

GUIDELINES FOR PANDEMIC SIMULATION DRILLS

In accordance with PAHO Service Contract TT/CNT/0700010.001 the following are the guidelines for “Pandemic Simulation Drills”.

Firstly, there is need to clarify the terminology used;

Exercise

The exercise is an activity designed to enhance emergency preparedness by evaluating the emergency operations, plans, policies, procedures or facilities and persons trained in emergency management. Exercises consist of duties, tasks or operations similar to those in real emergencies, therefore they are responses to simulated events with realistic actions either articulated or acted out.

There are different types of exercises, these are listed below, inclusive of defining characteristics¹:

Orientation

- Informal
- No simulation
- Discussion of roles and responsibilities
- Introduction of policies, procedures, plans and responsibilities

Drill

- Single Emergency Response Function
- Single agency involvement
- Often a field component

Table Top

- Informal discussion of simulated emergency
- No time pressures
- Low stress
- Useful for evaluating plans and procedures and resolving questions of coordination and responsibility

Functional

- Policy and coordination personnel practice emergency response
- Stressful realistic simulation
- Takes place in real time
- Emphasizes emergency functions
- EOC is activated

Full Scale

¹ Source: FEMA Independent Course Study: *An Orientation to Community Disaster Exercises*, 1995

- Takes place in real time
- Employs real people and equipment
- Coordinates many agencies
- Tests several emergency functions
- Activate EOC
- Produces high stress

Simulation

A simulation describes a replicated or created event used to test an emergency plan or standard operating procedure. It is part of the overall exercise.

STEPS IN PLANNING AN EXERCISE

Based on the above there are certain basic steps in planning an exercise. Included as Annex 1, is a generic list that was provided to Guyana and will also be forwarded to St. Lucia and Jamaica. This list should be used as a checklist to guide the simulation planning process. Annex 2 is the Microsoft Project Plan used in Guyana and also in the other two countries. The following categorizes the steps into three phases;

BEFORE THE EXERCISE

Planning is critical for a successful exercise. There are certain specific planning steps that must be taken, these are listed below;

- Review Plan
- Conduct Needs Assessment
- Assess Capability
- Determine Exercise Scope
- Write Purpose Statement Organise Design Team
 - Simulators and Controllers
- Organise Evaluation Team
 - Evaluators
- Prepare Objectives
- Write Narrative
- List Major and Detailed Events
- Determine Expected Actions
- Write Messages
- Develop Evaluation Format

A fundamental requirement is the National Influenza Pandemic Preparedness Plan (NIPPP). A simulation cannot be designed if there is no plan to test. A planning team should be developed which will include a small group of persons from the country to be tested and the regional team. The NIPPP should be reviewed to ensure all critical elements are included.

Subsequently, a **needs assessment** should be conducted to determine the overall planning needs and problem identification. These include the areas are to be tested, a preliminary listing of the resources required, amongst others. Assessment is the backbone of exercise design.

The **capability** to conduct the exercises should also be determined, this will influence the scope. The **scope** refers to putting realistic limits on the exercise. For example, it is not possible to test all hazards, all operations and all agencies. Therefore, the focus may be those of highest priority, such as the surveillance and response or facility surge capacity, within a specific geographical area i.e. such as a small community or a specific hospital.

The scope provides the foundation for the **purpose statement**. This is essentially a single sentence which states the goal of the exercises. For example, the purpose of this exercise is to test and evaluate the following emergency functions;

- Screening and testing
- Infection control
- Command and coordination

The statement of purpose is also a concise way to introduce the plan to others.

The **objectives** take the purpose statement one step further. They state exactly what the exercise is meant to accomplish. Objectives define who will do what according to what standard. They should be simple, clear, specific and measurable.

Example: Participants should demonstrate the ability to don Personal Protective Equipment (PPEs) within (a specific time according to standard) in a manner which will protect them from infection, in order to carry out their responsibilities as stated in the Emergency Plan.

The **narrative** is a brief scenario that sets the stage for the exercise. It provides the background information for the emergency and helps participants approach the exercise as a real situation.

Major and detailed events are realistic problems designed to motivate the actions required from players during the course of the exercise. For example,

Major event – About 20 persons have just shown up at the front of the facility, requesting on medical attention.

Detailed events:

2 Patients complain of fever, cough and are very tired.

5 Patients are children

One gentleman is very rowdy and walking around speaking loudly and up close to other patients and hospital staff.

The whole point of the exercise is to get the participants to think and act in certain ways, usually prescribed in the emergency plan. The expected actions should be documented to assist with evaluation.

The major and detail events are sometimes recorded in messages sent to the players in order to get them to carry out the expected actions. Messages keep all players involved and spread the activities.

The evaluation format is a structured approach to ensuring that the actions undertaken by players are appropriate and if not, to critique the actions and recommend improvements. An evaluator should be provided with an evaluation form for the exercise.

DURING THE EXERCISE

The conduct or execution of the exercise

If all the necessary logistics are organized and in place, the execution for the table top and the full scale will only need approximately three days for each country. The table top will be designed for 2 hours, with an immediate After Action Review (AAR) debriefing.

In the actual execution of the exercise the local planning team are observers/evaluators and may actually assist with inserts or messages; the regional team are the exercise simulators, evaluators. The simulation must be coordinated by either a lead simulator or controller who is very familiar with the script and the disaster plans. The progress of the exercise must be monitored to ensure that the messages and inserts are relevant. This can be addressed by the development of a MSEL – Multiple Scenario Events List with Expected Actions developed during the design phase (sometimes referred to as the Master Sheet). Prior to the exercise the simulators should meet at least for an hour and plan the execution.

The full scale will take one day (6-8 hours) since it involves the mobilization and deployment of actual resources. All persons should be labeled with either name tags or arm bands to indicate their role in the simulation. The victims will be deployed with the appropriate case description sheet to the medical post and the response team treats with the victims according to standard operating procedure and the emergency plan.

A safety officer should be appointed for the Full Scale exercise to maintain safety standards for all.

AFTER THE EXERCISE

Conduct Post – Exercise Meeting

After Action Review

This is a critical component of the exercise and must be done in the following sequence;

Immediate debriefing – done immediately after the simulations, primarily to get the impression of the players, their views on the exercise and their own performance

Detail Debriefing – Planning teams and Players

This is a more structure approach to reviewing the exercises. In this process each event in the MSEL is reviewed against the expected actions and what actually occurred. The Disaster Plans are also analyzed to determine applicability and the performance of the players are analyzed to determine knowledge of roles and functions, use of resources, availabilities of resources etc. Based on the outcomes of this meeting the recommendations for improvement can be made.

The detail debriefing should be conducted within the first two weeks immediately after the exercise. For the Avian Influenza simulations the detail debriefing will be conducted the day after. This process must be carefully managed by an experience simulator/controller to avoid conflict and/or emotional flares.

Write After Action Report

Reports are essential to the whole lessons learnt process. These should be written within the first two weeks after the simulation and should clearly indicate the weaknesses of the plans and the approach for making the necessary improvements and changes.

Conduct Follow- Up Activities

Follow up activities may include the following;

- The revision of the plan – re-writing or insertion of new sections as recommended
- The acquisition of additional equipment and
- Additional training for staff

ANNEX 1

Guidelines for developing an Exercise

Why a simulation?

- Test current emergency plan
- Reveal planning weakness
- Reveal resource gaps
- Identify additional training needs
- Improve co-ordination
- Clarify roles and responsibilities
- Improve individual performance
- Gain recognition of the emergency program

Exercise Definition

- An activity is designed to:
 - Promote NIPPP awareness and overall preparedness
 - Test or evaluate emergency operations, policies, plans, procedures or facilities
 - Train personnel
 - Demonstrate capability.

Exercise consist of

- Duties, tasks or operations similar to those in real emergencies
- Responses to simulated events
- Realistic actions

Developmental step getting started; Step 1

1. Announce exercise
2. Review current plan
3. Conduct needs assessment
4. Asses capability to conduct exercise
5. Develop exercise scope
6. Select exercise type
7. Address costs and liabilities

Mark the status of your emergency program in these and other areas to identify those most in need of exercising

New Updated Exercised Emergency Used In

Emergency Operations Plan
Plan Annex (es)
Standard Operating Procedures
Resource List
Maps, Displays
Reporting Requirements
Notification Procedures
Mutual Aid
Policy Making Officials
Coordination Personnel
Operations Staff
Voluntary Organizations
EOC/Command Center
Communication Facility
Warning Systems
Sampling techniques

CAPABILITY TO CONDUCT AN EXERCISE

Another important part of choosing an exercise is whether you have the skills, resources, manpower and support to conduct an exercise. The requirements vary according to the type of exercise. The questions below concern important exercise requirements. There are sure to be others, but this point out the level of effort and other requirements placed on the locality.

SUGGESTED QUESTIONS CONCERNING CAPABILITY TO CONDUCT AN EXERCISE

1. What and when was your last exercise_____
2. What exercise experience is on your staff
Yourself _____
Staff _____
3. How much preparation time can you reasonably expect to have allocated to developing an exercise?
Actual person days _____ Elapsed time to exercise _____
4. What manpower can you reasonably expect to have devoted to developing an exercise? List their names and person days available.
Own Staff _____
Other agencies _____
Volunteers _____

- 5 What skills can that manpower provide? List names of staff providing the skills.
Planning, Logistics, Promotion, Materials, Scenarios, Other
6. What physical facilities do you use when you conduct an emergency operation? Note whether they would be available for the exercise.
7. What communication facilities and systems do you use in a real emergency? Note whether they would be available for the exercise.
8. What is the expected attitude of the personnel to the exercise?
 Facility Chief :.
 Emergency Service personnel

SCENARIO DEVELOPMENT WORKSHEET/EXERCISE SCOPE

- 1 List the highest priority hazards in your community or company.
- 2 What geographical areas or subdivisions are most vulnerable to these high priority emergencies?
- 3 List the agencies/departments from "most" to "least" in the three categories below:

Frequently in Operation	Experienced with Major Disasters	Participation with Emergency Management Program
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- 4 The type of personnel you want to have in the exercise are:
 _____policy making (elected officials, department heads)
 _____Coordination (managers, EOC representatives, dept. deputies)
 _____Operations (field personnel, headquarters staff level)
 _____Public representatives (media)
- 5 The type(s) of operations you want participants to engage in include:
- 6 Check the degree of stress, complexity and time pressure you wish to instill in the exercise.

	High	Medium	Low
Stress	_____	_____	_____
Complexity	_____	_____	_____
Time Pressures	_____	_____	_____

Communication Mode _____

Statement of Purpose For An Emergency Exercise

Instructions

- 1 Examine the answers on the Scenario Development Worksheet. They form the basis for a statement for the planned emergency management exercise.
- 2 Examine the answers on the Scenario Development Worksheet to write an exercise statement of purpose. Fill in the spaces of the following statement:

The purpose of the proposed emergency management exercise is to improve the following emergency operations:

- a.
- b.
- c.
- d.
- e.

by involving the following agencies and personnel:

- a.
- b.
- c.
- d.
- e.
- f.

in a simulated _____

HAZARD

emergency at _____

Geographical area

Exercise Development Step 2

1. Identifying Resources
2. Defining Objectives
3. Developing Simulation Materials
4. Preparing Facilities, Displays & Materials
5. Identifying, Selecting & Training Staff

Good Objectives

- Specific
- Realistic, Yet Challenging
- Results Oriented
- Measurable

Exercise Objectives examples

- The PPEs will be appropriately donned within.....
- The samples will be extracted using themethodology

Narrative Checklist

- What event?
- How did you find out?
- What time?
- What happens in sequence?
- How fast, how strong, deep, dangerous?
- What response has been taken?
- What damage is already reported?
- Other factors?

Exercise Development – Critique and Evaluation Step 3

- Actions to be observed, identified
- Actions & decisions critiqued after exercise
- Evaluations & recommendations by evaluation group
- Follow-up on recommendations to be implemented

Safety issues

- Appoint an exercise safety officer
- Include safety as one of the key points in the exercise development activities
- Each exercise team member should consider safety within their discipline
- Identify all possible safety problems or hazards and resolve each
- Address safety as part of pre-exercise briefing
- Include safety factors in simulator and evaluator info packets
- Examine each field location before the exercise
- Assure the authority of the safety officer
- Provide for immediate termination of exercise

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ANNEX II

Microsoft Project Plan for Exercises in Guyana

ID	Task Name	Duration	Start	Finish	Predecessors	Gantt Chart																
						17/06	24/06	01/07	08/07	15/07	22/07	29/07	05/08	12/08	19/08	26/08	02/09					
1	Project Simulations - NIPPP Simulations	1 day	Tue 10/07/07	Tue 10/07/07																		
2	Start	26 days?	Wed 11/07/07	Wed 15/08/07																		
3	Planning	4 days	Wed 11/07/07	Mon 16/07/07																		
4	confirm and document Problem Areas	1 day	Wed 11/07/07	Wed 11/07/07	1																	
5	Review and finalize Scope Purpose and Objectives	1 day	Wed 11/07/07	Wed 11/07/07	4SS																	
6	Review and finalize Scenario	4 days	Wed 11/07/07	Mon 16/07/07	5SS																	
7	Identify and establish General Planning and Coordinating group	1 day	Wed 11/07/07	Wed 11/07/07	6SS																	
8	Conduct a Needs Assessment	1 day	Wed 11/07/07	Wed 11/07/07	7SS																	
9	Assess Capacity to Conduct Exercise	2 days	Wed 11/07/07	Thu 12/07/07	8SS																	
10	Liaises with health facility to identify persons for planning and coordinating	2 days	Wed 11/07/07	Thu 12/07/07	9SS																	
11	Discuss specific issues relating to location staff etc for script design	1 day	Wed 11/07/07	Wed 11/07/07	10SS																	
12	Logistics	7 days	Thu 12/07/07	Fri 20/07/07																		
13	Identify persons to assist with Logistics	1 day	Thu 12/07/07	Thu 12/07/07	7																	
14	Analysis of Alternative sites (if necessary)	2 days	Fri 13/07/07	Mon 16/07/07	13,6SS																	
15	Identify necessary props	3 days	Fri 13/07/07	Tue 17/07/07	14SS																	
16	Determine cost of props	2 days	Fri 13/07/07	Mon 16/07/07	15SS																	
17	Prepare existing equipment	6 days	Fri 13/07/07	Fri 20/07/07	16SS																	
18	Prepare arrangements for use of equipment	1 day	Fri 13/07/07	Fri 13/07/07	17SS																	
19	Budget	10 days	Fri 13/07/07	Thu 26/07/07																		
20	Prepare estimates for Hospitality Costs (food and drink, venue, etc)	2 days	Fri 13/07/07	Mon 16/07/07	9																	
21	Prepare estimates for Training/Orientation	2 days	Fri 13/07/07	Mon 16/07/07	20SS																	
22	Prepare estimates for transportation costs	1 day	Fri 13/07/07	Fri 13/07/07	21SS																	
23	Prepare estimate for stipend for players (victims)	1 day	Fri 13/07/07	Fri 13/07/07	22SS																	
24	Prepare venue	1 day	Mon 16/07/07	Mon 16/07/07	11,23																	
25	Prepare Budget	1 day	Tue 17/07/07	Tue 17/07/07	8,24,6																	
26	Acquire approval for budget	4 days	Wed 18/07/07	Mon 23/07/07	18,25																	
27	acquire releases	3 days	Tue 24/07/07	Thu 26/07/07	26																	
28	Procurement	7 days	Fri 27/07/07	Mon 06/08/07																		
29	Purchase equipment and materials from approved list	6 days	Fri 27/07/07	Fri 03/08/07	27,6																	
30	secure suppliers and caterers	1 day	Mon 06/08/07	Mon 06/08/07	29																	
31	Training	2 days	Mon 06/08/07	Tue 07/08/07																		

ID	Task Name	Duration	Start	Finish	Predecessors	July							August				Septem	
						17/06	24/06	01/07	08/07	15/07	22/07	29/07	05/08	12/08	19/08	26/08	02/09	
31	Training	2 days	Mon 06/08/07	Tue 07/08/07														
32	training in the use of PPEs	1 day	Tue 07/08/07	Tue 07/08/07	30													
33	review of sampling methodology	1 day	Mon 06/08/07	Mon 06/08/07	29													
34	orientation meeting with all stakeholders on NIPPP	1 day	Mon 06/08/07	Mon 06/08/07	29													
35	briefing for players (victims)	1 day	Mon 06/08/07	Mon 06/08/07	29													
36	briefing for staff (players and evaluators)	1 day	Mon 06/08/07	Mon 06/08/07	29													
37	Public Information	4 days	Thu 12/07/07	Tue 17/07/07														
38	Prepare Awareness Programme	1 day	Thu 12/07/07	Thu 12/07/07	7													
39	Obtain Approval for Awareness Programme	1 day	Fri 13/07/07	Fri 13/07/07	38													
40	Conduct Media Orientation	1 day	Mon 16/07/07	Mon 16/07/07	39													
41	Arrange Video Taping of Exercise	1 day	Tue 17/07/07	Tue 17/07/07	40													
42	Exercise	2 days	Tue 07/08/07	Wed 08/08/07														
43	conduct table top exercise	1 day	Tue 07/08/07	Tue 07/08/07	36,34,41													
44	Conduct Full Scale Exercise	1 day	Wed 08/08/07	Wed 08/08/07	43,36,35,33,32,4													
45	Evaluation	21 days	Thu 12/07/07	Thu 09/08/07														
46	identify evaluation team	1 day	Thu 12/07/07	Thu 12/07/07	7													
47	identify actions to critique (design form)	1 day	Tue 17/07/07	Tue 17/07/07	6,46													
48	Evaluate exercises	1 day	Wed 08/08/07	Wed 08/08/07	44SS,47													
49	Conduct Immediate Debriefing	1 day	Wed 08/08/07	Wed 08/08/07	44SS,48SS													
50	Conduct Detail Debriefing	1 day	Thu 09/08/07	Thu 09/08/07	49													
51	Report	3 days	Fri 10/08/07	Tue 14/08/07														
52	Review Reports and Players Comments	1 day	Fri 10/08/07	Fri 10/08/07	50													
53	Develop Outline Report and recommendations	1 day	Mon 13/08/07	Mon 13/08/07	52													
54	Complete Report and Distribute	1 day	Tue 14/08/07	Tue 14/08/07	53													
55	End	1 day	Wed 15/08/07	Wed 15/08/07	54													

