Data Assistant (PDA) ()

Not Accessed ()

Other () specify _____

9. Were the following or similar Forms/Records being utilized? (check all that apply)

Resource Accounting Record ()

Procurement Summary Report ()

Personnel Time Sheet ()

Activities Log ()

Incident Message Log ()

Situational Report ()

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Hospital Disaster Exercise Evaluation Communications

8. Communications device(s):

If device was **NOT** present, check "N" in Column "a" and proceed to the next line.

	a. Was device present?	b. If present, # available	c. If present, was it used in the drill
<u>Phones</u>			
2-way radio/phone(s)	() Y () N () U	_____	() Y () N () U
Direct line(s)	() Y () N () U	_____	() Y () N () U
Landline phone(s)	() Y () N () U	_____	() Y () N () U
Wireless/cell phone(s)	() Y () N () U	_____	() Y () N () U
<u>Radio and Television</u>			
AM/FM radio(s)	() Y () N () U	_____	() Y () N () U
Television(s)	() Y () N () U	_____	() Y () N () U
<u>Pager</u>			
Numeric paging	() Y () N () U	_____	() Y () N () U
Overhead paging	() Y () N () U	_____	() Y () N () U
Text paging	() Y () N () U	_____	() Y () N () U
<u>Other Electronic Device</u>			
E-mail & Internet Access	() Y () N () U	_____	() Y () N () U
FAX machine(s)	() Y () N () U	_____	() Y () N () U
<u>Voice or Physical Communication Device</u>			
Intercom	() Y () N () U	_____	() Y () N () U
Megaphone(s)	() Y () N () U	_____	() Y () N () U
Runner(s)	() Y () N () U	_____	() Y () N () U
<u>Other (specify)</u>			
_____	() Y () N () U	_____	() Y () N () U
_____	() Y () N () U	_____	() Y () N () U
_____	() Y () N () U	_____	() Y () N () U

Comments: (if comment refers to a specific item, give the item number)

Note: Y=Yes; N=No; U=Unclear; NA=Not applicable

Appendix C

THE POST-EXERCISE HOT WASH



Appendix C

THE POST-EXERCISE HOT WASH

An important part of any disaster drill/exercise is the “hot wash” or post-exercise debriefing. The hot wash provides a forum for exercise planners, facilitators, controllers, and evaluators to review and provide feedback on the exercise. As stated in Chapter 4 of this guidebook, an exercise debriefing occurs for exercise facilitators, evaluators, and for the exercise players. Depending on the size of the exercise, these groups (facilitators, evaluators and players) may meet separately for a brief hot-wash prior to reconvening as an entire group. The advantage of a separate debriefing for exercise evaluators and facilitators is that it gives this group the opportunity to organize the feedback and suggestions for improvement that should be given to the players at the end of the hot wash debriefing.

Below are some suggestions on how to make a post-exercise hot wash more effective:

- Choose your exercise and hot wash facilitator(s) carefully. The ideal hot wash is a facilitated discussion that allows each person an opportunity to provide an overview of the functional area they observed and document both strengths and areas for improvement. A good facilitator focuses first on giving everyone a turn to speak, and monitors the timing and flow of topics and issues so that the goals of the hot wash and the needs of the group are met. A good facilitator often speaks the least in the group. One mistake exercise planners make is to choose a facilitator who is a “subject matter expert” instead of one who has good group management skills. This leads to the dynamic of players being reluctant to give feedback, and the “expert” taking up all of the hot wash time giving advice. This interferes with the ability of the group to discuss the results of the exercise. Indeed, the best facilitator for the job is usually the one with the most superior group management skills and the least amount of subject matter expertise.
- Conduct the hot wash immediately following the exercise. A hot wash provides a timely opportunity for immediate feedback. It enables exercise facilitators/controllers, evaluators, and players to capture events while they remain fresh, to ascertain players’ level of satisfaction with the exercise, and to determine any issues or concerns and proposed improvement items.
- Start with the positive. Begin the hot wash by first asking the players to give feedback about what worked well. This allows the group to acknowledge disaster planning milestones that are already working well and provides the opportunity for everyone to give feedback about the successful parts of the exercise. After obtaining feedback on what went well, then the facilitator

should ask the group for feedback on what did not go well, followed by asking for suggestions for needed improvements to the disaster plan, procedures, supplies, etc.

- Be sure to have exercise evaluators and facilitator/controllers give their comments last. Exercise players need the opportunity to discuss their experiences, suggestions, and observations first. Otherwise, there is a risk that the exercise players will “edit” their comments to fit the direction set by the exercise leadership.
- Be sure to have a good recorder. Make sure to plan for one or more recorders who can clearly and legibly record feedback from the group on either news print or on the computer. Well recorded feedback is necessary to write a useful exercise After Action Report.
- Be sure to ask everyone to fill out an exercise evaluation form prior to dismissing the group. The debrief and/or hot wash provides an ideal time for facilitators, controllers, evaluators, and players to complete and submit their completed feedback forms. If written evaluation forms are not collected immediately following the hot wash meeting, it is extremely difficult to obtain these forms from participant’s after-the-fact. A summary of the written evaluations should be included in the After Action Report.
- Thank everyone for their participation. The facilitator should make sure to thank everyone for their participation in the planning, execution, and evaluation of the exercise. With large functional or full scale exercise, the exercise host should consider providing certificates of participation and/or thank you letters to participants following the exercise.
- Make sure to write a thorough After Action Report. Detailed guidance on writing effective After Action reports are found in Appendix D.
- Follow up on items identified for improvement. There is nothing more discouraging to exercise participants than to find that they are giving the same suggestions on areas for improvement year after year. This gives people the impression that their feedback is not valued and that the exercise was hosted for reasons other than to improve the hospital’s disaster plans.
- Use areas identified for improvement as the objectives of the next exercise. Once improvements have been made, then it is important to “test” new procedures, equipment, and plans by including those items in the next exercise.

Appendix D

COMPLETING THE AFTER ACTION REPORT



Appendix D

COMPLETING THE AFTER ACTION REPORT (AAR)

The After Action Report (AAR) is one of the most important documents of the exercise process. This report will capture all of the events that took place during the exercise. The level of detail in the AAR reflects the exercise type and size. This report utilizes the information from the various evaluators for the sections they evaluated, plus the information from the participants in their post exercise evaluations. To be comprehensive, the AAR writer should include comments made during the hot wash/debriefings if they are not already included in the evaluation process. This is the document used to validate the goals and objectives of the overall exercise. The AAR should address whether or not the exercise objectives were appropriate and attainable and whether the participants understood what was to be exercised. The AAR should also contain a review of the overall plan and planning process, as well as any major issues that created difficulty in the planning process. The AAR should include an introduction with an opening statement, a brief description of the over-all exercise scenario, groups and agencies participating, and the exercise purpose and objectives.

OBSERVATION:

The writer of the AAR should use this section to describe what was observed by the exercise evaluators and participants during the exercise. Issues such as communication, use of disaster plans, equipment, triage, patient care, etc. should be highlighted. Each observation should be documented as a separate entry.

DISCUSSION:

In this section, the AAR writer should first list the positive events (what went right) before discussing the less than positive events (what went wrong) during the exercise. The writer should be factual, but not judgmental. Outstanding performance by individuals can also be highlighted here.

SUGGESTIONS/RECOMMENDATIONS:

In the suggestions/recommendations for improvement section, the AAR writer should be sure to cover all points in the discussion section for those items identified as needing improvement. The suggestions and recommendations section should be used by future exercise planners to develop an Improvement Plan (see Chapter 4 of this guidebook, section 10). The AAR writer can make recommendation/suggestions in either a narrative format or as separate lines which are numerically listed. Make sure that suggestions/recommendations are realistic and attainable.

1. Example of an After Action Report (AAR)

After Action Report for Exercise Calaveras

Date: 01/11/05 through 01/12/05

From: John Q. Public

Exercise Calaveras was conducted over a 2 day period beginning 01/11/05 to 01/12/05. The participants included all four of the local area hospitals, Fire Department, Police Department, Sheriffs Office, Public Works Department, the local EMS Agency and private ambulance providers. The basic scenario was that of an earthquake that left a 1000 square mile area of Northern California isolated and a disruption in essential services such as telephone, propane gas, water and medical.

The exercise goals were as follows:

- Effectively establish the Standardized Emergency Management System (S.E.M.S) and or Hospital Emergency Incident Command (HEICS).
- Test the response capability of the local hospitals and public agencies to restore essential services and medical care to the affected areas.
- Exercise internal and external communication capability using telephone, Ham Radio, computers and alternate means.

I. OBSERVATION: Incident Command.

DISCUSSION:

The establishment of the Incident Command System was accomplished very quickly. The Incident Commander took charge and established the Command Post and assigned Section leaders to Operations, Plans/Intelligence, Logistics and Finance/Administration. All sections were operational within thirty minutes of their assignment. Logistics communication section began to establish communication with affected areas via telephone and handheld radios. Contact was made very quickly with the local Fire and Police agencies; however they were unable to contact the hospitals. Plans/Intel was notified of the communication problem. On further investigation over the course of the exercise it was determined that the communication problem resulted from hospital personnel not being trained in the use of the radios.

SUGGESTIONS/RECOMMENDATIONS:

1. Establish a training program for hospital personnel to become familiar with the use of radio equipment and appropriate protocols.

Appendix D

COMPLETING THE AFTER ACTION REPORT (AAR)

The After Action Report (AAR) is one of the most important documents of the exercise process. This report will capture all of the events that took place during the exercise. The level of detail in the AAR reflects the exercise type and size. This report utilizes the information from the various evaluators for the sections they evaluated, plus the information from the participants in their post exercise evaluations. To be comprehensive, the AAR writer should include comments made during the hot wash/debriefings if they are not already included in the evaluation process. This is the document used to validate the goals and objectives of the overall exercise. The AAR should address whether or not the exercise objectives were appropriate and attainable and whether the participants understood what was to be exercised. The AAR should also contain a review of the overall plan and planning process, as well as any major issues that created difficulty in the planning process. The AAR should include an introduction with an opening statement, a brief description of the over-all exercise scenario, groups and agencies participating, and the exercise purpose and objectives.

OBSERVATION:

The writer of the AAR should use this section to describe what was observed by the exercise evaluators and participants during the exercise. Issues such as communication, use of disaster plans, equipment, triage, patient care, etc. should be highlighted. Each observation should be documented as a separate entry.

DISCUSSION:

In this section, the AAR writer should first list the positive events (what went right) before discussing the less than positive events (what went wrong) during the exercise. The writer should be factual, but not judgmental. Outstanding performance by individuals can also be highlighted here.

SUGGESTIONS/RECOMMENDATIONS:

In the suggestions/recommendations for improvement section, the AAR writer should be sure to cover all points in the discussion section for those items identified as needing improvement. The suggestions and recommendations section should be used by future exercise planners to develop an Improvement Plan (see Chapter 4 of this guidebook, section 10). The AAR writer can make recommendation/suggestions in either a narrative format or as separate lines which are numerically listed. Make sure that suggestions/recommendations are realistic and attainable.

IV. OBSERVATION: Triage

DISCUSSION:

The triage areas were well managed and patients were assessed and moved quickly. Medical and nursing staff were professional and efficient in assessing the needs of the patients. Communication was a problem in this area. The triage area received no prior information what patients were in route or how many. Half way through the exercise, logistics sent a person who was trained in use of the radio to the triage area. This corrected the problem at one triage site.

SUGGESTIONS/RECOMMENDATIONS:

(Example of a combined narrative and numerical format)

The problem of establishing good communication processes has been a recurring theme through out this exercise. The following are suggestions to help correct the problem:

1. Develop a standardized training program for hospital personnel.
2. Utilize trained radio personnel to set up communication operations in critical areas such as the command post, triage, decontamination and patient care treatment areas.
3. See comments in item III above.

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Appendix E

HOSPITAL EMERGENCY INCIDENT COMMAND SYSTEM (HEICS)



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The Hospital Emergency Incident Command System (HEICS) was developed out of the need to have a standardized approach to disaster response. The Hospital Emergency Incident Command System (HEICS) is a standard by which the medical community has found success and common ground in the area of disaster management. A survey of California hospitals in the spring of 1997 indicated that this disaster management system was the choice of many hospitals. The medical community had established HEICS as a facility standard in emergency response. Confusion and chaos are commonly experienced by hospitals at the onset of a medical disaster. However, these negative effects can be minimized if management responds quickly with a structure and focused direction of activities. The Hospital Emergency Incident Command System (HEICS) is an emergency management system which employs a logical management structure, defined responsibilities, clear reporting channels, and a common nomenclature to help unify hospitals with other emergency responders. There are clear advantages for all hospitals using this particular emergency management system.

HEICS is an emergency management system made up of positions in an organizational chart. Each position has a specific mission to address in an emergency situation. Each position has an individual checklist designed to direct the assigned individual in disaster response and recovery tasks. The HEICS plan includes forms to enhance the overall system and promote accountability. The HEICS plan is flexible. Only those positions, or functions, which are needed to respond to the disaster or emergency situation should be activated. The HEICS plan allows for the addition of needed positions, as well as the deactivating of positions at any time. This promotes efficiency and cost effectiveness. HEICS may be fully activated for a large, extended disaster such as an earthquake or terrorist attack. A full activation may take hours or even days. The majority of disasters or emergencies will require the activation of far fewer HEICS positions. More than one position may be assigned to an individual. Situations of a critical nature may require an individual perform multiple tasks until additional support can be obtained. This is made possible with the use of the individual position checklists.

HEICS is NOT a complete ready to go, "Disaster Response Plan". Hospitals should use the HEICS guidance as a starting point for developing their own disaster plan. What HEICS does provide is a dependable chain-of-command, improved communication through common language, flexibility in section/component activation, prioritization of duties, organized documentation for improved financial recovery, and effective mutual aid with other hospitals and other agencies.

HEICS also provides for standardized basic units of structure that are universal for first responder agencies such as law and fire responders:

- Incident Commander
- Section Chiefs
- Directors
- Unit Leaders
- Officers

HEICS also provides a standardized Organizational Chart that is universal in government Emergency Operations Centers under the Standardized Emergency Management System (SEMS) in California:

- Command
- Operations
- Plans/Intelligence
- Logistics
- Finance/Administration

SEMS is the emergency management system long used in California. Nevertheless, hospital emergency management personnel should be aware that a similar system called NIMS (National Incident Management System) is currently being implemented nationwide. NIMS uses the Incident Command System on which SEMS was founded. The State of California is working to integrate the SEMS and NIMS systems to comply with this federal mandate. Hospital emergency managers should be aware that the SEMS/NIMS system will NOT replace HEICS. HEICS will remain as the preferred emergency management structure for hospitals.

For more information on HEICS go to www.emsa.gov and click on Disaster Medical Services Division.

For more information on SEMS go to www.oes.ca.gov and click on Information for Emergency Managers, then click on Standardized Emergency Management System (SEMS) Guidelines.

For more information on NIMS go to www.dhs.gov and type "NIMS" into the search feature at the top of the page. Click on the publication Department of Homeland Security National Incident Management System.

