PUBLIC HEALTH EMERGENCY PREPAREDNESS RESEARCH
RESOURCES AND TOOLS

Hospital Preparedness Exercises: Guidebook

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Hospital Preparedness Exercises Guidebook

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The content of this document is intended to provide a resource for hospitals in planning, conducting, and evaluating exercises and should not be construed as representing standards of care or recommendations on how to respond to specific types of incidents. No statement in this document should be construed as an official position of AHRQ or the U.S. Department of Health and Human Services.

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Introduction

The *Hospital Preparedness Exercises Guidebook* is meant to accompany the *Hospital Preparedness Exercises Atlas of Resources and Tools* as a reference for those using the *Atlas* to plan, conduct, and evaluate hospital preparedness exercises. The guidebook addresses preparedness exercise-related requirements for Federal funding and hospital accreditation. It is intended for use in planning, conducting, and evaluating such exercises, with the goal of improving hospital emergency preparedness programs. It also can serve as a resource for senior leadership to help increase institutional commitment to provide the necessary resources for successful preparedness exercises.

For more information on resources and tools that can be used to help with the preparedness exercise process, please refer to the *Hospital Preparedness Exercises Atlas of Resources and Tools.*

Using This Guidebook

This guidebook is designed to assist hospital preparedness exercise coordinators in planning, conducting, and evaluating exercises. It provides cross-references to resources and tools that may be useful in these activities; however, it should not be used as a sole reference for preparedness exercises.

FOCUS

The focus of the guidebook is hospital preparedness exercises, an important component of a hospital emergency preparedness program. The contents reflect exercise guidance for U.S. hospitals as of 2009.

TARGET AUDIENCE

The guidebook is intended for anyone planning, conducting, or evaluating a hospital preparedness exercise. It is expected to be particularly helpful to a novice hospital preparedness coordinator.

HOSPITALS ADDRESSED

Material in this guidebook addresses the needs of a range of hospitals, including acute care and critical access hospitals, as well as those that are accredited, and those that are not.

PART I:
Overview, Requirements, and Guidance

Chapter 1. Overview

This section provides an overview of **hospital preparedness exercises** in the following sections:

- ➔ Hospital Emergency Management Programs
- ➔ Definition of Exercises
- ➔ Purpose of Exercises
- ➔ Types of Exercises
- ➔ Hospital Preparedness Exercises Roadmap

HOSPITAL EMERGENCY MANAGEMENT PROGRAMS

Hospitals are the cornerstone of health care in a community. During catastrophic emergencies due to all types of hazards, hospitals must continue critical ongoing operations, but may also face large surges of patient arrivals. These events can disrupt patient treatment, threaten the safety and security of patients and hospital staff, and even completely shut down a facility. Hospitals generally have an **emergency management program** (also sometimes referred to as an **emergency management system**) to help effectively prepare for, respond to, and recover from an emergency. An emergency management program ideally focuses on the capabilities necessary to respond to any type of emergency.

Components of this program may vary according to each hospital's needs but often include the following:

- **Emergency Operations Plan (EOP)** – An EOP outlines the hospital's plan for response to emergencies, and should include protocols for communications, resources, safety, and continuity of operations for continued patient care. A hospital may have a single all-encompassing EOP or multiple, hazard-specific EOPs.
- **Incident Command System (ICS)** – The ICS is a standardized organizational structure for managing any size emergency events. The ICS can be scaled to the size of the event. The ICS generally consists of one Incident Commander and a team of people who are in charge and accountable for the various actions an organization must take to manage an incident. The major components of incident command are operations, finance, planning, and logistics. These are further broken down into many other components that allow the appropriate span of control and accountability, depending on the extent and specifics of the incident.
- **Emergency Operations Center (EOC)** – Also known as the **Hospital Command Center**, the EOC is where the emergency operations team (operating under the Incident Command System) convenes during an emergency to coordinate management of the incident.
- **Hazard Vulnerability Analysis (HVA)** – The HVA is a document created by an interdisciplinary process that a hospital uses to determine the key operational threats that the hospital is likely to encounter. Although a hospital should ideally be prepared for all types of emergencies, the HVA gives planners an idea of vulnerabilities and hazards that need to be addressed first in their planning and conduct of exercises and in the EOP(s). Certain hospital

accreditation programs require conduct and review of an HVA annually, with the identified threats used to guide planning activities and addressed with community and State partners.

- **Key Contacts** – Incidents often require coordination between multiple community- or government-based agencies. In order to ensure a coordinated response to an incident, a list of key contacts and agreements is essential. These contacts may include government officials (local, State and Federal), police, public health department, fire department, and local utilities companies. During an incident, the hospital ICS may need to directly link to the local EOC. This can be by direct communications or by the formal identification of a liaison person within the ICS which may be placed in the local EOC.
- **Exercises** – Exercises help hospital staff evaluate their preparedness capacities and capabilities to respond to a wide variety of events, many of which may have a profound and potentially catastrophic impact on hospital operations, staff, patients, the surrounding community and related infrastructure. Exercises are essential to helping emergency staff prepare to respond to these incidents before they occur. Hospitals should work with their surrounding community when planning and performing exercises. The remainder of this guidebook focuses on hospital preparedness exercises.

DEFINITION

In general terms, a **hospital preparedness exercise** is a means for a hospital to test and evaluate its capacity and capabilities for preventing, preparing for, protecting from, responding to, and/or recovering from an event that may overwhelm a hospital's patient care or operating systems. Such a hazard or threat can either occur internally (within the hospital) or externally (outside the hospital). Exercises are an essential component of an emergency management program. They are one of the most effective ways a hospital can test, evaluate, and ultimately improve an emergency management program.

PURPOSE OF HOSPITAL PREPAREDNESS EXERCISES

As part of an emergency management program, **hospital preparedness exercises** may have several specific purposes.

PURPOSES OF HOSPITAL PREPAREDNESS EXERCISES
1. Evaluation of a Hospital's Emergency Management Program
▪ Testing an Emergency Operations Plan(s) or program components ▪ Identifying strengths and weaknesses ▪ Adapting the hospital operations system to changing threats
2. Familiarization of Hospital Staff with Plans
▪ Providing an opportunity for staff to recognize strengths and identify gaps ▪ Providing an opportunity for staff to practice emergency response procedures ▪ Ensuring staff has capabilities to communicate, plan, respond, and recover from events ▪ Ensuring staff has the resources to communicate, plan, respond, and recover from events ▪ Ensuring staff can better understand their individual roles in an emergency
3. Integration with Community and Local Partners
▪ Educating community and local partners on hospital capabilities and procedures ▪ Providing an opportunity for hospital staff and community stakeholders to practice integrating their systems by planning and exercising together ▪ Enhancing planning, coordination, and communication with community and local agencies involved in response efforts
4. Compliance with Requirements
▪ Hospital accreditation requirements ▪ Federal and State funding requirements ▪ Other professional organizations' requirements
5. Improvement of Emergency Management Program
▪ Enhancing the hospital's capability to plan for, prevent, protect from, respond to, and recover from incidents and/or threats ▪ Taking action on identified weaknesses ▪ Maintaining identified strengths and determining best practices ▪ Building awareness among hospital staff and administration of components of emergency management program ▪ Decreasing liability, protecting hospital infrastructure, and improving community resiliency

TYPES OF EXERCISES

Based on available resources and objectives, exercises can be conducted in a variety of forms and scales. While objectives may range from testing certain capabilities to evaluating an entire Emergency Operations Plan (EOP), most exercises may be categorized as *discussion-based* or *operations-based* activities according to the definitions of the **Homeland Security Exercise and Evaluation Program (HSEEP)** of the Department of Homeland Security (DHS).

Discussion-Based Exercises

Discussion-Based Exercises allow hospital emergency management personnel to educate staff on strategic issues related to plans, policies, agreements, protocols, or procedures.

- **Pros:** Do not require extensive funds, resources, or coordination; can be developed in a short period of time; can help prepare for and eventually transition to an operations-based exercise
- **Cons:** No real exercise play (not as realistic); may not fulfill certain requirements (e.g., Joint Commission standards)

Types of Discussion-Based Exercises

TYPE OF EXERCISE	EXERCISE SCALE	DEFINITION & PURPOSE
Seminar	Small	Provides a synopsis of authorities, strategies, plans, policies, procedures, protocols, resources, concepts, and ideas
Workshop	Small	Provides an overview of relevant information for an emergency management program; more participant interaction than a seminar; aims to create a product/tool for exercise conduct
Tabletop	Small-Medium	Staff and key decision makers convene to discuss and verbally act out incident response under simulated emergency settings
Game	Small-Medium	Adapts actions of participants and focuses on consequences of decisions and actions during exercise play
Model/ Simulation	Small	Used to visualize and quantify a scenario and consequences of specific decisions made by participants; cost-effective way of conducting scenario-based exercises

Operations-Based Exercises

Operations-Based Exercises allow the emergency management program to test and evaluate certain capabilities, procedures, and functions.

- **Pros:** Real exercise play (more realistic than discussion-based exercises); may meet certain accreditation requirements
- **Cons:** May be costly; may require extensive planning, coordination, resources, and administrative commitment

Types of Operations-Based Exercises

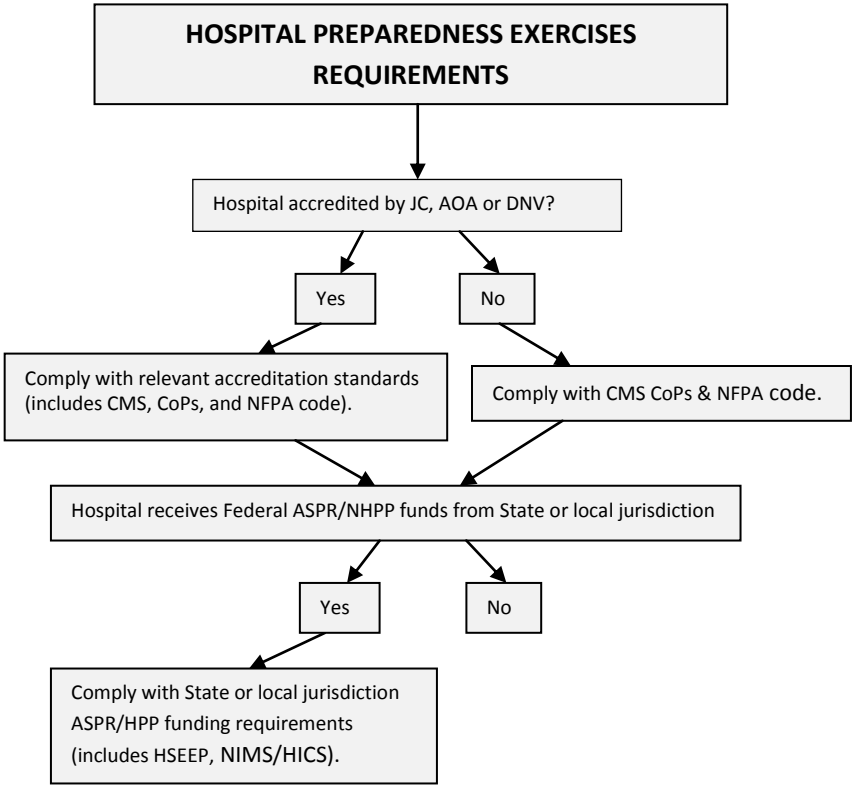
TYPE OF EXERCISE	EXERCISE SCALE	DEFINITION & PURPOSE
Drill[1]	Small-Medium	Small scale way of testing a specific function of an organization (e.g., fire evacuation drill) and used to practice or develop skills
Functional	Medium	Targets broader capabilities than drills; used to determine whether the hospital can effectively perform a function related to exercise plans, policies, or procedures
Full-Scale Exercise[2]	Medium-Large	Most elaborate exercise form; requires extensive resources; often involves multiple entities besides hospitals (e.g., EMS, police, and local health departments); and includes coordination between these entities to respond to an incident

[1] In some circumstances, the term "drills" may be used interchangeably with "exercises."

[2] Sometimes hospitals participate in full-scale exercises that are developed and coordinated by other entities.

HOSPITAL PREPAREDNESS EXERCISE ROADMAP

This schematic illustrates the order in which hospital preparedness planners typically address hospital preparedness exercise requirements.



KEY ACRONYMS

ASPR: Assistant Secretary for Preparedness and Response
AOA: American Osteopathic Association
CMS CoPs: Centers for Medicare & Medicaid Services, Conditions of Participation
DNV: Det Norske Veritas, Inc.
HICS: Hospital Incident Command System
JC: The Joint Commission (formerly Joint Commission for the Accreditation of Healthcare Organizations, JCAHO)
NHPP: National Hospital Preparedness Program (NHPP)
NIMS: National Incident Management System
NFPA: National Fire Protection Association

SUMMARY

- Hospital preparedness exercises are an integral part of an emergency management program.
- Discussion-based exercises focus on strategies outlined in emergency plans and policies. One example is a tabletop exercise.
- Operations-based exercises involve the activation of the emergency operations plan (or parts thereof) and test capabilities, procedures, and functions. One example is a full-scale exercise.

Chapter 2. Accreditation Requirements

This section provides an overview of **hospital preparedness exercise requirements** in the following sections:

- ➔ Overview: Accreditation Requirements
- ➔ The Joint Commission
- ➔ American Osteopathic Association (AOA)
- ➔ Det Norske Veritas (DNV) Healthcare, Inc.
- ➔ Other Accreditation Organizations
- ➔ Centers for Medicare & Medicaid Services (CMS) (*as related to accreditation*)
- ➔ National Fire Protection Association (NFPA) (*related to CMS*)
- ➔ Useful Resources and Tools

OVERVIEW: ACCREDITATION REQUIREMENTS

Accreditation Organizations serve as independent authorities for evaluating a hospital's patient care delivery. This evaluation is based on a set of **standards** developed by the accrediting organization.

If a hospital is accredited,[3,4] in most cases the hospital preparedness coordinator will begin planning an exercise by examining accreditation standards of the respective accreditation organizations. This is because the preparedness exercise standards of accreditation organizations generally have more specific requirements compared to those of other exercise-related entities. Furthermore, meeting accreditation requirements typically allows hospitals to achieve "deemed" status by the Centers for Medicare & Medicaid Services (CMS), which is a requirement for Federal hospital reimbursement. (See page 25 for more detail.)

[3] For this chapter, planners should focus only on the organization(s) by which their hospital(s) are accredited. Some hospitals may be accredited by more than one organization.

[4] Not all hospitals are accredited and accreditation is voluntary. Non-accredited hospitals can begin in Chapter 3. **Federal and State/Local Jurisdiction Requirements**. However, it may be informative for planners working at non-accredited hospitals to review accreditation standards for emergency preparedness.

JOINT COMMISSION

The Joint Commission is one organization that accredits health care organizations in the United States. According to the Joint Commission, receiving accreditation from the organization helps to assure quality care and safety for health care recipients.

The Joint Commission has a specific chapter on **Emergency Management** in its accreditation manual that covers standards related to managing consequences of emergencies (2009).[5] The standards include requirements for developing, maintaining, and implementing a comprehensive Emergency Operations Plan that covers the following critical areas in emergency management:

1. Communication
2. Resources and Assets
3. Safety and Security
4. Staff Responsibilities
5. Utilities Management
6. Patient and Clinical Support Activities
7. Regular Testing and Evaluation of the Plan

Emergency Management Standards That Contain Exercise Requirements

The Emergency Management Standards related to exercise requirements are found specifically in **Emergency Management Standard EM.03.01.03** and require that a hospital undertake exercises as a means of evaluating a its Emergency Operation Plan.

[5] Joint Commission standards are continuously updated. It is important to use the most recent guidance.

AMERICAN OSTEOPATHIC ASSOCIATION

The American Osteopathic Association (AOA) provides hospital accreditation through its **Healthcare Facilities Accreditation Program (HFAP)**.[6] The HFAP initially began as a program to ensure that osteopathic medical students were educated in facilities attuned to their training. However, it is now recognized by the Federal Government, State governments, insurance carriers, and managed care organizations as a comprehensive hospital accreditation program.

AOA's HFAP emergency preparedness-related standards are located in the **Physical Environment** chapter. AOA's HFAP emergency preparedness-related standards focus on developing "Disaster Plans," which are listed under the sub-categories "Weapons of Mass Destruction Plans" and "Disaster Response Plans." HFAP also uses the term **"Disaster Drills"** instead of exercises.

Disaster Drills Standards that Contain Exercise Requirements

The **Disaster Drills Standards** that contain exercise requirements are found specifically in **Standard 11.07.03** and **11.07.09**.[7]

DET NORSKE VERITAS HEALTHCARE INC.

Det Norske Veritas (DNV) Healthcare Inc. provides hospital accreditation through its **National Integrated Accreditation for Healthcare Organizations (NIAHO) Accreditation Program**.[8] DNV uses the International Organization for Standards (ISO) 9001 to guide its accreditation process, which, according to DNV, aims at identifying best practices and translating them into standard operating procedures.

The emergency preparedness-related standards are located in the **Physical Environment** chapter. All the emergency preparedness standards for DNV's accreditation program center on having a functional emergency management program. This involves developing and maintaining an emergency

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[6] HFAP standards are continuously updated. It is important to use the most recent guidance.

[7] Reviewing the entire Physical Environment chapter is essential because many of AOA's other emergency preparedness standards are related to the exercise-specific standards.

[8] NIAHO standards are continuously updated. It is important to use the most recent guidance.

management system, conducting exercises to evaluate the system, and improving the system.

Emergency Management System Standards that Contain Exercise Requirements

The **Emergency Management System Standards** related to exercise requirements are found specifically in **SR.4**[9] and are further clarified in DNV's **Interpretative Guidelines** and **Surveyor Guidance**.

OTHER ORGANIZATIONS

Hospitals may also follow standards of other organizations, depending on the services provided. Some examples of these organizations are:

- **American College of Surgeons** for verified trauma centers
- **American Burn Association** for verified burn centers
- **Commission for Accreditation of Rehabilitation Facilities** for rehabilitation, behavioral health, and other services

These organizations typically have additional requirements for emergency management and exercises, and it may be useful to refer to their standards in developing an exercise plan.

RELATIONSHIP OF CMS TO HOSPITAL ACCREDITATION: "DEEMED STATUS"

In order for hospitals to participate in the U.S. Federal Government's Medicare and Medicaid programs, the **Centers for Medicare & Medicaid Services (CMS)** has established regulations known as **Conditions of Participation (CoPs)** that may be found in **42 CFR 482**. (See page 25 for more information on CMS.)

Three accreditation organizations--the Joint Commission, AOA, and DNV have received CMS "deemed status." This means that CMS granted these organizations authority to deem their accredited hospitals to meet all Medicare requirements for hospitals because their standards either meet or exceed CMS requirements. Such hospitals also do not have to be subjected to the CMS routine survey and certification (CMS, 2009). Because of this, accredited hospitals will most likely not refer directly to CMS CoPs.

[9] Reviewing the entire Physical Environment chapter is essential because many of the other emergency preparedness standards tie into the exercise-specific standards.

Hospitals that are not accredited by any of these three accreditation organizations, but receive CMS reimbursement are subject to CMS' routine survey and certification process and do need to make sure they are compliant with the CMS CoPs.

NFPA RELATED TO CMS

The **National Fire Protection Association (NFPA)** provides standards and codes on fire safety-related issues for hospitals in the **NFPA 99 (Standard for Health Care Facilities)**, **NFPA 101 (Life Safety Code)**, and **NFPA 1600 (Standard on Disaster/Emergency Management and Business Continuity Programs)**. NFPA codes and standards are incorporated by reference into CMS' CoPs.

CMS and NFPA RELATIONSHIP TO ACCREDITATION STANDARDS

All three accreditation organizations with deemed status (Joint Commission, AOA, and DNV) require compliance with NFPA standards and codes because they are incorporated into the CMS CoPs.

SUMMARY

- Hospital accreditation organizations such as the Joint Commission, AOA, or DNV have specific requirements related to hospital preparedness exercises.
- If your hospital is accredited, it is important to consult the most recent standards from the relevant accreditation organizations in planning preparedness exercises.
- Because the Joint Commission, AOA, and DNV may confer “deemed status” according to CMS, hospitals accredited by these organizations are considered to be compliant with CMS Conditions of Participation for the Medicare and Medicaid programs.
- Hospitals that are accredited by organizations with “deemed status” are also compliant with NFPA standards that relate to hospitals because those standards are incorporated into the CMS CoPs.
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USEFUL RESOURCES AND TOOLS

Below is a list of useful resources and tools for meeting accreditation requirements. Consult these Web sites for the most recent standards and guidance. (**$** = Available for a fee; check with your hospital for existing subscriptions.)

Joint Commission

- **The Joint Commission: Comprehensive Accreditation Manual**
  These are the standards and requirements The Joint Commission uses for accreditation. These include the most recent standards related to hospital preparedness exercises.
  http://www.jointcommission.org/Standards/Manuals/ **($)**
- **2009 Comprehensive Accreditation Manual for Critical Access Hospitals**
  These are the standards and requirements The Joint Commission uses for critical access hospitals.
  http://www.jcrinc.com/Accreditation-Manuals/2009-CAMCAH/1343/ **($)**
- **Survey Activity Guide for Health Care Organizations**
  This is a guide provided by The Joint Commission to help hospitals prepare for unannounced surveys of compliance with Joint Commission standards. See "Environment of Care and Emergency Management Session" section for questions that may be asked regarding exercises.
  http://www.jointcommission.org/NR/rdonlyres/481CE5EA-D02C-46C3-AA5F-DF328FE13174/0/2009_SAG.pdf

AOA

- **Healthcare Facilities Accreditation Program**
  These are the standards and requirements that AOA uses for accreditation for healthcare facilities, ambulatory surgical centers, critical access hospitals, mental health centers, clinical laboratories and primary stroke centers. These include the most recent standards related to hospital preparedness exercises.
  http://www.hfap.org/pdf/acc_hforderfm.pdf (**$**)
  http://www.hfap.org/manualupdates.aspx (Document updates)

DNV Healthcare, Inc.

- **National Integrated Accreditation for Healthcare Organizations Accreditation Program**
  These are the standards and requirements DNV uses for accreditation. These include the most recent standards related to hospital preparedness exercises.
  http://www.dnv.com/industry/healthcare/key_niaho_materials.asp
  (*Register and download DNV Accreditation Standards*)

National Fire Protection Association (NFPA)

- **NFPA 99: Standard for Health Care Facilities**
  These are the NFPA standards that relate to protection from fire, explosions, and electrical hazards in health care facilities. Registration and/or membership in the NFPA may be required to view the standards.
  http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=99
- **NFPA 1600: Standard on Disaster/Emergency Management and Business Continuity Programs**
  These are the standards NFPA uses for disaster and emergency management.
  http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=1600

Chapter 3. Federal and State/Local Jurisdiction Requirements

This chapter provides an overview of **Federal** and **State/local jurisdiction** hospital preparedness exercise requirements in the following sections:

- ➔ Overview: Federal and State/Local Jurisdiction Requirements
- ➔ Centers for Medicare & Medicaid Services (CMS)
- ➔ National Hospital Preparedness Program (NHPP)
- ➔ Homeland Security Exercise and Evaluation Program (HSEEP)
- ➔ National Incident Management System (NIMS) and Hospital Incident Command System (HICS)
- ➔ Occupational Safety & Health Administration (OSHA)
- ➔ Centers for Disease Control and Prevention (CDC)
- ➔ Useful Resources and Tools

OVERVIEW: FEDERAL and STATE/LOCAL JURISDICTION REQUIREMENTS

Federal agencies serve as regulators and funding sources to ensure the well-being of both providers and recipients of health care. Regulations help maintain a safe environment of care at hospitals, ranging from routine operations to responding and recovering from an event.

The Federal Government has a number of programs, systems, and funding mechanisms to assist hospitals in developing the capability to function during an emergency. These are outlined in this chapter. However, individual States may have additional requirements for preparedness exercises, and it may be necessary to refer to your State's emergency management office for information on specific requirements and deliverables.

FEDERAL FUNDING STREAM

Federal funds are normally distributed to States or local jurisdictions, which distribute the funding to the hospitals.

Figure 1. This figure illustrates the flow of Federal funds for hospital preparedness activities. The Federal Government provides grants to States and/or local jurisdictions and these in turn dispense funds to hospitals.

CENTERS FOR MEDICARE & MEDICAID SERVICES (CMS)

CMS is responsible for administration of the Medicare and Medicaid programs, which provide a substantial proportion of reimbursements for patient care services to most U.S. hospitals. As a requirement for receiving CMS reimbursements, hospitals must be compliant with certain regulations known as the **Conditions of Participation (CoPs)**. These regulations are the "minimum health and safety standards for improving the quality of care and protecting the health and safety of recipients" (CMS, 2009).

Non-Accredited Hospitals

If a hospital is not accredited[10] by the Joint Commission, AOA, or DNV Healthcare, Inc., it must comply directly with CMS' CoPs in order to receive Medicare and Medicaid reimbursement. Non-accredited hospitals can achieve compliance with CoPs through surveys conducted by a State agency (e.g., a Department of Health) or a CMS Regional Office.

CMS and Emergency Preparedness Exercises

Currently, there are no specific requirements related to hospital preparedness exercises in the CoPs.[11] The emergency preparedness requirements for hospitals in the CoPs include:[12]

- Assuring medical staff has written policies and procedures for appraisal of emergencies and needs anticipated by the facility
- Developing and implementing emergency plans to ensure the safety and well-being of staff and patients during emergency situations
- Meeting applicable standards of the National Fire Protection Association (NFPA), Life Safety Code (2000 edition).

Hospitals may comply with these requirements through conducting exercises. CMS recommends that hospitals conduct exercises semiannually that test elements of their emergency plans, as well as interrelated elements, and the entire plan. CMS also recommends that the hospital takes corrective actions on any deficiencies identified from the exercise.[13]

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[10] Accreditation is voluntary.

[11] It is important to consult the most recent CoPs, as future versions may include requirements related to hospital preparedness exercises.

[12] CFR 482.55(b)(2)

[13] CMS – Draft Emergency Preparedness Guide, 2008.

NATIONAL HOSPITAL PREPAREDNESS PROGRAM (NHPP)

NHPP is administered by the U.S. Department of Health and Human Services' Office of the **Assistant Secretary for Preparedness and Response (ASPR). NHPP** is the main source of Federal funding and guidance specifically related to hospital preparedness. It was created to enhance the capability of hospitals to prevent, respond to, and recover from incidents.

NHPP Funding Opportunity Announcement

Annually, NHPP releases a **Funding Opportunity Announcement** to State and local jurisdictions with instructions on how to apply for funds for the upcoming fiscal year. This funding opportunity requires States and local jurisdictions to demonstrate: 1) how certain overarching requirements and current sub-capabilities will be "maintained and refined" and 2) activities that will be conducted and how funding will be applied to meet the overarching requirements and ASPR expectations.

The NHPP Overarching Requirements and Level 1 and Level 2 Sub-Capabilities from the Fiscal Year 2009 FOA are listed on pages 27-28.

NHPP Funding Distribution to Hospitals

NHPP[14] funding is awarded to a State or local jurisdiction, which is then responsible for distributing this funding to hospitals. Hospitals, in turn, are awarded NHPP funds by their respective State or local jurisdiction after demonstrating the completion of a set of deliverables. The hospitals' State or local jurisdiction develops and issues these deliverables based on the NHPP-required funding capabilities and overarching requirements from the most recent FOA. Hospitals may enter into a contract with the State or local jurisdiction agreeing to achieve those deliverables.

[14] States or local jurisdictions may refer to their HPP funding program under a different name (e.g. New York City's program is called HEPP, the Healthcare Emergency Preparedness Program).

NHPP Overarching Requirements (FY 2009)[15]

Overarching requirements[16] need to be incorporated into the development and maintenance of all sub-capabilities. The following four overarching requirements for NHPP awardees (that is, the State or local jurisdictions) must be incorporated in the development and maintenance of all sub-capabilities:

1. **National Incident Management System (NIMS):** ASPR expects awardees will evaluate and report which of the NHPP participating hospitals have adopted all implementation objectives of NIMS.
2. **Education and Preparedness Training:** ASPR expects awardees will insure the development and use of education and preparedness training programs for all hospital personnel; ASPR also expects awardees will work with hospitals to maximize the number of hospital staff participating in preparedness drills and exercises.
3. **Exercises, Evaluation, and Corrective Actions:** ASPR expects all exercise programs either wholly or partially funded by NHPP funds will be HSEEP-compliant. It also expects each exercise to test the operational capabilities of the three critical components of medical surge: (1) Interoperable Communications and ESAR-VHP; (2) a tabletop component to test memoranda of understanding; and (3) fatality management, medical facility evacuation, and tracking of bed availability.
4. **Needs of At-Risk Populations:** ASPR expects awardees will work with hospitals to address at-risk populations and ensure their medical needs will be met during a disaster or public health emergency.

NHPP Level 1 Sub-Capabilities (FY 2009)

These capabilities are recognized as critical for the sustainability of State preparedness efforts. There were five required funding capabilities for NHPP awardees (States or local jurisdictions):

1. **Interoperable Communications System:** ASPR expectations include having communication devices and systems that permit interoperable communications both within hospitals and with community partners.

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[15] The FY 2010 HPP Funding Opportunity Agreement was unavailable at the time of publication, but should be consulted for future planning.

[16] As mentioned earlier, the NHPP requirements and capabilities listed in this document are for State and Local Jurisdiction applicants, and are not direct requirements for hospitals. However, States and local jurisdictions use these requirements and capabilities to develop the deliverable requirements for hospitals to receive NHPP funds, so hospital emergency managers may want to familiarize themselves with them.

2. **Tracking System:** ASPR expectations include having an operational bed tracking system compatible with the *Hospital Available Beds for Emergencies and Disasters* (*HAvBED)* definitions and standards.
3. **Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP):** The goal of the ESAR-VHP program is to create a national network of State-based registries of volunteer health professionals that can be effectively used in the event of an emergency.
4. **Fatality Management Plans:** ASPR expectations include collaborating and working with hospitals to make sure facility-level fatality management plans are incorporated in State and local jurisdiction plans.
5. **Hospital Evacuation Plans:** ASPR expectations include working with healthcare facilities, emergency medical services, emergency management officials, fire departments, and other community partners in developing and integrating evacuation plans and evaluating situations (e.g., whether an organization should conduct a shelter-in-place vs. full or partial evacuation).

NHPP Level 2 Sub-Capabilities (FY 2009)

Level 2 Sub-Capabilities are capabilities which ASPR strongly encourages each State or local jurisdiction to address to expand their preparedness efforts. There are five optional funding capabilities for NHPP awardees:

1. **Alternate Care Sites (ACS):** ASPR expectations include establishing ACS, continuous development and improvement of ACS plans and concept of operations for providing supplemental surge capacity to the healthcare system.
2. **Mobile Medical Assets:** This involves having the ability to provide care outside of an awardees' health care system by using mobile medical units (e.g., tents, trailers).
3. **Pharmaceutical Caches:** ASPR expectations include developing an operational plan related to dispensing, storing, and rotating critical antibiotic medications for hospital staff and families.
4. **Personal Protective Equipment (PPE):** ASPR expectations include ensuring sufficient types and amounts of PPE for protecting healthcare workers.
5. **Decontamination:** This involves ensuring the portable or fixed decontamination system is sufficient for handling exposed adult patients, pediatric patients, and healthcare workers.

NHPP Requirements and State or Local Jurisdiction Deliverables

States or local jurisdictions are responsible for following NHPP requirements in order to receive NHPP funds. Hospitals may need to apply for NHPP funding in some States or local jurisdictions. In other States or local jurisdictions, hospitals may be designated to receive a certain amount of NHPP funding without an application. Hospitals may be expected to meet certain requirements and/or achieve certain deliverables required by their State or local jurisdiction. An example of a deliverable would be an "interoperable communications exercise" evidenced by submitting an After Action Report**.** The State/local jurisdiction would then report back to the Federal NHPP program to demonstrate their compliance with the requirements.

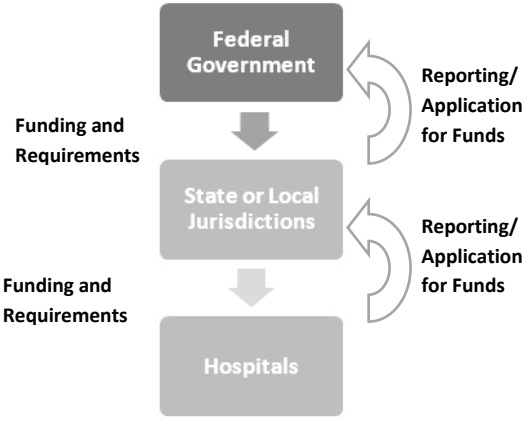


Figure 2: As previously described, Federal funding flows from the Federal government to State or local jurisdictions to hospitals. Hospitals in turn give deliverables back to the State or local jurisdictions as required, who in turn report the fulfillment of requirements to the Federal government.

HOMELAND SECURITY EXERCISE AND EVALUATION PROGRAM (HSEEP)

HSEEP was developed by the U.S. Department of Homeland Security to provide standardized policy, methodology, and terminology for exercise-related activities. The program emphasizes assessing capabilities through performance (exercises). One of the overarching requirements of NHPP is **Exercises, Evaluation, and Corrective Actions**. Under this requirement, ASPR expects all exercises funded completely or partially by NHPP funds to be built on the HSEEP framework and guidelines.

Examples of complying with HSEEP guidelines include:

• Exercise cycle growing more complex, uses a "building block approach."
• Basing design, conduct, and evaluation on capabilities
• Basing exercise scenarios on risk/vulnerability assessment and adapting scenarios to validate capabilities, tasks, and objectives found in Exercise Evaluation Guides
• Using documents that correspond to guidelines and templates in HSEEP Volumes I-III
• Exercise conduct demonstrating NIMS principles
• Drafting an After Action Report/Improvement Plan; presenting findings and recommendations to key stakeholders at After Action Conference

NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)

The **NIMS**, developed by the U.S. Department of Homeland Security's Federal Emergency Management Agency, provides a national standard for the organization of personnel, information flow, and lines of command for incident response. It enables government agencies, non-government agencies, and the private sector to work together in response to an incident. NIMS has 14 implementation objectives for health care organizations that NHPP grant awardees are expected to follow. Included in these objectives for NIMS compliance is an incident command system (ICS). Many hospitals use the **Hospital Incident Command System (HICS)** as their form of ICS.

HOSPITAL INCIDENT COMMAND SYSTEM (HICS)

The **HICS** is a form of ICS developed by the California Emergency Medical Services Authority and is tailored to hospitals. HICS is also consistent with NIMS guidelines in terms and definitions, response concepts, and procedures. For this reason, hospitals will often use HICS to meet some of the NIMS objectives. The purpose of HICS is "to assist [hospitals] with their emergency

planning and response efforts for all hazards" (HICS, 2007). Because incident command systems such as HICS are used in emergency situations, they are often activated during exercises.

OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA)

OSHA is a regulatory agency under the U.S. Department of Labor. OSHA is responsible for assuring safe and healthy working conditions for working men and women. The agency also provides guidance related to emergency preparedness and response on topics including: developing an Emergency Response Plan, communication, evacuation, lines of authority, decontamination, equipment, and security.

OSHA's **Best Practices for Hospital-Based First Receivers of Victims from Mass-Casualty Incidents** provides guidance to hospitals in creating and implementing emergency preparedness plans related to protecting hospital-based emergency department personnel who may receive contaminated victims from other locations. It also includes guidelines and procedures for handling victim decontamination and personal protective equipment (PPE) and training first receivers.

Currently, OSHA does not have specific requirements related to hospital preparedness exercises. However, hospitals may want to test compliance with OSHA regulations and guidelines by means of exercises.

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

CDC has an analogous program to the Assistant Secretary for Preparedness & Response's National Hospital Preparedness Program (NHPP), called the **Public Health Emergency Preparedness (PHEP)** cooperative agreement which provides funding to State, local, tribal, and territorial public health departments to support preparedness efforts. Since hospitals often conduct exercises with their respective public health departments, hospitals may need to comply with CDC-PHEP funding requirements.

SUMMARY

- The Federal government provides programs and funding to assist with hospital emergency management. These programs and funding are delivered to hospitals through the State/local jurisdiction.
- The Centers for Medicare & Medicaid Services (CMS) publishes *Conditions of Participation (CoPs)* with which hospitals must comply in order to receive Medicare and Medicaid reimbursement. Hospitals can be compliant with the CoPs through accreditation by organizations with "deemed status" or by demonstrating compliance to relevant State agencies or the regional CMS office.
- CMS CoPs do not have specific exercise requirements, but they do contain general preparedness requirements relevant to exercises.
- The National Hospital Preparedness Program (NHPP) provides funds to States/local jurisdictions that meet their requirements. States/local jurisdictions distribute these funds to hospitals and may in turn require hospitals to provide certain deliverables as a condition of receiving funding.
- Compliance with the National Incident Management System (NIMS) is part of the NHPP requirements. Using the Hospital Incident Command System (HICS) as part of an emergency management program assists hospitals in complying with NIMS.
  The Occupational Safety and Health Administration (OSHA) has additional guidance related to emergency preparedness, some of which can be found in the document, *Best Practices for Hospital-Based First Receivers of Victims from Mass-Casualty Incidents*.

USEFUL RESOURCES AND TOOLS

Below is a list of useful resources and tools for meeting Federal and State/local requirements.

ASPR - NHPP

- **General Information**
  http://www.hhs.gov/aspr/opeo/nhpp/

CDC - PHEP

- **General Information**
  http://www.bt.cdc.gov/cotper/coopagreement/

CMS

- **General Information**
  http://www.cms.hhs.gov/SurveyCertEmergPrep/
- **Draft Emergency Preparedness Guide for State Survey Agencies, Health Care Providers, and Partners**[17]
  This is a CMS guidebook that hospital preparedness planners can use as a reference for CMS emergency preparedness requirements and recommendations.
  http://www.hah-emergency.net/Planning%20Tools/CMS%20Emergency%20Planning%20Guide%20DRAFT.pdf
- **Emergency Preparedness Checklist: Recommended Tool for Effective Health Care Facility Planning**
  This is a CMS tool to survey emergency preparedness and has a list of recommended tasks for emergency preparedness.
  http://www.cms.hhs.gov/SurveyCertEmergPrep/downloads/S&C_EPChecklist_Provider.pdf

HSEEP

- **General Information**
  https://hseep.dhs.gov/pages/1001_HSEEP7.aspx
- **HSEEP Volumes**
  The following volumes are created by HSEEP and are meant to guide

[17] This is a draft document; a final version was not available at the time of publication.

users through the HSEEP methodology of establishing and maintaining an exercise program and developing individual exercises.
Volume I: HSEEP Overview and Exercise Program Management
https://hseep.dhs.gov/support/VolumeI.pdf
Volume II: Exercise Planning and Conduct
https://hseep.dhs.gov/support/VolumeII.pdf
Volume III: Exercise Evaluation and Improvement Planning
https://hseep.dhs.gov/support/VolumeIII.pdf
Volume IV Library: Sample Exercise Materials
This online library has sample documentation, forms, templates, and other tools to help users design an HSEEP-compliant exercise.
https://hseep.dhs.gov/hseep_vols/default1.aspx?url=home.aspx

NIMS

- **General Information**
  http://www.fema.gov/emergency/nims/
- **NIMS FAQs**
  This site provides basic information about NIMS.
  http://www.fema.gov/emergency/nims/FAQ.shtm
- **FY 2008 and 2009 NIMS Implementation Objectives For Healthcare Organizations**
  This lists the 14 implementation activities needed for NIMS compliance.
  http://www.fema.gov/good_guidance/download/10067

HICS

- **General Information**
  This site provides information on HICS, including guidebooks, forms, information on courses as well as other resources related to emergency management.
  http://www.hicscenter.org/pages/index.php
- **Hospital Incident Command System Guidebook**
  This guidebook gives a thorough overview of HICS and how it is used.
  http://www.emsa.ca.gov/HICS/files/Guidebook_Glossary.pdf

OSHA

- **General Information**
  http://www.osha.gov/SLTC/emergencypreparedness/index.html

OSHA Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances
This document contains guidelines and procedures for handling victim decontamination, personal protective equipment, and training first receivers, and is meant to ensure the safety of hospital workers during an emergency.
http://www.osha.gov/dts/osta/bestpractices/html/hospital_firstreceivers.html

PART II.
HSEEP EXERCISE METHODOLOGY

Chapter 4. Overview of HSEEP Exercise Methodology

Part II of this guidebook is an overview of HSEEP exercise methodology, consisting of five phases:

- ➔ **Foundation (Chapter 5):** Laying groundwork for an exercise
- ➔ **Design and Development (Chapter 6):** Planning and preparing for an exercise and evaluation of that exercise
- ➔ **Conduct (Chapter7)**: Execution of the exercise
- ➔ **Evaluation (Chapter 8)**: Assessing the exercise
- ➔ **Improvement Planning (Chapter 9)**: Using lessons learned from the exercise to improve the emergency management program

These phases are meant to be a cycle, with the next exercise being based on lessons learned and improvements made from previous exercises.

Before a hospital can enter the exercise cycle and begin planning for an exercise, it is necessary to have established an emergency management program. This includes components previously mentioned on pages 6-7, such as completing the Hazard Vulnerability Analysis (HVA) and training hospital employees in the Emergency Operations Plan (EOP).

NOTE: This guidebook provides the basics of HSEEP methodology but does not provide all the information for full HSEEP compliance. The HSEEP Web site at https://hseep.dhs.gov has more information as well as an online toolkit for exercises and for creating HSEEP compliant documentation of those exercises. This online toolkit is available by requesting login access through HSEEP.

Chapter 5: Foundation

This section provides an overview of the **Foundation** phase for a hospital preparedness exercise in the following sections:

- ➔ Overview: Foundation
- ➔ Developing a Support Base
- ➔ Forming an Exercise Planning Team
- ➔ Conducting Planning Conferences
- ➔ Creating a Timeline
- ➔ Checklist: Foundation
- ➔ Useful Resources and Tools

OVERVIEW: FOUNDATION

According to HSEEP, the **Foundation** phase involves laying down the groundwork for an exercise. It involves conducting the following steps:

- Developing a support base
- Forming an exercise planning team
- Creating a timeline of key milestones
- Setting up planning conferences

DEVELOPING A SUPPORT BASE

Developing a Support Base for a hospital preparedness exercise program involves having the buy-in of key hospital emergency preparedness stakeholders. This may be done by means of an emergency management committee that includes senior management personnel.

Examples of Key Stakeholders

The following are groups that may be important to include in discussions concerning hospital preparedness exercises and essential in forming a support base for your exercise program:

- Hospital Senior Management
- Hospital Facilities Management
- Key Hospital Departments (emergency department, inpatient/outpatient departments, radiology, diagnostic laboratories, and other support services)
- Local Stakeholders (e.g., Police, Fire, etc.)
- Local Emergency Management Office

Key Benefits of Having a Support Base

Having executive-level buy-in is crucial in creating and maintaining a strong exercise program. Several benefits of having executive level support are:

- Creates alignment with strategic and organizational goals
- Helps in receiving continuous or additional funding support
- Helps with increasing exercise staffing and/or staff participation
- Develops community partnerships
- Develops partnerships with other health care organizations
- Improves hospital operations

TIP: In order to receive funding and other support for exercises from key hospital executives, it may be useful to point out exercise requirements of various accreditation bodies, Federal agencies, State laws or licensures. Showing key executives the HVA may also be useful to demonstrate the potential emergencies faced by their hospitals.

FORMING AN EXERCISE PLANNING TEAM

Forming an exercise planning team involves identifying individuals to participate in the exercise planning process. These individuals may come from a subcommittee of the emergency management committee.

Key Factors to Consider When Forming an Exercise Planning Team

Factors to consider when forming a planning team are:

- Time requirements
- Duration of exercise planning
- Supervisor notification
- Exercise scale
- Financial cost of the exercise (e.g. compensation/overtime for staff, supplies)
- Roles needed for exercise
- Experience and background needed for exercise planning

Assigning Preliminary Roles

After planning team members have been identified, preliminary roles can be assigned. This helps exercise planning team leaders in preparing for the exercise planning meetings. According to HSEEP, the suggested roles for an exercise planning team and their respective duties are:

1. **Exercise Planning Team Leader:** Coordinates exercise planning process
2. **Safety Manager:** Exercise safety
3. **Operations Manager:** Exercise location, organizations involved, resources needed
4. **Planning Manager:** exercise documentation, exercise evaluation
5. **Logistics Manager:** Actors and props, volunteers, communications
6. **Administration/Finance Manager:** Compliance with regulations and standards, budgeting

Some hospitals may choose to combine or divide these roles, based on available staff, or they may choose different titles for these roles. Some exercises are also done in conjunction with the community (required by some accreditation organizations) and, if so, a representative from each of those agencies (i.e., police, fire, public health department.) should be involved in the exercise planning team.

TIP: In general, members of the exercise planning team should not also be exercise participants. For smaller organizations, this may be difficult to accomplish. If this is the case, it may be helpful to limit full knowledge of the exercise details to a handful of "trusted agents."

CREATING A TIMELINE

According to HSEEP, an exercise planning team is responsible for **creating a timeline** of meeting dates and milestones that are to be completed prior to the Initial Planning Conference (IPC). The Exercise Planning Timeline can include items such as planning meetings, deadlines for completion of tasks/documents and after action conferences (AAC).

The timeline may be continuously modified and updated depending on the progression of the exercise.

CONDUCTING EXERCISE PLANNING CONFERENCES

After an exercise planning team has been formed, the next step is to **conduct exercise planning conferences.** Several conferences must be conducted according to HSEEP methodology. According to HSEEP, it is important for participants at planning conferences to refer to previous after action reports/improvement plans to effectively move through the exercise cycle.

Types of Exercise Planning Conferences

Name	Attendees	Purpose
Concept and Objectives (C&O) Meeting	Senior Officials, Lead Exercise Planner	Identify exercise scope, type, objectives and purpose. Can be combined with the **Initial Planning Conference (IPC)**.
Initial Planning Conference (IPC)	Exercise Planning Team	Receive feedback from exercise planning team on scope, design, objectives, scenario, location, schedule, duration. Develop exercise documentation. Assign tasks to planning team members.
Mid-Term Planning Conference (MPC)	Exercise Planning Team	Generally only conducted for operations-based exercises/full-scale exercises. Opportunity for additional problem-solving related to logistical and organizational issues encountered in planning stages.
Master Scenario Events List (MSEL) Conference	Exercise Planning Team	Generally only conducted for operations-based exercises/full-scale exercises. Create the MSEL, a chronological list that supplements the exercise scenario with event synopses; expected participant responses; capabilities, tasks, and objectives; and responsible personnel.
Final Planning Conference (FPC)	Exercise Planning Team	Review and finalize exercise processes and procedures, final drafts of exercise material, and logistical requirements. Check all requirements met and issues resolved.

CHECKLIST: FOUNDATION

The following are some of the essential steps in the **Foundation** phase:

Developing a Support Base

- ☐ Identify key stakeholders
- ☐ Involve key stakeholders in exercise planning (form an emergency management committee)

Forming an Exercise Planning Team

- ☐ Identify team members
- ☐ Assign roles

Creating a Timeline

- ☐ Determine necessary meetings and milestones
- ☐ Set dates and deadlines of completion

Conducting Exercise Planning Conferences

- *Discussion-based Exercises*
  - ☐ Concept/Objectives Meeting
  - ☐ Initial Planning Conference
  - ☐ Final Planning Conference
- *Operations-based Exercises*
  - ☐ Concept/Objectives Meeting
  - ☐ Initial Planning Conference
  - ☐ Midterm Planning Conference
  - ☐ Master Scenario Events List Conference
  - ☐ Final Planning Conference

USEFUL RESOURCES AND TOOLS

Below is a list of useful resources and tools related to the **Foundation** phase of exercise planning.

Forming an Exercise Planning Team

- **Organizational Chart** (HSEEP Vol. IV*)
  This sample organization chart shows the hierarchy of key members in the exercise planning team.

Creating a Timeline

- **Discussion-based Exercises**
  - ***Project Management Timeline*** (HSEEP Vol. IV, see under Foundation > Exercise Planning Team)
    This template lists key tasks to be completed to create, conduct, and evaluate an exercise, and has space to fill in a time frame or due date for each task.
- **Operations-Based Exercises**

- ***Planning Timeline*** (HSEEP Vol. IV, see under Foundation > Master Task List)
  This is an example of an exercise planning timeline for an operations-based exercise that lists key tasks and approximate due dates.

Conducting Exercise Planning Conferences

- **Discussion-based Exercises**
  - ***Initial Planning Conference*** (Briefing, Agenda, Minutes) (HSEEP Vol. IV, see under Foundation > Planning Conference Materials)
    These materials, created to help the exercise planning team hold an initial planning conference, consist of a briefing presentation, an agenda of topics to be covered in the meeting, and a template for taking minutes during the meeting.
  - ***Final Planning Conference*** (Briefing, Agenda, Minutes) (HSEEP Vol. IV, see under Foundation > Planning Conference Materials)
    These materials help the exercise planning team hold a final planning conference and consist of a briefing presentation, an agenda of topics to be covered in the meeting, and a template for taking minutes during the meeting.

- **Operations-based Exercises**
  - ***Initial Planning Conference*** (Briefing, Agenda, Minutes) (HSEEP Vol. IV, see under Foundation > Planning Conference Materials)
    These materials, created to help the exercise planning team hold an initial planning conference, consist of a briefing presentation, an agenda of topics to be covered in the meeting, and a template for taking minutes during the meeting.
  - ***Mid-Term Planning Conference*** *(*Briefing, Agenda, Minutes) (HSEEP Vol. IV, see under Foundation > Planning Conference Materials)
    These materials, which assist the exercise planning team in holding a mid-term planning conference, consist of a briefing presentation, an agenda of topics to be covered in the meeting, and a template for taking minutes during the meeting.
  - ***MSEL Package*** (HSEEP Vol. IV, see under Design and Development > Documentation)
    This is a template for developing a Master Scenario Events List for an exercise, which includes a chronological listing of events in exercise play as well as injects.
  - ***Final Planning Conference*** (Briefing, Agenda, Minutes) (HSEEP Vol. IV, see under Foundation > Planning Conference Materials)
    These materials help the exercise planning team hold a final planning conference and consist of a briefing presentation, an agenda, and a template for taking minutes during the meeting.

***NOTE:** These resources and tools can be found as part of the HSEEP Volume IV Library: Sample Exercise Materials under Exercise Planning.
https://hseep.dhs.gov/hseep_vols/default1.aspx?url=home.aspx

Chapter 6. Design and Development

This section provides an overview of the **Design and Development** phase of a hospital preparedness exercise in the following sections:

- ➔ Overview: Design and Development
- ➔ Defining Capabilities, Tasks, and Objectives
- ➔ Scenario
- ➔ Exercise Documentation
- ➔ Exercise Logistics
- ➔ Evaluation Planning
- ➔ Checklist: Design and Development
- ➔ Useful Resources and Tools

OVERVIEW: DESIGN and DEVELOPMENT

According to HSEEP, **designing and developing an exercise** involves:

- Defining objectives
- Developing scenarios
- Deciding on the logistics of an exercise
- Documenting activities
- Planning how the exercise will be conducted
- Deciding on the evaluation and improvement planning program.

This phase occurs along with the planning conferences mentioned in the **Foundation** phase (see Chapter 5).

DEFINING CAPABILTIES, TASKS, AND OBJECTIVES

Capabilities are competencies in which a health care organization needs to be proficient to perform critical tasks in an emergency situation. Capabilities may be derived from the **Target Capabilities List (TCL)**. The TCL is a list that describes the capabilities as deemed by the Federal Emergency Management Agency (FEMA) necessary for any organization to prevent, protect from, respond to, and recover from an emergency. The list includes items such as handling a "medical surge."

Capabilities have specific related **tasks**, which are various activities that need to be performed to achieve a given outcome. Tasks may be derived from the **Universal Task List (UTL)**, a list also created by FEMA that describes critical tasks related to the capabilities listed in the TCL. The UTL includes items such as, "Activate the healthcare incident command system." Tasks may also come from the hospital's Emergency Operations Plan, which should be reviewed when designing an exercise.

Objectives are the goals of an exercise and are used as performance measures. Objectives should be **S**imple, **M**easurable, **A**chievable, **R**ealistic, and **T**ask-oriented (**SMART**); and should be formulated using the capabilities and tasks identified as necessary for emergency operations. It is also important to examine documents, such as Improvement Plans, from prior exercises to help shape the objectives of the current exercise.

TIP: Reviewing your hospital's most recent Hazard Vulnerability Analysis (HVA) may be useful during this phase. A hospital may choose to identify their capabilities, tasks, and objectives by evaluating the top hazards found in the HVA. Although this is not part of HSEEP methodology, most hospitals use the HVA as a starting point for exercise design and development because it is a requirement of accreditation organizations, such as the Joint Commission. Using the HVA is important because exercises should test responses to hazards that a hospital is likely to encounter. The HVA allows the exercise planning team to develop exercises that test certain capabilities based on hazards their hospital has a high probability of encountering.

SCENARIO

According to HSEEP, a **scenario** is a description of a series of actions and events taking place during an exercise. A scenario has three basic elements:

1. **Context of the exercise or a story describing the situation**
   - This may include *injects* – information provided by controllers that prompts players to implement plans that the exercise is meant to test.
2. **Conditions in which the exercise players can demonstrate their fitness in meeting certain capabilities, tasks, and objectives**
3. **Technical aspects to portray scenario conditions and events**

Key Additional Factors to Consider When Developing a Scenario

According to HSEEP, when developing a scenario, the following factors also need to be considered:

- **Threat/Hazard:** Exercises may focus on a specific type of threat/hazard. Possible threats/hazards should come from the hospital's **Hazard Vulnerability Analysis**.
- **Venue:** If the exercise is taking place at a hospital, the area needs to be properly sectioned off to prevent alarming those passing by and to prevent interruption of normal patient care. Many hospital operations-based exercises take place in the emergency department and surrounding area. Discussion-based exercises often take place in the hospital's Emergency Operations Center or conference room.
- **Weather:** If there is inclement weather and the exercise is taking place outdoors, plans should include whether the exercise should proceed as planned or be rescheduled.
- **Date and Time:** Healthcare organizations are largely shift-based, so careful scheduling of the date and time of the exercise is critical. It is important to make sure exercises cover a variety of dates and times to allow all staff to be involved.

TIP: It is useful to have some exercises that extend beyond the emergency department to other key areas of the hospital to test patient flow and tracking, detect potential bottlenecks (e.g., radiology during mass casualty incidents), and examine the overall response of key support departments.

EXERCISE DOCUMENTATION

Exercise Documentation includes documents that will be used or reviewed by exercise participants, exercise evaluators, exercise controllers, and exercise observers. These documents are developed by the exercise planning team.

Documentation to Be Reviewed by Exercise Planning Team

Name	Purpose
Hazard Vulnerability Analysis (HVA)*	Identifies and analyzes potential hazards of a system a hospital is likely to encounter. Useful for identifying exercise objectives and an exercise scenario. Conducted prior to exercise planning in connection with the development of the EOP.
After Action Reports/ Improvement Plans	Show existing strengths, weaknesses, and recent improvements in the system that may need to be addressed in the current exercise and in future exercises.
Emergency Operations Plan	Outlines the hospital's plans and protocols for emergency events. Tasks and scenarios can be developed to test these plans
Accreditation Standards	Important if one of the exercise goals is to meet accreditation requirements.
Federal/State/ Local Jurisdiction Requirements and Deliverables	Important if one of the exercise goals is to meet Federal funding requirements or State/local jurisdiction requirements.

***NOTE:** The HVA is not a form of HSEEP documentation.

Documentation to be Created/Modified

Discussion-Based Exercises

Name	User	Purpose
Exercise Evaluation Guides (EEGs)	Evaluators, Controllers	Used to help evaluate an exercise. Identifies tasks linked to certain capabilities. Can help in creating exercise objectives and a scenario.
Situation Manuals (SitMans)	Exercise Participants, Evaluators, Controllers	Ideally the primary source of documentation for a discussion based-exercise. Textual exercise playbook that participants can follow while watching the multimedia presentation.
Multimedia Presentation	Exercise Participants	Used to supplement the SitMan. Adds a degree of realism to a discussion-based exercise by using visual and audio elements of a threat/hazard.

Operations-Based Exercises

Name	User	Purpose
Exercise Evaluation Guides (EEGs)	Evaluators, Controllers	Used to help evaluate an exercise. Identifies tasks linked to certain capabilities, can help in creating exercise objectives and a scenario
Exercise Plan (ExPlan)	Exercise Participants	Similar to a SitMan, but does not include scenario information. Includes summary of objectives, exercise scope, roles and responsibilities for exercise participants, duties for an exercise planning team, safety issues, rules of conduct, security, communication, schedule, and maps.
Controller and Evaluator (C/E) Handbook	Controllers and Evaluators	Distributed prior to an exercise to give ample time for review of material. Explains roles and responsibilities during the exercise. Contains greater detail about the scenario than ExPlan.
Controller Packets	Controllers	Distributed prior to the start of an exercise to controllers. Packets contain controller information respective to their duties (e.g., MSEL).
Evaluator Packets	Evaluators	Distributed immediately prior to the start of an exercise to evaluators. Packets contain evaluator information respective to their duties (e.g., relevant EEGs).
Media/Public Information Documentation	Media, Community	Can be in the form of a press release or public announcement. Can be distributed prior to an exercise and/or post-exercise.

EXERCISE LOGISTICS

Exercise Logistics involve resources, tasks, and personnel needed to implement the exercise. Logistics differ for discussion-based exercises and operations-based exercises.

Discussion-Based Exercises

For **Discussion-Based Exercises,** key items that need to be considered are:

- ☐ **Participants:** Identification of exercise participants, notification about the exercise, and essential exercise information.
- ☐ **Evaluators:** Need to be recruited and trained prior to the exercise.
- ☐ **Facility:** The hospital or another location.
- ☐ **Room:** Often take place at an emergency operations center or conference room.
- ☐ **Room Layout:** What groups/staff at each of the tables represent and seating assignments.
- ☐ **Multimedia Capabilities**: Whether projectors, screens, computers, whiteboards, etc., are needed.

Other items that need to be considered include:

- ☐ **Accommodating People With Disabilities**
- ☐ **Providing Food**
- ☐ **Restrooms**
- ☐ **Registration Procedures**
- ☐ **Name Tags and Table Tents**

Operations-Based Exercises

For **Operations-Based Exercises,** the same factors need to be considered as for Discussion-Based Exercises, except with greater detail. Key items that need to be considered are:

- ☐ **Location(s):** The physical location of the exercise, which varies depending on the objective, scope, and magnitude of exercise.
- ☐ **Assembly Area:** The staging location for deployable resources prior to an exercise.
- ☐ **Response Route (if applicable):** The path where emergency units travel during the exercise (e.g., when there is more than one exercise location).
- ☐ **Operations Area:** The location for exercise play/tactical operations.
- ☐ **Observer/Media Area:** The location for observers and media to safely watch the exercise and not interfere with exercise play.
- ☐ **Simulation Cell (SimCell):** The area for simulating agencies not participating in an exercise, often represented as a call center that participants contact in lieu of contacting the actual agencies.
- ☐ **Multimedia Capabilities:** Needed depending on the exercise.
- ☐ **Videotaping:** Used for documenting the exercise and identifying areas of improvement. May be challenging if real patients are present, due to Health Insurance Portability and Accountability Act regulations.
- ☐ **Communications:** How information sharing will take place during an exercise. Best to use a form that would most likely be used during an incident, e.g., radio or telephone. All communications should start and end with, "This is an exercise."
- ☐ **Safety:** Ensuring that the safety of exercise participants is maintained and that actual patient care is not interrupted.
- ☐ **Actors:** If actors are being used, the following items should be considered: waivers of liability, actor instructions, symptomology cards, moulage (e.g., cosmetics, fake blood).

Other items that need to be considered (if applicable) include:

- ☐ **Accommodating People With Disabilities**
- ☐ **Providing Food and Refreshments**
- ☐ **Supplies (e.g., HazMat Suits, Personal Protective Equipment)**
- ☐ **Badges and Identification**
- ☐ **Registration Procedures**
- ☐ **Props and Devices**
- ☐ **Site Security (Including Weapons and Safety Policy)**
- ☐ **Restrooms**

EVALUATION PLANNING

The **Design and Development** phase takes place simultaneously with the **Evaluation** (See Chapter 8) phase. The capabilities, tasks, and objectives of an exercise need to be clearly defined because they are the basis of what will be evaluated. Evaluation documentation, such as Exercise Evaluation Guides (EEGs), along with the evaluation procedures and tasks of the evaluators, are designed prior to conducting the exercises. Planning the placement of the evaluators in the operations area is also an important planning consideration. Evaluators should be located where they can directly observe exercise activities, but they should not interfere with operations. Evaluators should also be able to move freely so that they may follow the action of key players as they complete tasks.

Evaluation planning is important early in the exercise planning process because the means of making a critical assessment of the exercise are necessary to determine strengths, weaknesses, and areas of improvement to build a stronger emergency management program.

CHECKLIST: DESIGN and DEVELOPMENT

The following are some of the essential steps in the **Design and Development** phase:

Defining Capabilities, Tasks, and Objectives

- ☐ Determine necessary capabilities and tasks
- ☐ Review the most recent hazard vulnerability analysis (HVA), Emergency Operations Plan (EOP) and previous After Action Reports/Improvement Plans
- ☐ Review necessary requirements/standards
- ☐ Define exercise objectives based on the HVA and capabilities and tasks to be tested

Scenario

- ☐ Develop narrative context of the scenario
- ☐ Develop conditions to test plans and objectives
- ☐ Determine technical aspects of portraying the scenario

Documentation

- *Discussion-based Exercises*
  - ☐ Exercise Evaluation Guides (EEGs)
  - ☐ Situation Manual (SitMan)
  - ☐ Multimedia Presentation
  - ☐ Media/Public Announcement
- *Operations-based Exercises*
  - ☐ Exercise Evaluation Guides (EEGs)
  - ☐ Exercise Plan (ExPlan)
  - ☐ Controller/Evaluator (C&E) Handbook and Packets
  - ☐ Media/Public Announcement

Logistics

- *Discussion-based Exercises*
  - ☐ Participants: facilitators, controllers, evaluators
  - ☐ Setting: location, room setup, restrooms
  - ☐ Supplies: multimedia technology, table tents, name tags, food
- *Operations-based Exercises*
  - ☐ Participants: actors, controllers, evaluators
  - ☐ Setting: assigning areas for assembly, operations, observation, SimCell and response routes
  - ☐ Supplies: multimedia technology, communications technology, food, badges
  - ☐ Safety: security, weapons and safety policy

Evaluation Planning

- ☐ Develop evaluation documentation (Exercise Evaluation Guides, Evaluation forms, etc.)
- ☐ Recruit and train evaluators.
- ☐ Plan the placement of evaluators at the exercise site.

USEFUL RESOURCES and TOOLS

Below is a list of useful resources and tools for exercise design and development.

General

- **New York City Department of Health and Mental Hygiene**
  This Web site includes many drills and toolkits for discussion-based and operations-based exercises.
  http://www.nyc.gov/html/doh/html/bhpp/bhpp-train.shtml
- **World Health Organization Hospital and Health Facility Emergency Exercises: Guidance Materials:**
  This document is a useful source of general information for exercise planning and includes several checklists for many different types of exercises, although it is not designed to be HSEEP compliant.
  http://www.wpro.who.int/NR/rdonlyres/C575E87F-F0C3-4462-ACB7-FF7B6D5A48B4/0/Guidancematerials_HospitalsandHealthfacilityemergencyexercises.pdf (Draft)

Defining Capabilities, Tasks, and Objectives

- **Target Capabilities List (TCL)**
  This is a list developed by FEMA of capabilities necessary for emergency management. These capabilities can be tested during exercises.
  http://www.fema.gov/pdf/government/training/tcl.pdf(FEMA)
- **Universal Task List (UTL)**
  This is a list of tasks to be completed in an emergency incident that are related to the capabilities listed in the TCL.
  http://www.comcare.org/uploads/Universal%20task%20list.pdf

Hazard Vulnerability Analysis (HVA)

- The following are templates for HVAs that assess the probability and severity of hazards and threats to the hospital.
- **FEMA HVA**
  http://training.fema.gov/emicourses/E464CM/02 Unit 2.pdf
- **Kaiser Permanente HVA**
  http://www.gnyha.org/22/File.aspx (Kaiser Permanente)
- **ASHE HVA**
  http://www.ashe.org/ashe/products/pubs/hazvulanalysis.html (**$**)

Scenario

- **Altered Standards of Care in Mass Casualty Events**
  Includes descriptions of scenarios involving mass casualty incidents.
  http://www.ahrq.gov/research/altstand/altstand.pdf (AHRQ)
- **Bioevent Tabletop Exercise Toolkit for Hospitals and Primary Care Centers**
  Includes exercise scenarios for plague, SARS, anthrax, smallpox and pandemic flu

http://www.nyc.gov/html/doh/downloads/pdf/bhpp/bhpp-train-hospital-toolkit.pdf (New York City Department of Health)

Exercise Documentation

- **Discussion-Based Exercises**
  - **Situation Manual (SitMan)** (HSEEP Vol. IV, See under Design and Development > Documentation)
- **Operations-Based Exercises**
  - **Exercise Plan (ExPlan)** (HSEEP Vol. IV, See under Design and Development > Documentation)
  - **Controller & Evaluator (C&E) Handbook** (HSEEP Vol. IV, See under Design and Development > Documentation)

Exercise Logistics

- **Discussion-Based Exercises**
  - **Media/Public Announcement** (HSEEP Vol. IV, see under Design and Development)
- **Operations-Based Exercises**
  - **Media/Public Announcement** (HSEEP Vol. IV, see under Design and Development > Actors)
  - **Actor Waiver Form** (HSEEP Vol. IV, see under Design and Development > Actors)

Evaluation Planning

- **Exercise Evaluation Guides**
  This Web site has a library of EEG templates developed by HSEEP that correspond to capabilities in the Target Capabilities List. They include guides for medical surge, mass prophylaxis, medical supplies management and distribution, among others that are related to hospitals.
  https://hseep.dhs.gov/pages/1002_EEGLi.aspx (HSEEP)
- **Evaluation of Hospital Disaster Drills: A Module-Based Approach**
  This resource provides valuable information and forms for evaluating hospital exercises, including scenarios related to decontamination, biological incidents, radiation incidents, and triage.
  http://www.ahrq.gov/research/hospdrills/ (AHRQ)

***NOTE:** These can be found as part of the HSEEP Volume IV Library: Sample Exercise Materials under Exercise Planning.
https://hseep.dhs.gov/hseep_vols/default1.aspx?url=home.aspx

Chapter 7. Conduct

This section provides an overview of **conducting a hospital preparedness exercise** in the following sections:

- ➔ Overview: Conduct
- ➔ Discussion-Based Exercises
- ➔ Operations-Based Exercises
- ➔ Checklist: Conduct
- ➔ Useful Resources and Tools

OVERVIEW: CONDUCT

The **Conduct** phase of a hospital preparedness exercise involves three parts:

(1) Pre-exercise activities (e.g., setup),
(2) Exercise, and
(3) Post-exercise/wrap-up activities.

The purpose of the conduct phase is to test whether or not the hospital is able to carry out capability- and task-based objectives within the constraints of the exercise scenario and other injects.

This section breaks down the HSEEP methodology for conducting an exercise into the two main types of exercises: (1) discussion-based exercises; (2) operations-based exercises.

DISCUSSION-BASED EXERCISES

As mentioned on page 9, there are many types of discussion-based exercises: **seminars, workshops, tabletop exercises, games, models,** and **simulations**. Discussed below is an example of a commonly used discussion-based exercise by hospitals, a tabletop exercise (TTX).

Exercise Participants

There are several types of exercise participants:

- **Players:** Participants that discuss their role and response to the scenario. Players can be internal (e.g., hospital staff) or external (representatives from community agencies).
- **Evaluators:** Unbiased observers that record the discussion and their observations and do not participate in the discussion.
  - Examples of evaluators include staff from other hospitals or public health institutions. These people are recruited and trained during the **design and development** phase.
- **Facilitators:** Lead the discussion, coordinate discussion among groups, and summarize the decisions of the group on specific issues; keep the group focused on determining how critical tasks will be performed.
- **Recorders:** Record discussion data and do not participate in the exercise

Conduct of a Discussion-Based Exercise

- **SETUP:** TTX room setup includes where participants will be situated during the exercise, specifically who will sit at what tables and what the tables represent, labeling (table tents, name tents), and location of audiovisual equipment.
- **PRESENTATION:** In a TTX, a moderator normally conducts a briefing using a multimedia exercise presentation. The briefing provides an introduction about the exercise and informs participants of their roles and responsibilities during exercise play. This information may also be provided to players in their Situation Manuals.
- **FACILITATED DISCUSSIONS:** TTX are first conducted in facilitated group discussions where participants are assigned seating in different groups based on the organizations they represent. A facilitator will be responsible for leading discussion, ensuring that all players have the opportunity to contribute.
- **MODERATED DISCUSSIONS:** After the facilitated discussion, a representative from each area presents results of each component to the reassembled group, with moderation from the facilitator. Questions are

also addressed. (Alternately, all discussion may take place in one large group with no breakout time set aside for small group discussion.)

- **WRAP-UP ACTIVITIES:** At the conclusion of both discussions, wrap-up activities take place. Documentation from the wrap-up activities is essential for the Evaluation phase. These activities include:
  - **Debriefing:** This meeting occurs immediately after the exercise, addresses immediate concerns or issues, and is conducted with Exercise Planning Team members.
  - **Participant Feedback Forms:** These are given to participants immediately following an exercise to provide their feedback of the exercise.
  - **Hot Wash:** A hot wash may be conducted in lieu of feedback forms or to supplement forms. A "hot wash" is an open discussion with the exercise participants and is conducted immediately after an exercise while the exercise is still "hot." The goal is to identify exercise strengths and areas to be improved.

Sample Tabletop Exercise Schedule	
8:00 - 8:30	**Registration**
8:30 – 9:00	**Session 1: Incident Presentation**
9:00 – 9:30	**Session 2: Notification and Mobilization**
9:30 – 10:30	**Session 3: Response**
10:30 – 11:00	**Session 4: Recovery**
11:00 – 11:30	**Summary and Conclusion**
11:30-12:30	**Wrap-Up Activities: Feedback and Hot Wash**

OPERATIONS-BASED EXERCISES

Also mentioned on page 10, there are several types of operations-based exercises: **drills, functional exercises,** and **full-scale exercises**. Hospitals may conduct all of these exercise types.

Exercise Participants

There are several types of exercise participants:

- **Players:** Perform assigned health-care related roles and responsibilities during the exercises.
- **Controllers:** Monitor and manage exercise play and provide participants with key information during the exercise.
- **Evaluators:** Do not "play" in the exercise but rather record specific information on the actions of the players during exercise.
  - Examples of people who may be recruited as evaluators include staff from other hospitals or public health schools.
- **Actors:** Volunteers or paid professionals who serve as patients or other individuals relevant to the scenario.
  - Examples of actors include hospital volunteers and medical students.
- **Observers:** People who are watching the exercise, e.g., media or VIP.
- **Safety Officers:** People in charge of overseeing operations safety and enforcing safety policy for exercises

Operations-Based Exercise Conduct – Functional/Full-Scale

- **SETUP:** Depending on the scenario, setup should occur well before the start of an exercise. This entails designating the location for the components of the exercise (staging areas, registration, media and their perimeters), testing equipment, situating props, and checking for safety issues.
- **BRIEFINGS:** Briefings need to be held prior to exercise play to ensure all participants know their roles and responsibilities. These briefings are: **Safety Briefing** (for all participants)**, Controller and Evaluator Briefing, Player Briefing, Actor Briefing,** and **Observer Briefing**. Exercise play rules should also be established prior to the exercise as safety precautions (including protocols for termination mid-exercise).
- **EXERCISE PLAY:** This is when the exercise is carried out. It is essential to have an exercise controller responsible for making key announcements regarding the start and end of the exercise. The exercise generally lasts until time allotted for the exercise expires, or until all objectives are met.
- **WRAP-UP ACTIVITIES:** At the conclusion of exercise play, wrap-up activities take place. Documentation from the wrap-up activities is essential for the **Evaluation** phase. These activities include:

- **Hot Wash:** Also called a participant debriefing, a participant hot wash is an open-forum discussion with exercise players and other participants. This occurs immediately after the exercise, and is used to solicit feedback from exercise participants. They may also submit a Participant Feedback form during this time. Hot Wash Minutes should be recorded from this meeting.
- **Controller and Evaluator Debrief:** This is a debriefing for controllers and evaluators to express their feedback regarding the exercise. Controllers and evaluators will also finish and submit their Exercise Evaluation Guides.

CHECKLIST: CONDUCT

The following are some of the essential steps in the **Conduct** phase:

Discussion-Based Exercise

- ☐ Room setup
- ☐ General briefing presentation
- ☐ Exercise play – presentation of scenario and discussion
- ☐ Debriefing with exercise planning team
- ☐ Hot wash and/or participant feedback forms

Operations-Based Exercise

- ☐ Set-up of location – designating areas for registration, observation, etc.
- ☐ Safety briefing for all participants
- ☐ Individual briefings for controllers and evaluators, players, actors, and observers
- ☐ Exercise play
- ☐ Player hot wash
- ☐ Controller and Evaluator debrief

USEFUL RESOURCES AND TOOLS

Below is a list of useful resources and tools related to conducting hospital preparedness exercises broken down by discussion-based exercises and operations-based exercises.

Discussion-Based Exercises

- **Hot Wash Minutes** (HSEEP Vol. IV*, see under Conduct)
  This is a template to record minutes from a hot wash/participant debrief meeting, including expectations, outcomes and issues that participants identified during the exercise.
- **Participant Feedback Form** (HSEEP Vol. IV, see under Conduct)
  This sample form allows participants to provide feedback on exercise design and conduct and make recommendations for improvement.

Operations-Based Exercises

- **Actor, Player, Controller & Evaluator, Hospital, and Observer Briefings** (HSEEP Vol. IV, see under Conduct > Exercise Briefings)
  These presentations may be used during briefing meetings with groups of exercise participants to give them essential information about the exercise and their roles in the exercise.
- **Hospital Debrief** (HSEEP Vol. IV, see under Conduct > Exercise Briefings)
  This presentation is used to discuss the exercise with, and solicit feedback from, hospital exercise participants after the exercise.
- **Controller & Evaluator Debrief** (HSEEP Vol. IV, see under Conduct > Exercise Briefings)
  This presentation is for a post-exercise debrief with controllers and evaluators to discuss the exercise and do a preliminary analysis of the information collected.
- **Exercise Weapons Policy** (HSEEP Vol. IV, see under Program Management > Policies
  This is an example of a safety policy used during an exercise when there are weapons involved.

***NOTE:** These can be found as part of the HSEEP Volume IV Library: Sample Exercise Materials under Exercise Planning.
https://hseep.dhs.gov/hseep_vols/default1.aspx?url=home.aspx

Chapter 8. Evaluation

This section provides an overview of **evaluating a hospital preparedness exercise** in the following sections:

- ➔ Overview: Evaluation of a Hospital Preparedness Exercise
- ➔ Step 1: Planning and Organizing the Evaluation
- ➔ Step 2: Observing the Exercise and Collecting Information
- ➔ Step 3: Analyzing Information
- ➔ Step 4: Developing the Draft of an After Action Report/Improvement Plan
- ➔ Checklist: Evaluation
- ➔ Useful Resources and Tools

OVERVIEW: EVALUATION

The purpose of an **evaluation** of an exercise is to assess the performance of participants and the emergency operations plan in order to determine the proficiency with which the hospital staff was able to carry out the tasks and demonstrate the desired capabilities and competencies, as well as the extent to which objectives were met. Evaluation of exercises is essential for identifying weaknesses and gaps, which is critical in improving and strengthening a health care organization's emergency management program.

STEP 1: PLANNING AND ORGANIZING THE EVALUATION

Planning and organizing the evaluation of a hospital preparedness exercise normally takes place during the **Design and Development** stages. Important tasks that need to be completed in this step include:

1. **Assigning a Lead Evaluator**
   This person is usually identified early in exercise planning and oversees the team of evaluators throughout the evaluation process. He/she helps to integrate evaluation planning into the exercise design process.
2. **Identifying the Evaluation Requirements**
   These requirements are developed using the exercise scope and objectives. It may be useful to look at accreditation or Federal requirements as well. Also consider the tools, documentation, and personnel needed to carry out the evaluation process.
3. **Recruiting and Training Evaluators**
   First, the requirements for evaluators should be identified (e.g., the number of evaluators, the type of expertise, and the time commitment needed). Then evaluators must be recruited, assigned, and trained to provide useful and constructive criticism and observations that are related to the exercise. Training may involve familiarizing the evaluators with the evaluation forms being used as well as the hospital's general operations. It may be helpful to do an exchange with another hospital or public health institution to obtain unbiased evaluators. Other potential evaluators include State or local emergency personnel not taking part in the exercise.
4. **Developing an Evaluation Plan**
   The evaluation plan should include:
   - **Exercise-specific information,** such as the scenario and schedule.
   - **Evaluator team information** about organization, assignments, and location.
   - **Evaluator instructions** on what to do before and during the exercise.
   - **Evaluation tools** such as an exercise evaluation guide, the MSEL, and blank paper.
5. **Holding a Controller and Evaluator Briefing**
   - This should take place just before the exercise to provide updates and an opportunity to ask questions. In operations-based exercises, this may include a tour of the exercise area so that controllers and evaluators are familiar with where they are stationed to observe exercise play.

STEP 2: OBSERVING THE EXERCISE AND COLLECTING INFORMATION

Observing the exercise and collecting information take place during the **Conduct** phase of the exercise, and differ for discussion-based exercises and operations-based exercises.

Discussion-Based Exercises

For discussion-based exercises, there are often breakout sessions and small group discussions. Evaluators and data collectors need to be present at each of these small groups to get a full understanding of the thinking and decision-making during the exercise conduct.

Operations-Based Exercises

For operations-based exercises, evaluators and data collectors tend to focus on player actions and decisions. Normally, evaluators are situated in pre-determined locations so they can observe exercise play without creating a physical obstruction. Actions and decisions recorded for operations-based exercises include:

- Who completed the action or task;
- What the task or action was;
- Where the task or action occurred;
- When the task or action occurred (time or point in the schedule);
- Why (the trigger), and
- How (the process of doing the action or task) things occurred.

During the exercise play, the evaluator also should be familiar with injects, messages, discussions, decisions, directives, and movement. This information may be presented in the briefing or contained within the Master Scenario Events List (MSEL). Having knowledge of the hospital's normal protocols and procedures is also useful, although specific medical knowledge is not necessary.

Evaluators may be provided with forms that allow them to rate performance on a numerical scale. They may also receive lists of objectives that should be completed during the exercise along with the tasks associated each objective. The evaluators would record whether the task was completed (fully, partially, or not at all) and record the time and other notes about the task. Evaluators should also record any problems or issues that arose during the exercise.

Hot Wash/Debriefing

Additional information may come from a hot wash (an open-forum discussion with exercise participants immediately after the exercise), participant feedback forms, and/or other debriefings with exercise participants. This may provide useful information that evaluators may have missed or misinterpreted and provide insight on how to improve the exercise or the emergency operations plan.

> **TIP:** An actor debriefing may provide useful information about patient care and treatment during an emergency situation.

STEP 3: ANALYZING EVALUATION INFORMATION

After the exercise is conducted, the evaluation information is analyzed. Preliminary analysis begins in the controller/evaluator debriefing session. The information to be analyzed is gathered from debriefing sessions, evaluators' forms, participants' feedback forms and hot wash minutes. For hospitals, data may also include hypothetical clinical care outcomes for the "patients" of the exercise. At the post-exercise debriefing, controllers and evaluators have an opportunity to compare notes, begin to analyze findings including numerical measures such as performance ratings, and develop an account of the actions that took place during the exercise.

Data may be represented as narratives that show strengths and weaknesses during the exercise. HSEEP methodology suggests that, in the analysis, the evaluation team (e.g., the exercise planning team, exercise evaluators, and/or controllers) should identify the "**root cause"** for actions and tasks not completed in an exercise and develop recommendations based on this.

When conducting analysis of evaluation information, the evaluation team should consider:

1. If objectives were met and to what extent;
2. If tasks were successfully completed;
3. What key decisions were made;
4. Whether participants demonstrated they were adequately trained to perform the tasks and capabilities;
5. If the actions of the players reflect the current plans, policies, and procedures;
6. Recommendations for improvement.

STEP 4: DEVELOPING THE DRAFT OF THE AFTER ACTION REPORT/ IMPROVEMENT PLAN

After collection and analysis of information from the exercise, the exercise evaluation team should develop a draft of the **After Action Report/Improvement Plan (AAR/IP)**. The AAR/IP includes a description of the exercise, strengths of exercise player response, areas of improvement that need to be addressed, and recommendations for implementing corrective actions.

According to HSEEP, an AAR/IP includes:

1. **Executive Summary** – A brief overview that includes the scenario, the exercise objectives, what capabilities were tested, strengths, and improvement areas.
2. **Exercise Design Overview** – This section includes the overall purpose of the exercise; the objectives, capabilities, and tasks tested; and a summary of the scenario and key events.
3. **Analysis of Objectives –** This section examines the performance of the players on each capability/task, including strengths and areas of improvement.
4. **Appendix A: Improvement Plan Matrix** – This contains an initial draft of the improvement plan.

CHECKLIST: EVALUATION

The following are some of the essential steps for the **Evaluation** phase:

Planning and Organizing the Evaluation

Before exercise conduct, the following tasks should be completed:

- ☐ Assign a lead evaluator
- ☐ Identify evaluation requirements
- ☐ Hire and train evaluators
- ☐ Develop an evaluation plan
- ☐ Hold a controller and evaluator briefing (just prior to the exercise)

Observing the Exercise and Collecting Data

Data include:

- ☐ Evaluators' observations from the exercise
- ☐ Exercise Evaluation Guides (EEGs)
- ☐ Hot wash minutes
- ☐ Participant feedback forms

Analyzing Evaluation Information

- ☐ Condense information into narratives demonstrating exercise strengths and weaknesses
- ☐ Consider the extent to which objectives were met
- ☐ Determine root causes for actions and tasks not completed
- ☐ Develop recommendations for improvement

Developing the Draft of the After Action Report/Improvement Plan

- ☐ Write the draft of the AAR/IP

USEFUL RESOURCES AND TOOLS

Below is a list of useful resources and tools related to evaluating an exercise.

Step 1: Planning and Organizing the Evaluation

- **Exercise Evaluation Guides**
  Web site with a library of EEG templates developed by HSEEP that correspond to capabilities in the Target Capabilities List. They include guides for medical surge, mass prophylaxis, and medical supplies management and distribution, among others that are related to hospitals.
  https://hseep.dhs.gov/pages/1002_EEGLi.aspx (HSEEP)
- **Evaluation of Hospital Disaster Drills: A Module-Based Approach**
  Provides valuable information and forms for evaluating hospital exercises, including scenarios related to decontamination, biological incidents, radiation incidents, and triage.
  http://www.ahrq.gov/research/hospdrills/ (AHRQ)
- **Evaluator Briefing**
  Controller & Evaluator Briefing (HSEEP Vol. IV*, see Operations-Based Exercises > Conduct > Exercise Briefings)

Step 2: Observing the Exercise and Collecting Data

- **Emergency Operation Performance Evaluation Form**
  Sample form that allows evaluators to rate performance of several tasks that need to be completed during an exercise.
  http://www.gnyha.org/374/File.aspx (North Shore University Hospital)

Step 3: Analyzing Data

Step 4: Developing the Draft of an After Action Report/ Improvement Plan

- **After Action Report/Improvement Plan**
  Templates of HSEEP-style After Action Reports with an Improvement Plan Matrix.
  Operations-Based Exercises: AAR (HSEEP Vol. IV, see under Evaluation > After Action Report)
  Discussion-Based Exercises: After Action Reports (HSEEP Vol. IV, see under Evaluation > After Action Report)

***NOTE:** These can be found as part of the HSEEP Volume IV Library: Sample Exercise Materials under Exercise Planning.
https://hseep.dhs.gov/hseep_vols/default1.aspx?url=home.aspx

Chapter 9. Improvement Planning

This section provides an overview of the **improvement planning** phase of a hospital preparedness exercise in the following sections:

- ➔ Overview: Improvement Planning
- ➔ Step 5: Conduct an After Action Conference
- ➔ Step 6: Identify Corrective Actions to Be Implemented
- ➔ Step 7: Finalize After Action Report/Improvement Plan
- ➔ Step 8: Track Implementation
- ➔ Checklist: Improvement Planning
- ➔ Useful Resources and Tools

OVERVIEW: IMPROVEMENT PLANNING

The purpose of the **Improvement Planning** phase is to incorporate lessons learned and best practices developed from each exercise into both the hospital's emergency management program and future hospital exercises. Conducting exercises is not only to test system-wide capabilities, but also to identify ways of improving those systems.

The steps of the **Improvement Planning** phase continue with the steps from the **Evaluation** phase. Some hospitals may choose to condense these steps in fewer meetings due to limited staff, resources, and time.

STEP 5: CONDUCT AN AFTER ACTION CONFERENCE

An **After Action Conference** is conducted after a draft AAR has been written. Participants in an After Action Conference include evaluators, exercise planning team members, and parties that may be involved in implementing the improvement plan. The main purpose of an After Action Conference is to edit the draft AAR and develop an Improvement Plan (IP). It may also be an opportunity to further analyze and compile data if necessary and provide additional information or insights that were not available during the post-exercise debriefing meeting.

STEP 6: IDENTIFY CORRECTIVE ACTIONS TO BE IMPLEMENTED

After modifying the AAR to incorporate feedback from the After Action Conference, corrective actions need to be identified that correspond with recommendations listed in the AAR. When identifying corrective actions to be implemented, the following issues need to be addressed:

1. Changes needed to plans and procedures;
2. Changes needed to organizational structures;
3. Changes needed to leadership and management processes;
4. Training needed;
5. Changes to or additions to equipment; and
6. Lessons learned.

Corrective actions should be written so that they could be measured based on progress of implementation. These corrective actions should be written into the Improvement Plan.

An Improvement Plan consists of the list of corrective actions that should be taken to improve the emergency management program. It may be organized into a table according to capabilities or critical areas that need improvement, along with specific corrective actions and responsible parties. It may also contain timeframes or deadlines for completion of those actions.

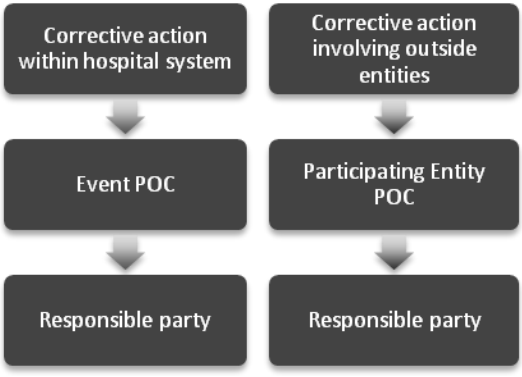
STEP 7: FINALIZE AFTER ACTION REPORT/IMPROVEMENT PLAN

This step entails finalizing and incorporating all changes into the AAR/IP and distributing it to all relevant parties, such as evaluators and exercise planning team members. The AAR/IP should also be distributed to key stakeholders identified in the **Foundation** phase, and may also be distributed to the proper accreditation organizations and Federal, State, or local jurisdictions as needed. The AAR/IP is to be used in future emergency management planning, such as exercise planning, developing strategies, and changing policies or procedures.

TIP: The terminology used in the AAR/IP and the framing of the information contained in it should be tailored to the intended audience. For example, a hospital may need to write the AAR/IP in a way that demonstrates how they achieved their State's deliverables for HPP funds.

STEP 8: TRACK IMPLEMENTATION

The last step involves tracking the implementation of corrective actions. This involves assigning team members to be **event points of contact (POC)** (HSEEP terminology, may differ in your organization) who are responsible for tracking implementation of corrective actions. Event POCs serve as the central POC for exercise improvements, along with progress and documentation of corrective actions. In addition to event POCs, **participating entity POCs** need to be identified who are responsible for monitoring corrective actions at outside entities that participated in the exercise. A responsible party is also assigned to each corrective action to make sure the action is completed.



CHECKLIST: IMPROVEMENT PLANNING

The following are some essential steps for the **Improvement Planning** phase:

Conduct an After Action Conference

- ☐ Hold an After Action Conference with the exercise planning team and evaluators.

Identify Corrective Actions

- ☐ Determine changes necessary for plans, organizational structures, and equipment and additional training needed for staff.
- ☐ Determine time frames and methods of measuring completion of corrective actions.
- ☐ Write corrective actions into the Improvement Plan.

Finalize AAR/IP

- ☐ Create final draft of AAR/IP that includes all changes.
- ☐ Distribute to planning team members, evaluators, key stakeholders, and government agencies and accreditation groups as needed.

Track Implementation

- ☐ Assign team members to be **event points of contact** for each corrective action.
- ☐ Assign **participating entity points of contact** to monitor corrective actions at entities outside of the hospital.
- ☐ Follow up with responsible parties to make sure each action is completed.

USEFUL RESOURCES AND TOOLS

Below is a list of useful resources and tools related to improvement planning for an exercise.

Step 5: Conduct an After Action Conference

- **After Action Conference Presentation** (HSEEP Vol. IV*, see under Improvement Planning)
  This presentation is used during an After Action Conference to present the draft After Action Report, revise the AAR, and develop an Improvement Plan.

Step 6: Identify Corrective Actions to Be Implemented

- **Corrective Action Program (CAP) System** (HSEEP login required)
  This web-based application developed by HSEEP allows the user to create and track the implementation of corrective actions from Improvement Plans.
  https://hseep.dhs.gov/support/CAPSOverviewandFAQ.pdf (Login required for access)

Step 7: Finalize AAR/IP

- **After Action Report/Improvement Plan**
  These are templates of HSEEP-style After Action Reports with an Improvement Plan Matrix in the appendix. The HSEEP Web site also has examples of AAR/IPs available with an HSEEP login.
- Operations-Based Exercises: AAR (HSEEP Vol. IV, see under Evaluation > After Action Report)
  Discussion-Based Exercises: After Action Reports (HSEEP Vol. IV, see under Evaluation > After Action Report)

Step 8: Track Implementation

- **Lessons Learned Information Sharing** (Login required for access)
  https://www.llis.dhs.gov/index.do

PART III.
EXERCISE STRATEGIES

Chapter 10. Overview of Exercise Strategies

This section provides an overview of strategies that can be used for certain types of exercises and exercise planning settings.

- ➔ Maximizing Efficacy and Efficiency of Exercises
- ➔ Unannounced Exercises
- ➔ Real Events
- ➔ Improving a Hospital's Emergency Operations Plan
- ➔ Exercise Planning: Challenges and Strategies
- ➔ Urban Settings: Challenges and Strategies
- ➔ Rural Settings: Challenges and Strategies
- ➔ Suburban Settings: Challenges and Strategies

MAXIMIZING EFFICACY AND EFFICIENCY OF EXERCISES

Because exercises take a considerable amount of planning and resources, it is essential to get the most value out of each exercise, both in meeting Federal, State, local jurisdiction, and accreditation requirements and in preparing the hospital to manage any incident or threat. Some key areas for maximizing efficacy and efficiency are below.

Training

An exercise can only effectively test what the participants know.
Participants must be trained in the emergency operations plan and their roles during an emergency situation, especially if they are key members of the incident command system. An announced exercise can be useful in that it allows the hospital an opportunity to review response procedures, communications (important points of contact, call trees, etc.), and other educational material.

Small Scale Drills

These may be useful because they require less planning time and resources. Because fewer departments and outside agencies are involved, this can shorten meetings and reduce the number of staff needed for exercise planning. Small Scale Drills can also effectively target specific deficiencies discovered in previous exercises and offer an opportunity to practice responses and demonstrate improvement. ***Having very clear, defined, SMART (simple, measurable, achievable, realistic, and task-oriented) objectives is critical for smaller exercises so that they can be specifically designed to test those objectives.***

Knowing Requirements

A single exercise may meet requirements of multiple organizations. Knowing these requirements and planning for them during early stages of exercise design will be useful when planners seek to fulfill requirements of relevant organizations. It may be necessary to write up more than one After Action Report/Improvement Plan according to the needs of each organization.

Work with Community Partners

Few incidents affect a single entity, so it is important to use exercises that involve the community. Some accreditation organizations such as the Joint Commission require involvement of community partners such as local police,

fire, and public health department. ***It is important to have the participation of community partners so that the hospital can establish lines of communication, identify key points of contact for various agencies, and determine where key resources are.*** .

In addition, **ESAR-VHP** (Emergency System for Advance Registration of Volunteer Health Professionals) may be able to provide additional staff in emergencies. When conducting exercises with the community, additional planning and resources may be needed, so it is important to ensure that your hospital is still meeting the necessary requirements. Making the exercise as realistic as possible will also effectively test cooperation and communication with other agencies in real time.

UNANNOUNCED EXERCISES

Unannounced exercises resemble a real-life situation by preventing prepositioning of materials, such as personal protective equipment, or prior review of emergency plans in preparation for the exercise. They are useful for testing the hospital staff's ability to quickly recall emergency plans and respond to an incident as well as their ability to find resources such as extra equipment, additional staff, and information related to the hazard. It can also foster communication between different agencies (e.g., other hospitals, police or public health departments) in order to acquire those resources. Unannounced exercises may also accurately test an institution's ability to restrict access or quickly notify staff, visitors, and patients of an event and which actions to take. Unannounced exercises are also required by certain accreditation organizations' standards.

In conducting these types of exercises, it is important to remember the following:

- It is challenging for an exercise to be completely unannounced in a health care setting. Often, participants are given at minimum a range of dates for when the exercise should take place.
- Exercise controllers that know all details of the exercise (time, date, scenario, injects) should be easily identified on location to insure the safety of patients, visitors, and staff during exercise play.
- Evaluators should also be present and briefed with the details prior to the unannounced exercise because it is important to make sure the staff's response is thoroughly assessed when there is no prior notice of an exercise.
- Unannounced exercises may cause disruption of routine activities and therefore may be more disorganized than announced exercises.
- Staff should have prior training and knowledge of emergency plans and procedures, and the exercise should test those established plans.

REAL EVENTS

For some accreditation organizations, real events may be used in lieu of an exercise to meet certain requirements. Real events can demonstrate the hospital's ability to manage an emergency situation. In using these events, it is important to complete the following shortly after an event:

- ☐ Form a committee of key personnel from the response effort, additional technical or subject matter experts, and critical partners to document and evaluate the response to the event.
- ☐ Solicit feedback and meet with key staff and partners involved in the response to discuss the sequence of events, their observations, and their use of and familiarity with activating the hospital's emergency operations plan(s).
- ☐ Determine what would have been the appropriate response to the event.
- ☐ Evaluate the actual response to the determined appropriate response.
- ☐ Write an After Action Report/Improvement Plan to identify strengths and gaps.
- ☐ Make improvements to procedures, policies, infrastructure, or training as identified in the AAR and outlined in the Improvement Plan.

IMPROVING A HOSPITAL'S EMERGENCY OPERATIONS PLAN

A Hospital's Emergency Operations Plan (EOP) is meant to be continually improved and changed as needed. Exercises are meant to test the activation and operation of the EOP, but also provide a means of evaluating and improving it.

Some strategies for improving the EOP may come from:

- **The Hazard Vulnerability Analysis** – Based on the hazards that may face a hospital and its surrounding community, specific procedures and plans may need to be made to mitigate these risks.
- **Exercises**-- An institutional strategy for exercises that continues to test the facility's capability to respond to a variety of events realistically with increasing complexity is the most effective and efficient way for a hospital to prepare for an actual event.
- **Requirements by accreditation organizations and government agencies** – Since standards for emergency planning are likely to change, it is important to keep track of the requirements of relevant accreditation organizations, Federal requirements, and State or local jurisdiction deliverables and requirements.
- **Previous After Action Reports/Improvement Plans** – Once an exercise or actual incident is completed, the improvement plan outlines actions that need to be taken based on lessons learned during the exercise.

When any changes are made to the EOP, appropriate changes to hospital policies, procedures, protocols should also be made, and hospital staff should be notified of those changes.

EXERCISE PLANNING: CHALLENGES AND STRATEGIES

Common challenges that hospitals face relate to staffing, budgets, and coordination with other groups. Some challenges and strategies for handling them are described here.

Challenge: Staffing and Coordination with Other Groups
Strategy: Do not wait until it is time to conduct the exercise to incorporate community involvement; continuously work with local emergency management officials and include them in hospital planning, exercise conduct, exercise evaluation, and response activities.
Strategy: Establish MOUs with agencies, healthcare facilities, and other critical partners that would enable the hospital when faced with significant infrastructure damage or a surge capacity event to maintain continuity of care. Specific MOUs may address issues including: equipment, pharmaceuticals, and staffing deficiencies that may occur in emergency situations.

Challenge: Integrating Emergency Operations Plans (EOPs)
Strategy: Whenever your hospital's EOP is being updated, notify other community partners and local government of your changes and ask those groups to provide any changes to their EOPs as well.

Challenge: Lack of Resources and Funding
Strategy: Checking with larger hospitals or State emergency planning agencies to find State or local training programs and exercises that your hospital may be able to participate in.

Challenge: Ensuring that Exercises Actually Improve Hospital Preparedness
Strategy: When designing the exercise objectives, make sure they align with the needs of your health care system and test capabilities that need to be addressed.

URBAN SETTINGS: CHALLENGES AND STRATEGIES

Hospitals in urban settings face many specific challenges. They range from small to large and may face issues related to competition with other hospitals; synchronizing with other systems, particularly with large-scale incidents; and coordination with several hospitals or community agencies. Some of the strategies for addressing these challenges are below.

Challenge: Hospital Management/Leadership Support
Strategy: This is critical for all hospitals, but especially for hospitals in urban settings in order to ensure coordination across the entire hospital. The best way to ensure hospital management support is to include management in critical exercise planning and to demonstrate how essential exercises are to funding, to receiving accreditation, and to hospital sustainability.

Challenge: Coordination with Neighboring Entities
Strategy: While coordinating and synchronizing with neighboring entities, e.g., other healthcare facilities, may be a challenge, urban hospitals should use this to their advantage. Working with neighboring entities may be more cost-effective and will also strengthen preparedness capabilities of all participating entities.

Challenge: Ensuring All Staff Participate in Exercises
Strategy: Use train-the-trainer programs. The larger the hospital, the greater the staff, and the harder it is to make sure everyone is up-to-date on preparedness activities (especially due to the shift-based nature of hospitals). Developing train-the-trainer programs that enable staff that have participated in exercises to train and educate staff who have not participated can help boost the number of staff prepared to respond to an incident.

RURAL HOSPITALS: CHALLENGES AND STRATEGIES

Hospitals in rural settings often have challenges related to limited resources with regard to staff, equipment, and financing. Another one of their main challenges relates to geographical distance. Rural hospitals may be far from other neighboring hospital and supply vendors. Effective transportation and communications plans are critical. Strategies for addressing these challenges in exercises:

Challenge: Staffing Shortage
Strategy: Maximize use of staff. Since staff shortage is common in rural hospitals, consider assigning roles to all hospital staff, including those that do not work directly in patient care (administrative, custodial, etc.)
Strategy: Enlisting community volunteers can also help with staffing shortages and create greater awareness of preparedness activities

Challenge: Staff Overwhelmed by Preparedness Exercises
Strategy: This is a challenge for all hospital exercises, but especially for rural hospitals with inexperienced staff. Make sure objectives are reasonable. Do not set staff up to fail. Exercises should not overwhelm staff, but instead teach and empower staff.
Strategy: Exercises should also build on in each other. Start with smaller-scale exercises, and gradually increase in size. Exercises are essential for funding, receiving accreditation, and hospital sustainability.

Challenge: Geographical Distances
Strategy: Conducting tabletop exercises that allow participants to take part in the exercise remotely may be less costly and more time efficient than having people travel to the exercises. Remote exercises also may have greater resemblance to what will take place during a real event.

SUBURBAN HOSPITALS: CHALLENGES AND STRATEGIES

Hospitals in suburban settings experience a hybrid of the challenges faced by urban and rural hospitals. Since the strategies depend largely on the size and location of your hospital it may be helpful to read both urban and rural challenges and strategies and determine which challenges and strategies are applicable.

APPENDIX.
ADDITIONAL RESOURCES AND TOOLS

Useful Web Sites

Below is a list of useful Web sites related to hospital emergency preparedness exercises:

Agency for Healthcare Research and Quality (AHRQ)
http://www.ahrq.gov/prep/

Center for HICS Education & Training
http://www.hicscenter.org/pages/index.php

Centers for Disease Control and Prevention (CDC)
http://www.cdc.gov

Centers for Medicare & Medicaid Services (CMS)
http://www.cms.hhs.gov/SurveyCertEmergPrep/

Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response (ASPR)
http://www.hhs.gov/aspr/

Federal Emergency Management Agency (FEMA)
http://www.fema.gov/

Hospital Incident Command System (HICS)
http://www.hicscenter.org/

Homeland Security Exercise and Evaluation Program (HSEEP)
https://hseep.dhs.gov/pages/1001_HSEEP7.aspx

National Association of County and City Health Officials
http://www.naccho.org

National Incident Management System (NIMS)
http://www.fema.gov/emergency/nims/

Other Useful Resources and Tools

Guidance Materials: Hospital and Health Facility Emergency Exercises (World Health Organization) (Draft)
http://www.wpro.who.int/NR/rdonlyres/C575E87F-F0C3-4462-ACB7-FF7B6D5A48B4/0/Guidancematerials_HospitalsandHealthfacilityemergencyexercises.pdf

Public Health Emergency Exercise Toolkit (Columbia University School of Nursing)
http://www.nursing.columbia.edu/pdf/PublicHealthBooklet_060803.pdf

Commonly Used Acronyms and Abbreviations

AAC – After Action Conference
AAR/IP – After Action Report/Improvement Plan
ACS – Alternate Care Site
AHRQ – Agency for Healthcare Research and Quality
AOA – American Osteopathic Association
ASPR – Office of the Assistant Secretary for Preparedness and Response of the U.S. Department of Health and Human Services
C/E – Controllers and Evaluators
C&O – Concept and Objectives Meeting
CMS – Centers for Medicare & Medicaid Services
CoP – Condition of Participation
DNV – Det Norske Veritas
EEG – Exercise Evaluation Guide
EM – Emergency Management
EOP – Emergency Operations Plan
EP – Elements of Performance (Joint Commission)
ESAR-VHP – Emergency System for Advance Registration of Volunteer Health Professionals
ExPlan – Exercise Plan
FEMA – Federal Emergency Management Agency
FPC – Final Planning Conference
HAvBED – Hospital Available Beds for Emergencies and Disasters

HFAP – Healthcare Facilities Accreditation Program
HHS – U.S. Department of Health and Human Services
HICS – Hospital Incident Command System
HSEEP – Homeland Security Exercise and Evaluation Program
HVA – Hazard Vulnerability Analysis
ICS – Incident Command System
IPC – Initial Planning Conference
MOU – Memoranda of Understanding
MPC – Midterm Planning Conference
MSEL – Master Scenario Events List
NFPA – National Fire Protection Association
NHPP – National Hospital Preparedness Program
NIAHO – National Integrated Accreditation for Healthcare Organizations
NIMS – National Incident Management System

OSHA – Occupational Safety and Health Administration
POC – Point of Contact
PPE – Personal Protective Equipment
SitMan – Situation Manual
TCL – Target Capabilities List
TTX – Tabletop Exercise
UTL – Universal Task List

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Det Norske Veritas, Inc. (2009) National Integrated Accreditation for Healthcare Organizations (NIAHO) Accreditation Requirements: Interpretive Guidelines & Surveyor Guidance, Revision 7.

The Joint Commission. (2009) Comprehensive Accreditation Manual for Hospitals. Oakbrook Terrace, Illinois.

Kaiser Permanente Healthcare Continuity Management and Washington Hospital Center ER One for the California Emergency Medical Services. (2006) Hospital Incident Command Systems Guidebook.

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. (2009) "FY09 Hospital Preparedness Program, Funding Opportunity Announcement." CFDA 93.889.

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