Public Health and Medical Exercise Planners’ Series
Booklet 1: Introduction to Exercises

A “How To” Series of Exercise Design, Conduct, and Evaluation Developed to Assist Public Health and Medical Organizations
Acknowledgements

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CIDER is one of three Centers for Public Health Preparedness in California and has the specific vision and mission to achieve “all-hazards public health and community emergency readiness through the provision of education and training, engaging in research activities which result in improved public health systems capabilities, increased local communities resilience to prevent, protect against, respond to, and recover from any public health emergency, and to effectively protect and serve our most vulnerable populations.”

The CIDER EMSci Program was created to assist public health and its partners, including city, county, State, and Tribal communities, with their education and training related to emergency management planning and implementation, and exercise design and evaluation. The EMSci Program utilizes the Homeland Security Exercise and Evaluation Program (HSEEP) to develop emergency management exercises that evaluate systems, provide opportunities to define gaps and vulnerabilities, and provide direction that will improve an agency’s operational readiness.

Contributors

The following UC Berkeley CIDER personnel contributed to this booklet:

- Michael Petrie, EMT-P, MBA, MA, Director
  Emergency Management Sciences Program
- Jennifer Hunter, MPH
  Public Health Analyst
- Cindy Lambdin, RN, MS
  Emergency Operations Specialist
- Christine Siador, MPH
  Associate Director
- Jeannie Balido
  Education and Training Program Manager
- Julia Dysart
  Administrative Support

For more information please contact us at: www.idready.org
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Introduction to the Public Health and Medical Exercise Planners’ Series

Purpose of the Series

The purpose of the Public Health and Medical Exercise Design Planners’ Series is to provide guidance, direction, and suggestions to public health or medical exercise planners and to introduce the Homeland Security Exercise and Evaluation Program (HSEEP) to the public health and medical community by demonstrating the use of that program throughout the booklet series. More than being another HSEEP guidance book, the Public Health and Medical Exercise Design Planners’ Series provides guidance for individuals and teams tasked with advancing preparedness in their organizations. These booklets provide an insider’s perspective, through the lens of an emergency planner, in the implementation of exercise activities from concept to conclusion for the novice to the more advanced exercise planner. There are three booklets in this series:

Booklet 1: Introduction to Exercises

Booklet 1: Introduction to Exercises introduces a five-phase approach to exercise foundation, design and development, conduct, and evaluation and improvement. This booklet provides direction and the “how to” in the design, development, conduct, and evaluation of public health and medically-focused emergency preparedness exercises.

Booklet 2: Selecting the Right Exercise

Booklet 2: Selecting the Right Exercise familiarizes the user with the seven standardized types of exercises in the US Department of Homeland Security’s Homeland Security Exercise Program (HSEEP). This booklet also identifies the key characteristics of each type of exercise, and presents a flowchart to help the user to select the proper exercise. This booklet provides two case studies to demonstrate the use of exercises to develop and verify public health capabilities and to stress the importance of proper exercise selection and design.

Booklet 3: Exercise Forms and Reference Documents

Booklet 3: Exercise Forms and Reference Documents contains links to key exercise documents, templates, and forms used in the HSEEP exercise design, conduct, and evaluation process. Booklet 3 also presents two exercise scenarios, one discussion-based and one operations-based, which emphasize the documents used in exercise design, conduct, and evaluation. Booklet 3 provides valuable information on the Lessons Learned Information Sharing web portal, which is another valuable tool for exercise planners.
Objectives

After reviewing this booklet, the learner will have the basic knowledge and information to be able to:

1. Define the role and function of the exercise planner and exercise planning team.
2. Identify the differences between discussion-based and operation-based exercises.
3. Design an exercise to discuss or evaluate emergency management procedures, protocols, policies, or systems.
4. Conduct exercise activities to evaluate emergency management response procedures and systems.
5. Develop tools to evaluate the effectiveness of exercise activities.
6. Create a continuous improvement plan consistent with the level of exercise activity and track the progress of public health emergency preparedness management improvement.

Tips

Throughout the series, look for these unique indicators for tips and warnings:

- Red Flag Warnings
- Key Point
- Lessons Learned
- Capability Measurement

This booklet is designed to assist exercise planners to design, conduct, and evaluate public health emergency management exercises to demonstratively improve public health preparedness. It is not intended to serve as a substitute for formal exercise design, conduct, and evaluation training, but as a supplement and reference during exercise planning activities.
Exercises - Getting Started

**What is an exercise?**

An exercise is a simulated incident requiring a discussion, action, or response. Exercises provide an opportunity for personnel to familiarize themselves with policies and procedures and to gain experience in their role for a specific response situation. Exercises also provide a controlled environment to evaluate the strengths and areas for improvement in a response system. Exercise-based evaluations provide a structured and objective process for assessing the system’s current capacity, compared to the system’s desired capacity to successfully respond to a real incident. Exercises help identify gaps in training, equipment, organization, and planning.

Many preparedness coordinators are intimidated by the responsibility of designing, conducting, and evaluating preparedness exercises. However, just as with other projects, designing, conducting, and evaluating exercises is more manageable when the project is segmented by phases. This booklet segments the exercise design, conduct, and evaluation process into four phases, with each phase consisting of a number of objective-oriented steps.

**Homeland Security Exercise Evaluation Program (HSEEP)**

The Department of Homeland Security has developed the Homeland Security Exercise and Evaluation Program (HSEEP) to guide the design, conduct, and evaluation of exercises. The HSEEP program was structured for use across sectors and disciplines for a consistent and standardized approach to design, conduct, and evaluation of exercises throughout the United States. The HSEEP methodology provides the structural framework needed by exercise planners and preparedness coordinators to implement a standardized multi-year exercise and evaluation program within their organization.

**The HSEEP Toolkit**

The HSEEP Toolkit is the US Department of Homeland Security’s interactive, on-line system for exercise scheduling, design, development, conduct, evaluation, and improvement planning.

*Organizations that want to have their exercise recognized by DHS or to have their exercise costs reimbursed by DHS must enter the exercise into the HSEEP Toolkit.*
The HSEEP Program and HSEEP Toolkit can be found at: https://hseep.dhs.gov/ Individuals can self-register for HSEEP Toolkit access at this location. The HSEEP Toolkit includes the following:

**National Exercise Schedule System**: An online tool that facilitates scheduling, deconfliction, and synchronization of all National-level, federal, state, and local exercises and events.

**Design and Development System**: A project management tool and tutorial for the design, development, conduct, and evaluation of exercises. The DDS provides appropriate templates and for developing timelines, planning teams, and exercise documentation.

**Exercise Evaluation Guide (EEG) Builder**: Allows users to create customized EEGs inside the Toolkit and through the website by selecting which activities from a given capability will be evaluated during an exercise.

**Master Scenario Events List (MSEL) Builder**: Allows exercise Lead Planners to create customized MSEL formats by selecting from a list of data fields.

**Corrective Action Program (CAP) System**: A web-based application that enables users to prioritize, track, and analyze improvement plans developed from exercises and real-world events.

Templates for all of the forms and documents referenced throughout this booklet may be found within the HSEEP Toolkit. Additionally, the HSEEP Toolkit provides for direct web-based entry of data into the toolkit, and the ability to print complete exercise forms and documents from the toolkit.

Additional information regarding emergency management and exercises, including independent study coursework, is available on the Emergency Management Institute website: [http://training.fema.gov/](http://training.fema.gov/).

Two important websites for exercise information and training are:

- HSEEP website: [www.hseep.dhs.gov](www.hseep.dhs.gov)

**The Incident Command System**

The Incident Command System (ICS) is a standardized, all-hazards incident management approach that is used throughout the nation to manage the planning, response, and recovery to all types of events, incidents, and disasters. The ICS was developed by the California fire service in the 1970s, but has evolved, and continues to evolve, for use by all sectors and disciplines in the private sector, and by local, state, and federal government agencies.
In February 2003, Homeland Security Presidential Directive 5 (HSPD-5) mandated that the Department of Homeland Security establish a National Incident Management System (NIMS) to improve coordination among Federal, State, local, and private sector responses. In response to this directive, the National Incident Management System (NIMS) was created in March 2004. The Incident Command System (ICS) is one essential element of NIMS. NIMS requires the use of ICS for all domestic responses and requires that all levels of government, adopt ICS as a condition for receiving Federal preparedness funding.

The Incident Command System is best known for its modular organizational structure, in which the organization is based on activities in five functional areas. Those areas are: Command, Operations, Planning, Logistics, and Finance/Administration. All of the functional areas may or may not be used based on incident needs. That structure is identified below.

![Incident Command System Diagram]

In addition to providing a dynamic, modular, scalable organizational structure, ICS allows for:

- Standardized terminology
- Consistent practices for establishing and transferring command and leadership
- Common practices for communication and information management
- Management by objectives
- Standardized planning and execution practices
- Comprehensive resource management tools and processes
- Improved worker safety and security through standardized accountability procedures
Before the Phases: Exercise Program Management

The US Department of Homeland Security’s Homeland Security Exercise and Evaluation Program (HSEEP) identifies that organizations should develop an exercise program to facilitate continuous cycles of strategy and planning, exercise design and development, exercise conduct and evaluation, and improvement planning. Of these functions, strategy and planning, and improvement planning are considered elements of exercise program management. Exercise program management is strategic and multi-year, and emphasizes capabilities-based planning, capabilities assessment, identifying priorities and strategy, developing multi-year training and exercise plan and schedules, and tracking plans of improvement until completion.

Exercise Program Management is critically important to a successful long term exercise capability, but is beyond the scope of these booklets. This booklet focuses on exercise project management, which emphasizes training, exercises, evaluation, and improvement planning relative to a single exercise.

To facilitate this single exercise focus, there have been minor additions and deviations from the strict HSEEP doctrine. UC Berkeley CIDER encourages all public health, emergency management, healthcare and emergency services organizations to develop a multi-year exercise management program.

Exercise Phases

Exercises can be organized into four phases:

1. Exercise foundation, which is developing the infrastructure for an exercise;
2. Design and development, which focusing on developing a specific exercise;
3. Conduct, which is the activities during an exercise; and,
4. Evaluation and Improvement Planning, which identifies and memorializes strengths and areas for improvement and assures that corrective action identified in the evaluation are resolved.

These phases and their component elements are summarized on the following page, and are explained in detail in the following chapters.
Phase One: Exercise Foundation

- Create a Base of Support
- Conduct a Capabilities Assessment and Set Exercise Priorities
- Develop a Project Management Timeline
- Identify an Exercise Planning Team
- Schedule Planning Conferences

Phase Two: Exercise Design and Development

- Conduct a Resource Assessment
- Develop the Exercise
- Plan for Exercise Logistics
- Plan the Evaluation Strategy

Phase Three: Exercise Conduct

- Discussion-Based Exercises
  - Exercise Logistics
  - Participant Briefings
  - Exercise Play
  - Recording and Evaluation
  - Debrief/Hot Wash

- Operations-Based Exercises
  - Exercise Logistics
  - Participant Briefings
  - Exercise Play
  - Recording and Evaluation
  - Debrief/Hot Wash

Phase Four: Exercise Evaluation and Improvement Planning

- Analyze Exercise Data
- Draft After Action Report
- After Action Conference
- Improvement Plan
Phase One: Exercise Foundation

Create a Base of Support

The first step in developing an exercise program or single exercise is to determine whether you have the support necessary to accomplish the objective. Support includes the financial resources to plan, conduct, and evaluate the exercise. If it is your job to lead the exercise, are you provided enough hours for successful planning and execution? Do you or your colleagues have the training and expertise to properly coordinate an exercise? Have you been provided the authority to accurately record the areas for improvement that will be listed in the after action report and plan of improvement (AAR/IP)? Does your organization have the commitment and resources to correct the areas for improvement (preparedness gaps) identified during the exercise?

Do you have the organizational or political support to engage other departments or jurisdictions in your planning? It’s often easier to garner support from other agencies if you can clearly articulate the benefit of participation to that agency and if you have the strong support of your agency’s senior leadership.

In many instances you will not have the resources you would like to design, conduct, and evaluate an exercise. However, by identifying your resources, support, and constraints early in the planning process, you are better prepared to modify your plans or create other mitigation strategies to compensate for deficits in resource or support.

Creating a Base of Support is not part of the HSEEP doctrine; however, exercise planners have stated that identifying their functional levels of support early has improved their exercise planning processes.

Conduct a Capabilities Assessment and Set Exercise Priorities

The next step in an organization’s exercise program (or to conduct a single exercise) is to assess an organization’s current capabilities against its desired capabilities, based upon its mission, vulnerabilities, perceived threats, and discipline or jurisdictional-specific standards. The “gap” between the current capabilities and desired capabilities are opportunities for improvements. Some gaps can be filled by purchasing equipment, some by organizational improvements, and others by development of policies and practices, training and exercising.

Strategies to close the gaps should be identified in each organization’s Multi-Year Training and Exercise Plan. Closure of specific gaps should be prioritized, based upon the State and National Priorities, which are listed in the National Preparedness Goal. The National Preparedness Goal identifies three levels of priority:
Priority 1: Strengthen chemical, biological radiological, nuclear and explosive (CBRNE) detection, response, and decontamination capabilities;
Priority 2: Expand regional collaboration; and,
Priority 3: Implement National Incident Management System (NIMS) and the National Response Framework.

Information to determine an agency’s or department’s desired capabilities can come from many sources, including the Target Capabilities List and Uniform Task List, grant guidance from federal or state agencies (such as the Centers for Disease Control and Prevention and the Hospital Preparedness Program for public health organizations). Additional sources include jurisdictional or department threat or vulnerability assessments; state or local government doctrine or direction from your agency’s leadership.

In addition to exercising to close the deficiencies identified through gap analysis, public health departments should also review identified strengths and areas for improvement from real events, recent exercises, and training programs. Previously identified gaps or areas for improvement can serve as continuing improvement areas for exercise activities.

Look back at real events and exercises to better identify the path for preparedness activities. How people perform in simulated activities strongly predicts how they will respond during a “real” event.

Develop a Project Management Timeline

Developing a project management timeline is critical to proper exercise planning. A project management timeline allows the coordination of exercise activities with the agency’s other mission-critical activities. It also allows the more accurate forecasting of budget resources if the exercise design, conduct, and evaluation period spans more than one budget cycle. It also documents the individuals responsible for completing objectives, tasks, and activities and the dates those deliverables are due.

Avoid the common pitfall of exercising to exercise. Exercises should be capability-based, be designed to explore or organizational performance, and include an implementable after action report and plan of improvement.

Exercise managers will benefit from formal project management training. Project management training provides tools to help assure that schedules and budgets are met, and human resources are effectively used.
Identify an Exercise Planning Team

The Exercise Planning Team is responsible for determining the type of exercise that should be conducted, designing the exercise, developing the exercise objectives and scenario, and drafting the exercise documents.

The Exercise Planning Team Leader
The Exercise Planning Team Leader (or exercise planner) will determine the initial participants needed for inclusion in the planning process, issue the invitations, and set the first meeting date and time to start the exercise planning process.

The goals for the exercise planner are to create a meaningful exercise calendar targeted to test and mitigate gaps and vulnerabilities, create a continuous improvement plan, implement vigilant monitoring, and demonstrate both focused and overall capability during a public health emergency.

The Exercise Planning Team Members
The Exercise Planning Team should include staff from each organization or agency participating in the exercise, subject matter experts, and other key stakeholders. Professional diversity in the Planning Team will support the development of a more realistic scenario and will ensure that the exercise objectives meet the needs of each participating entity, increasing commitment or “buy-in” from these partners. While the initial design team will be determined by the Exercise Planning Team Leader, additional members should be invited to the organizations and agencies that will be included in exercise play.

Planning Team Members should not participate in the exercise as players, since their familiarity with the exercise design could influence their (and others’) performance during the exercise. However, Planning Team Members are ideal candidates for exercise controllers, facilitators, evaluators or simulators. If it is important that an individual participates in the exercise as a player, she should not be part of the Exercise Planning Team.

The capabilities to be exercised, the participating jurisdictions, and the scenario will guide selection of the exercise planning team members.

ICS and the Exercise Planning Team
The Incident Command System (ICS) provides an excellent structure to manage the exercise design process. The ICS chart below identifies how exercise-related activities, such as creating exercise documentation, securing actors, and tracking costs, are assigned to individuals filling traditional ICS positions, such as operations, planning, logistics and finance section chiefs. As in ICS, each section can be expanded using the branch, division, or group doctrine to allow expanded delegation and responsibility for large exercises. The Exercise Planning Team Leader serves as the Incident Commander and is ultimately responsible for the exercise project.
Sample exercise planning team:

Schedule Planning Meetings

Depending on the type and scope of exercise you are designing, you should schedule between 2 and 5 exercise planning meetings. In the case of a large and complex multi-agency full scale exercise, planning may start one year or more before the exercise date. The types, purpose, and schedule of the five common exercise planning meetings are detailed below.

The Concept and Objectives (C&O) Meeting is attended by the sponsoring agency, planning team leader, and senior officials. It is a forum to identify exercise goals, develop exercise capability, and identify planning team members. This meeting is optional and is typically used to plan large, complex operations-based exercises.

The Initial Planning Conference (IPC) is a mandatory meeting for all discussion and operations-based exercises. It is a forum to design the exercise, get input on the scope, assumptions, artificialities, and scenario variables. It may be used to plan the exercise evaluation. At the Initial Planning Conference, team members are assigned to develop documents (e.g. SITMAN, EXPLAN, MSEL) and prepare logistics support.
The Midterm Planning Conference (MPC) is a forum to discuss exercise staffing, documents, timeline, scheduling, and logistics. It is used to review the draft EXPLAN, Controller and Evaluator Handbook, and MSEL for operations-based exercises. The Midterm Planning Conference is an optional meeting, which is typically used for complex operations-based exercises.

<table>
<thead>
<tr>
<th>Pre-Exercise Planning Meetings*</th>
<th>Discussion-Based</th>
<th>Operations-Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;O Meeting</td>
<td>---</td>
<td>Large or series of exercises</td>
</tr>
<tr>
<td>IPC</td>
<td>3 months</td>
<td>6 months</td>
</tr>
<tr>
<td>MPC</td>
<td>---</td>
<td>3 months</td>
</tr>
<tr>
<td>MSEL Conference (s) (1 or more)</td>
<td>---</td>
<td>Large or complex exercise</td>
</tr>
<tr>
<td>FPC</td>
<td>6 weeks</td>
<td>6 weeks</td>
</tr>
</tbody>
</table>

Months/days denote the recommended time before the exercise when the meeting should occur.

The Master Scenario Events List (MSEL) Conference is a meeting to design the exercise timeline for an operations-based exercise. It can also be incorporated into the midterm initial planning conference or final planning conference. A MSEL Conference is not used when planning a discussion-based exercise. A MSEL is a chronological list that supplements exercise scenario with event synopses, and responses.

The Final Planning Conference (FPC) is a mandatory meeting for all discussion and operations-based exercises. It is a forum for final review of all exercise processes and procedures. Final drafts of all exercises materials are reviewed and approved during a FPC.

It is better to have fewer content-rich, well-planned, and focused planning conferences than additional planning conferences. Exercise planners are busy and often unable to attend numerous meetings.
Conduct a Resource Assessment

The available resources will influence the type, size, and scope of an exercise. The magnitude of required resources increases with exercise complexity. A resource assessment should include the following:

Funding
It is essential to engage the financial department early in the exercise planning process to identify a realistic budget, project and track costs, and work collaboratively with outside agencies and organizations in cost sharing.

Staff/Personnel
Exercise activities may be limited by the number of dedicated staff assigned to the exercise. Attempts to conduct a full scale exercise may fail if inadequate resources are allocated to the project. Be realistic in identifying the staff necessary to design, conduct, evaluate and provide logistics to an exercise.

Timeline
The development of an exercise timeline is essential to ensure that exercise activities stay on track. Exercises often need to be conducted within a certain timeline, based on grant, regulatory agency or other requirements.

Remember, the greater the size or complexity of the exercise, the more resources it will require to accomplish.

Developing the Exercise

The Exercise Planning Team is now ready to begin designing the exercise. This design process includes the following activities, which are discussed in detail in this section:

- Develop purpose, objectives, capabilities, and tasks
- Determine the type of exercise to be conducted
- Develop exercise scenario
- Recruit participants
- Develop exercise documents
- Plan for exercise logistics
Develop Purpose, Objectives, Capabilities & Tasks
The first (and perhaps the most important) step in designing an exercise is to identify the purpose of the exercise, the capabilities to be evaluated, and the specific objectives of the exercise.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>The purpose is a broad statement defining why an exercise is being conducted and includes a general statement on the areas being tested, assessed, evaluated or measured.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capabilities and Tasks</td>
<td>Capabilities and Tasks, as outlined by the Department of Homeland Security Target Capabilities List (TCL) and Universal Task List (UTL), directly link exercise objectives with standardized performance measures. A multi-year exercise and training program can guide the selection of capabilities and objectives to be exercised.</td>
</tr>
</tbody>
</table>
| Objectives | The foundation of an exercise is well-defined objectives which meet SMART standards. Objectives establish the direction of the exercise, control expected actions or discussion of exercise participants, and keep the scope of the exercise well-defined. The objectives are the driving force from which other document development is created, including: scenario development messages/injects, and evaluation criteria. The SMART standards will help guide the development of good objectives: 
S = Simple (concise) 
M = Measurable (and Mapping to the Target Capabilities List) 
A = Achievable (can be accomplished during the allocated exercise time) 
R = Realistic (and challenging) 
T = Task-oriented (oriented to the required functions) |

Determine the Type of Exercise to be Conducted
The next step in developing the exercise is to determine the type of exercise you will conduct. There are two primary categories for exercises: discussion-based and operations-based. In this booklet, we provide a brief overview of both types of exercises. More detailed information on exercises, including descriptions and examples of exercises, case reviews, and instructions on selecting the correct exercise for your needs, can be found in Booklet 2: Selecting the Right Exercise. The exercise planning team will need to determine which type of exercise best suits their purpose, objectives, and available resources.
**Discussion-Based Exercises**
Discussion-based exercises are used to develop, revise, and/or assess policies, procedures, plans, and agreements. In discussion-based exercises, there is no movement of people, resources, or equipment. This category of exercises allows individuals and agencies to discuss policy-oriented issues within a structured and collaborative environment. Discussion-based exercises can be used to promote team building while advancing or assessing planning goals.

There are several types of discussion-based exercises, which are described in detail in Booklet 2: Selecting the Right Exercise. Deciding which type of exercise is appropriate for you will depend on the stage of planning and objectives of the exercise. Discussion-based exercises include: Seminars, Workshops, Tabletop Exercises, and Games.

**Operations-Based Exercises**
Operations-based exercises are used to validate policies, procedures, plans, and agreements. Operations-based exercises are characterized by play in real time, and actual decision making or movement based upon a scenario. Often, the movement during operations-based exercises involves “boots on the ground”; the movement of field assets, such as vehicles and personnel. Rather than discussing relevant policies or procedures, exercise players act out their roles in response to exercise events as they would in the “real world.”

There are several types of operations-based exercises, which are described in detail in Booklet 2: Selecting the Right Exercise. Deciding which type of exercise is appropriate for you will depend on objectives of the exercise and the scope of the activity being considered. Operations-based exercises include: Drills, Functional Exercises, and Full-Scale Exercises.

**Develop the Scenario**
After determining the purpose and type of exercise, the exercise planning team develops the content of the exercise, including selecting the exercise scenario. This is where the exercise really starts to take shape.

A scenario should be selected that allows a jurisdiction to test the selected capabilities, tasks, and objectives and allows the exercise players to overlook the artificialities of the exercise. The scenario will serve as the stage for exercise play. Scenarios are most beneficial when they are realistic and are tailored to the individual community, jurisdiction, or organization conducting the exercise. The scenario includes:

- **Type of threat/event** (e.g. earthquake, pandemic influenza, fire): The type of threat/event chosen should provide players the opportunity to use the capabilities to be exercised. For example, a fire scenario may be particularly good for evaluating evacuation capabilities, whereas a pandemic influenza exercise may be a better choice for evaluating isolation and quarantine capabilities.

- **Background**: The background provides information on the events leading up to the scenario, and will influence the types of actions/responses that can be evaluated. For example, a pandemic influenza exercise could start at the time that the first case is detected in the US or when many cases are detected in the exercising jurisdiction. Each of these possible scenarios will trigger different responses.
Recruit Participants
The number of persons required to participate in the exercise will vary based on the type and scope of the exercise. Engaging potential participants early is essential for ensuring adequate participation. The types of participants to consider are described below.

<table>
<thead>
<tr>
<th>Players</th>
<th>Players are the agency/organization personnel who perform their regular roles and responsibilities during the exercise. Exercise players are required for all discussion-based exercises and operations-based exercises.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitator/Controller</td>
<td>Facilitators lead the discussion in discussion-based exercises. Controllers lead actions in operations-based exercises by injecting messages, scenario updates, and other information that is used to prompt action by the exercise players.</td>
</tr>
<tr>
<td>Evaluators</td>
<td>Evaluators are used to evaluate specific objectives, capabilities, and tasks during the exercise in discussion-based and operations-based exercises. There should be at least one evaluator per objective being exercised.</td>
</tr>
<tr>
<td>Simulators</td>
<td>Simulators are used to simulate non-participating agencies during operations-based exercises. Simulators use scripted messages (or “injects”) to simulate concerns, actions, or responses of non-participating agencies (e.g. if schools are not participating, a simulator might be used to simulate communications between the Emergency Operations Center and schools). Simulators should be knowledgeable of the agencies for which they are simulating. The number of simulators will depend upon the number of non-represented agencies being simulated and the number of injects to be included.</td>
</tr>
<tr>
<td>Actors/Victims</td>
<td>Actors or victims are used to simulate specific roles during operations-based exercises, making the scenario more realistic. In exercises with a medical or health component, actors may be provided with a “symptomology card,” which describes the signs and symptoms that the victim should act out.</td>
</tr>
<tr>
<td>Controllers</td>
<td>Controllers provide safety leadership in operations-based exercises, including minimizing “real life” safety hazards and responding to and health and safety events that occur during the course of the exercise. Controllers are also responsible for assuring that exercise play remains within planned parameters and for identifying those who “act outside” of those parameters. The controllers should not be confused with a safety officer who is participating as a player in the exercise.</td>
</tr>
<tr>
<td>VIPs/Observers</td>
<td>VIPs and observers can be invited to an exercise to observe exercise play. They do not participate in the exercise or interact with exercise players.</td>
</tr>
<tr>
<td>Recorders</td>
<td>Recorders take notes on exercise events as directed by facilitators. Recorders do not interact with exercise players.</td>
</tr>
</tbody>
</table>
Develop Supporting Exercise Documents

Exercise documents must be created to support the activities of the exercise players, evaluators, controllers, and simulators. The type of exercise documents required depends on the type of exercise (operations-based or discussion-based). Exercise documents for discussion and operations-based exercises are described in more detail in Booklet 3: Exercise Forms and Reference Documents.

Documents for Exercise Players

In both operations-based and discussion-based exercises, the Exercise Planning Team will provide all exercise players with a document that provides background information on the exercise. In an operations-based exercise, this is called and Exercise Plan (EXPLAN). In a discussion-based exercise, this is called a Situation Manual (SITMAN). All exercise players should also be given a Participant Feedback Form, which typically evaluates the players’ satisfaction with the exercise, exercise facilitators, and SITMAN. For more detail on these documents, see Booklet 3: Exercise Forms and Reference Documents.

Documents for Evaluators and Controllers

The Exercise Planning Team will provide controllers and evaluators with a Controller and Evaluator Handbook, which contains the information in the SITMAN or EXPLAN, and detailed information related to each scenario, exercise safety plan, and controller communication plans.

For operations-based exercises, Exercise Evaluation Guides (EEG) delineate the specific objectives, capabilities, and tasks for the evaluators to observe and evaluate during the course of the exercise. HSEEP has developed capability- and task-based Exercise Evaluation Guides (EEGs) that can be adapted for all exercises and jurisdictions and ensure that the evaluation criteria are aligned with the Department of Homeland Security standards¹. Additional jurisdiction-specific evaluation tools may also be beneficial for evaluation. For example, if you are evaluating a triage protocol during a drill, it would be important to evaluate the protocol itself (e.g., Were all of the protocol steps followed correctly? Did the protocol meet its purported purpose? etc.).

Documents for Simulators (Operations-based Exercises)

During an operations-based exercise, it might be necessary to have staff simulate non-participating agencies (i.e. simulators). The Exercise Planning Team will provide the simulators, evaluators, and controller with a chronological listing of all the messages/injects that will be delivered into the exercise for participants to take action. This document is called the Master Scenario Events List (MSEL).

Documents for Actors

During an operations-based exercise, it might be necessary to have actors simulate victims. Actors should be provided with a “symptomology card,” which describes the signs and symptoms that a volunteer acts out, including: vital signs, symptoms, injuries, as well as acting instructions (e.g. confused, distressed) and special needs (e.g. language or mobility needs).

¹ The HSEEP Exercise Evaluation Guide builder is available at https://hseep.dhs.gov/eegb/standalone.aspx
**Plan for Exercise Logistics**

Planning an exercise requires attention to numerous logistical details. Logistics personnel should be included in the Exercise Planning Team to help plan the following:

<table>
<thead>
<tr>
<th>Venue/Site Location</th>
<th>For a discussion-based exercise, considerations include:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Room size and set-up (e.g. table layout, separate rooms for breakout groups, etc.)</td>
</tr>
<tr>
<td></td>
<td>- Availability of audio-visual equipment, technical support, room lighting</td>
</tr>
<tr>
<td></td>
<td>- Availability of restroom facilities</td>
</tr>
<tr>
<td></td>
<td>- Access and egress for those with impaired mobility</td>
</tr>
</tbody>
</table>

For an operations-based exercise, a venue should be chosen to provide a realistic environment for the exercise scenario. For example, a local high school stadium could simulate a major NFL stadium. Key considerations include:

<table>
<thead>
<tr>
<th></th>
<th>Size of site</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Parking availability</td>
</tr>
<tr>
<td></td>
<td>Maps and directions</td>
</tr>
<tr>
<td></td>
<td>Site safety, security, and access</td>
</tr>
<tr>
<td></td>
<td>Projected weather during the exercise period</td>
</tr>
<tr>
<td></td>
<td>Availability of communications devices (e.g. telephones, fax machines, cell signal)</td>
</tr>
<tr>
<td></td>
<td>Availability of simulation cell area (i.e. area physically separated from exercise play with available communications devices, such as: telephone, cell signal, fax machine)</td>
</tr>
<tr>
<td></td>
<td>Restrooms or portable toilets</td>
</tr>
</tbody>
</table>

| Food | Refreshments, including drinks, snacks, and meals, should be provided for participants based on the time and length of the exercise. |

<table>
<thead>
<tr>
<th>Supplies &amp; Equipment</th>
<th>Discussion-based</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General supplies: paper, writing implements, computers, easels</td>
</tr>
<tr>
<td></td>
<td>Identification materials (e.g. badges, name tents, table tents)</td>
</tr>
<tr>
<td></td>
<td>Registration table and materials</td>
</tr>
<tr>
<td></td>
<td>Copies of plans to be discussed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Operations-based</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All supplies listed for discussion-based exercises above</td>
</tr>
<tr>
<td></td>
<td>Props and devices</td>
</tr>
<tr>
<td></td>
<td>Moulage (or makeup for simulated injuries)</td>
</tr>
<tr>
<td></td>
<td>Videotaping equipment (optional)</td>
</tr>
</tbody>
</table>

| Safety/Security | Safety and security personnel should be considered for operations-based exercises. |

| Personnel | It is essential that there are a sufficient number of participants to achieve the exercise objectives, including: players, evaluators, actors, and simulators. See *Recruit Participants* above, for a description of the necessary participants. |
Plan the Evaluation Strategy

Planning the evaluation strategy before the exercise will assure that the exercise evaluation accurately captures the strengths and opportunities for improvement from the exercise. At least one evaluator is used for each functional area, table, or agency. In operations-based exercises, many more evaluators may be necessary. Evaluators are typically recruited from non-exercise-players from agencies that are participating in the exercise, due to their familiarity with the policies and procedures of the participating agency. Well before the exercise, evaluators should review their agency’s relevant policies and procedures and refresh their knowledge of relevant technical skills, such as biological sample collection, victim decontamination, or evidence collection, which are being evaluated during the exercise.

All evaluators must attend a Controller and Evaluator Briefing, which is typically held one or two days before the exercise. At this briefing, evaluators are trained to properly evaluate the discussion or operations-based exercise, how to properly capture and document actions and issues on exercise evaluation guides (EEGs) or other documents. They are also trained to not interact with exercise players, how to record information gathered from exercise observers, and how to analyze the data they collected after the exercise. Evaluators are provided with the evaluation plan, oriented to the After Action Report (AAR) template, and trained to complete and submit their section of the AAR.
Phase Three: Exercise Conduct

Phase Three explores issues associated with conducting the exercise. It examines exercise-relevant issues that will occur in the final days before an exercise. Exercise conduct will vary widely, based on the type and scope of the exercise.

Discussion-Based Exercises

Logistics
The Exercise Planning Team should revisit the exercise site at least one day before the exercise. The layout of the room may be modified to facilitate the specific type of discussion exercise. For example, workshops are typically setup in classroom layout, with desks arranged in columns. However, in tabletop exercises, players typically sit at tables, arranged by agency, functional responsibility, or other characteristic. In a workshop, seminar or basic tabletop exercise, one room appropriate to the number of attendees may be sufficient. A more advanced tabletop may require multiple rooms with duplicate equipment and personnel to keep discussions and momentum going. Mitigate last minute logistic problems and challenges by arriving early on the day of the exercise (at least 3 hours in advance).

A trial run of audio visual equipment (i.e., laptops, LCD projector, microphones, etc.) is highly recommended to decrease the possibility of electronic system failures on the day of the exercise. Bring duplicate equipment in case the primary equipment fails. Develop a plan of action if there is an equipment or power failure.

Participant Briefings
Two briefings are typically used for discussion-based exercises. The first briefing is held for evaluators, facilitators and recorders. This briefing usually occurs the day before the exercise or the day of the exercise. At this briefing, evaluators, facilitators, and recorders review the situation manual (SITMAN), discuss the flow of the exercise, the exercise objectives, and the specific role and focus area of each evaluator, facilitator, and recorder.

The day of the exercise, immediately before exercise play, a separate briefing may be held for VIPs and observers. This briefing orients the VIP or observer to the exercise objectives and scenarios.

Exercise Play
Discussion-based exercises may consist of a lecture with occasional audience participation, a facilitated discussion or a moderated discussion. These may be enhanced through multi-media presentations and other simulation aides to make the play more realistic.
In a tabletop exercise, the most complex of the discussion-based exercises, the presentation includes introductions and opening remarks, an agenda for the day, and description of the scenario and relevant background information. Once the scenario has been presented, the facilitated discussion begins. During this time, the facilitator presents the discussion questions and presents exercise scenario updates. The exercise participants respond to each question. The questions often allow participants to clarify roles and responsibilities, identify priorities, and resolve issues based on the exercise scenario. Players can be broken up into smaller groups, by agency or discipline. If this is the case, the smaller group discussions can be followed by a moderated plenary discussion, where a spokesperson from each small group reports on the key findings, issues, and questions of their group.

In a discussion-based exercise, the facilitator is responsible to guide the journey of the participants through discussions and to manage the exercise process by:

- Managing agenda and time
- Managing group report backs
- Facilitating resolution of conflict between participants
- Focusing and redirecting the group on issues
- Ensuring that all participants have the opportunity to contribute to discussions

Recording and Evaluation
Exercise evaluators and scribes should be positioned where they can hear but not disrupt the discussion. Evaluators will observe and record information related to the specific objectives that have been assigned to them. Scribes will take notes on the general discussion.

Hotwash
Immediately following the exercise play, a hot wash is conducted to capture the players’ perspectives of the exercise, while it is still fresh in their minds. This hot wash, in which only players share their perspective, allows controllers and evaluators to capture valuable input and immediate feedback about the exercise.

The hot wash should last no more than 30 to 45 minutes.

Debrief
Following the hotwash, either later that same day or the next day, an evaluator, facilitator, and recorder brief is held. This brief allows these personnel to comment on exercise issues, and to address conflicts or problems. Observations from the player hot wash and the evaluator, facilitator, and recorder brief are important inputs for the After Action Report.
Operations-Based Exercises

Logistics
As noted earlier, the logistics needs for operations-based exercises are much more comprehensive than for discussion-based exercises. Setting up the exercise site for a full scale exercise is often a multi-day or longer process. The Exercise Planning Team should visit the exercise site numerous times before the exercise to verify that the site is still available, and to determine that there are no physical impediments to access the sites. The exercise planning team should prepare the site for the exercise by setting up the areas for exercise play, delineating travel routes and parking areas; and creating sign-in areas for players, exercise participants, VIPs, and the media.

Visit your operations-based exercise site frequently to assure that the site hasn’t been used for another purpose. You don’t want to find that your site has become a storage yard the day before the exercise.

The exercise planning team should also ensure that play and controller communication systems are functional, restroom and break facilities are functioning, and real-world safety and medical personnel are available.

Develop a VIP and media-relations plan. It is important to provide these groups with special access without disturbing exercise play or endangering the VIP, media, or exercise participants.

 Participant Briefings
Many different briefings may be used to support an operations-based exercise, depending on the size, scope, complexity and participants in the exercise.

The Evaluator/Controller briefing should occur the day before the exercise at the location of the exercise (if possible). Evaluators should have received their Exercise Evaluations Guides and had time to review this document prior to the briefing. If evaluators have not been assigned to specific objectives, this should be done during the briefing. This provides the opportunity for evaluators to ask questions about the tasks they will evaluate, to see the venue, and identify where they can most effectively evaluate their objectives. The controller and evaluators should be told the process for reporting questions or concerns (e.g. who they should contact, how they can reach that person during the exercise).
The Actor Briefing should occur the day of the exercise. Actors should be given an overview of the exercise, a schedule of events for the day, safety instructions, and sign a waiver form. In medically-based scenarios, actors will be given “symptomology cards” and provided with instructions on acting. Actors should be told the process for reporting questions or concerns during the exercise.

The Simulator Briefing can occur the day of the exercise. Prior to this briefing, simulators should have received the Master Scenario Events List (MSEL) and been assigned to the non-participating agency for which they will represent. At this briefing, simulators should be given instructions on acting and improvising. Simulators should be told the process for reporting questions or concerns during the exercise.

Exercise Play
The scenario and background will be presented by the exercise controller. Players will respond to the scenario as they would in a real event. Scenario progressions and messages/injects will be introduced by the controller, simulators, and/or actors throughout the remainder of the exercise based on Master Scenario Events List. Messages/injects will be communicated to players by a simulation cell using pre-identified mechanisms, such as phone, fax, two-way radio, email, or news releases. Actors will simulate their roles during the exercise. Messages/Injects may be accelerated or decelerated to meet the exercise objectives, based on the controller’s discretion.

The lead controller ends the exercise after the scenario and injects have been completed, a certain period of time has passed, or the exercise objectives have been achieved.

Rarely, during operations-based exercises, some players have demonstrated inappropriate conduct. Controllers should be prepared to rapidly identify these players, and safely remove them from exercise play, if necessary, relying on assistance from law enforcement or security personnel.

All exercise participants should be given a stop exercise play code word, which is used to stop exercise play due to an extreme safety hazard or real world emergency. “Real World Emergency” is often used.
**Recording and Evaluation**
Exercise evaluators should be positioned where they can hear/observe the exercise activities, but not disrupt exercise play. Evaluators will observe and record information related to the objectives for which they have been assigned. After exercise activity has ended, evaluators should summarize their observations, noting observed strengths and areas for improvement. Evaluators should provide detail for each of the noted strengths and areas for improvement, including: what occurred, why it occurred, and what tasks/capabilities were related to the observation. For each area of improvement, evaluators should suggest corrective actions.

**Hot Wash**
Immediately following the exercise play, the evaluators of each functional area will conduct a “player hot wash” to capture the players’ perspectives of the exercise, while it is still fresh in their minds. This hot wash, in which only players share their perspective, allows controllers and evaluators to capture valuable information about the exercise. Players should be asked to identify what happened, the reasons for each significant action, the consequences of that action, and the lessons learned from that action. Players should also recommend best practices and lessons learned that should be considered for inclusion in policies and procedures.

**Debrief**
Later, after the exercise or the day following the exercise, a Controller and Evaluator Debrief is held. This debrief allows the controllers and evaluators to comment on exercise issues and to address conflicts or problems. Observations from the player hot wash and the controller and evaluator debrief are important inputs for the after action report.
Analyze Exercise Data

The first element of the exercise evaluation process is collecting and analyzing data from the exercise. Sources of data include the player hot wash, debriefings, exercise evaluation guides, observations summary sheets, and other oral or written documentation of the exercise. The SITMAN or EXPLAN are also critical documents for review.

These data sources should be used to reconstruct the sequence of events that occurred throughout the exercise. This information is used to identify variation between the expected actions, as defined in policies and procedures; the actions taken during the exercise; and the causes and results of that variation.

Structured data from the analysis section of the exercise evaluation guides are given special attention in the data analysis process. This information is valuable to identify strengths, general observations, and areas for improvement, for inclusion in the After Action Report (AAR). Additionally, for each area of improvement, corrective actions should be identified.

For each issue identified a root cause should be determined. The root cause is the primary cause of an identified issue. An implementable solution for each area of improvement’s root cause should be identified.

Draft After Action Report

Using the collected data, the analysis of that data, and the SITMAN or EXPLAN, the lead planner and exercise planning team can create a draft after action report (AAR). The AAR is an evaluation of exercise performance, as measured through the taxonomy of preparedness-based capabilities. The AAR is a stand alone document that provides general information about the exercise, exercise design information, a discussion of capabilities, and an improvement plan. Optional parts of the AAR include documentation of lessons learned, participant feedback summary, and performance ratings. The draft AAR should be released to the participating agencies for review and comment within 30 days of the exercise. The AAR should contain the following HSEEP-standardized sections: ²

After Action Conference

An After Action Conference should be conducted after the AAR draft is reviewed by the participating agencies. The After Action Conference should be attended by the evaluators, the exercise planning team, and leaders from each agency who have the authority to authorize the plan of correction. This is critical because the plan of correction will bind that agency to making certain improvements, which may involve a cost to that agency. The After Action Conference provides the opportunity for participants to discuss the observations and to further develop corrective actions to address the noted areas for improvement. The corrective actions selected during the After Action Conference provide the basis for the Improvement Plan (IP). The IP also identifies the individuals responsible for completing the corrective actions and includes a timeline by which the activities must be completed.

Finalize After Action Report/Improvement Plan

The final AAR/IP is developed by the exercise planning and evaluation team, incorporating the feedback from the After Action Conference. The Final AAR should be submitted for approval from the evaluation/planning team within 60 days of the exercise. The completion of the exercise is only one step in the continuous improvement process. It is necessary to complete the improvement plan, to track progress in meeting the identified corrective actions, and to use the lessons learned from this exercise to improve your overall preparedness.

The After Action Report is generally submitted to the US Department of Homeland Security through use of the HSEEP Toolkit. After submission of the AAR, DHS will follow up to assure that the improvement plan has been completed.
Exercise Reference Documents

The following documents were used during the development of the Public Health and Medical Planners’ Exercise Series. These reference documents, listed alphabetically, define and describe the Homeland Security Exercise and Evaluation Program (HSEEP), and provide essential background regarding incident management systems, identifying target capabilities, and planning using standardized scenarios:


Enhanced Exercise Design, Conduct and Evaluation (EEDCE) Participant Guide, California Emergency Management Agency (CalEMA), California Specialized Training Institute (CSTI)

Enhanced Exercise Design, Conduct and Evaluation (EEDCE) Additional Resource Book, California Emergency Management Agency (CalEMA), California Specialized Training Institute (CSTI)

Emergency Management Institute, Independent Study Course Work
http://training.fema.gov/

   IS-120A – Introduction to Exercises
   IS-130 – Exercise Evaluation and Improvement Planning
   IS-139 – Exercise Design

Homeland Security Exercise and Evaluation Program
Exercise Manuals 1 through 4
https://hseep.dhs.gov


National Incident Management System, December 2008

National Planning Scenarios, March 2006 (located in secure portal)
http://www.llis.dhs.gov

National Preparedness Guideline, September 2007

National Response Framework, January 2008

Target Capabilities List, September 2007

Universal Task List, February 2007 (located in secure portal)
http://www.llis.dhs.gov