PREFACE

The 2010 Earthquake & Communications Table Top Exercise is being conducted by the Indiana Primary Health Care Association (IPHCA). This Situation Manual (SitMan) was produced with input, advice, and assistance from Suzanne Conklin, Area Emergency Administrator for the Veterans Health Administration, which followed guidance set forth by the U.S. Department of Homeland Security (DHS) Homeland Security Exercise and Evaluation Program (HSEEP).

The 2010 Earthquake & Communications Table Top Exercise Situation Manual (SitMan) provides exercise participants with all the necessary tools for their roles in the exercise. It is tangible evidence of state’s commitment to ensure public safety through collaborative partnerships that will prepare it to respond to any emergency.

The 2010 Earthquake & Communications Table Top Exercise is an unclassified exercise. Control of exercise information is based on public sensitivity regarding the nature of the exercise rather than actual exercise content. Some exercise material is intended for the exclusive use of exercise planners, facilitators, and evaluators, but players may view other materials that are necessary to their performance. All exercise participants may view the SitMan.

All exercise participants should use appropriate guidelines to ensure proper control of information within their areas of expertise and protect this material in accordance with current jurisdictional directives. Public release of exercise materials to third parties is at the discretion of the DHS and the 2010 Earthquake & Communications Table Top Exercise Planning Team.
HANDLING INSTRUCTIONS

1. The title of this document is the 2010 Earthquake & Communications Table Top Exercise Situation Manual (SitMan).

2. Information gathered in this SitMan is designated as For Official Use Only (FOUO) and should be handled as sensitive information that is not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from IPHCA is prohibited.

3. At a minimum, the attached materials will be disseminated strictly on a need-to-know basis and, when unattended, will be stored in a locked container or area that offers sufficient protection against theft, compromise, inadvertent access, and unauthorized disclosure.

4. For more information about the exercise, please consult the following points of contact (POCs):

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# CONTENTS

**Preface** ................................................................................................................. iii  
**Handling Instructions** ...................................................................................... iv  
**Introduction** ......................................................................................................... 1  
  - Background ........................................................................................................... 1  
  - Purpose .................................................................................................................. 1  
  - Scope ...................................................................................................................... 2  
  - Target Capabilities ............................................................................................... 2  
  - Exercise Design Objectives .................................................................................. 2  
  - Participants .......................................................................................................... 3  
  - Exercise Structure ............................................................................................... 3  
  - Exercise Guidelines ............................................................................................. 3  
  - Assumptions and Artificialities ........................................................................... 3  

**Module 1: Earthquake Response** ........................................................................ 4  
  - Initial Situation ................................................................................................... 4  
  - Questions ............................................................................................................. 5  
  - Situation Update #1 ......................................................................................... 6  
  - Questions ............................................................................................................. 7  
  - Situation Update #2 ......................................................................................... 8  
  - Questions ............................................................................................................. 8  

**Module 2: Communications: Methods and Means** ............................................. 9  
  - Situation ............................................................................................................. 9  
  - Questions ............................................................................................................. 10  

**Appendix A: Area Maps** .................................................................................. A-1  
**Appendix B: Acronyms** ...................................................................................... B-1
INTRODUCTION

Background

Indiana has the potential to be affected from two separate seismic zones, the New Madrid seismic zone and the Wabash Valley seismic zone.

The U.S. Geological Survey (USGS) defines an earthquake as, “…the ground shaking caused by a sudden slip on a fault. Stresses in the earth's outer layer push the sides of the fault together. Stress builds up and the rocks slips suddenly, releasing energy in waves that travel through the earth's crust and cause the shaking that we feel during an earthquake. An earthquake occurs when plates grind and scrape against each other.”

The Central U.S. Earthquake Consortium (CUSEC) notes that, “the Central U.S. has the highest level of seismicity in the country east of the Rocky Mountains- approximately 250 earthquakes occur a year unknowingly to the public.” CUSEC indicates that, “potential losses from a major earthquake in the central U.S. are expected to be significant because: 1) the high population of the region, 2) the large structures that are not designed and constructed to withstand strong shaking, 3) the potential for liquefaction and 4) the large area that would be affected by damaging ground motion and associated ground failure (about 10 times larger that the area impacted by a California earthquake of comparable size).”

The Indiana Geological Survey indicates that Indiana, “…has trembled in the wake of earth waves generated by powerful earthquakes in the past, and will, no doubt, tremble again in quakes that are yet to come.”

Purpose

The purpose of this exercise is to provide participants with an opportunity to evaluate current response concepts, plans, and capabilities for the effects of earthquakes in Indiana. The exercise will focus on the basic response steps needed to initially recover from the event and the communications that must take place internally and externally to facilitate a swift, effective, efficient response to the disaster as needed to save lives and protect public health and safety. The
use of well-written and exercised Emergency Operations Plans (EOP) and Standard Operating Procedures (SOP) will be critical to the overall response effort.

**Scope**

This exercise emphasizes the role of health centers in response to an earthquake and the communication concerns that would arise.

**Target Capabilities**

The National Planning Scenarios and establishment of the National Preparedness Priorities have steered the focus of homeland security toward a capabilities-based planning approach. Capabilities-based planning focuses on planning under uncertainty because the next danger or disaster can never be forecast with complete accuracy. Therefore, capabilities-based planning takes an all-hazards approach to planning and preparation that builds capabilities that can be applied to a wide variety of incidents. States and urban areas use capabilities-based planning to identify a baseline assessment of their homeland security efforts by comparing their current capabilities against the Target Capabilities List (TCL) and the critical tasks of the Universal Task List (UTL). This approach identifies gaps in current capabilities and focuses efforts on identifying and developing priority capabilities and tasks for the jurisdiction.

The capabilities listed here have been selected by the IPHCA from the National Planning Scenarios, the TCL and the UTL. These capabilities provide the foundation for development of the exercise design objectives and scenario. The purpose of this exercise is to measure and validate performance of these capabilities and their associated critical tasks.

The selected National Planning Scenario is a major earthquake. The selected Target Capability is the common target of Communications. The Universal Tasks are:

- ComC 1.6.2: Identify emergency communications and data requirements for each stakeholder
- ComC 1.6.4: Identify available operational telecommunication assets needs for use on and off-incident site.

**Exercise Design Objectives**

Exercise design objectives focus on improving understanding of a response concept, identifying opportunities or problems, and achieving a change in attitude. This exercise will focus on the following design objectives:

1. **Initial Earthquake Response.** Evaluate the existing earthquake Standard Operating Procedure (SOP) to determine the ability to effectively respond during an earthquake and the strengths/weaknesses of existing plans.

2. **Communications.** Evaluate the existing earthquake Standard Operating Procedure (SOP) to determine whether plans to maintain effective internal and external communications exist and note strengths and weaknesses of existing plans.
Participants

- **Players.** Players respond to the situation presented, based on expert knowledge of response procedures, current plans and procedures, and insights derived from training.

- **Observers.** Observers support the group in developing responses to the situation during the discussion; they are not participants in the moderated discussion period, however.

- **Facilitators.** Facilitators provide situation updates and moderate discussions. They also provide additional information or resolve questions as required.

Exercise Structure

This tabletop exercise (TTX) will be a multimedia, facilitated exercise. Players will participate in the following two modules:

- Module 1: Earthquake Response
- Module 2: Communications: Methods and Means

Each module begins with an update that summarizes key events occurring within that time period. After the updates, participants review the situation and engage in facilitated discussions of appropriate response issues.

Exercise Guidelines

- Treat the scenario incidents as real.
- Participate openly. Asking questions, sharing thoughts and offering forward-looking, problem-solving suggestions are strongly encouraged and will enhance the exercise experience.
- This TTX will be held in an open, low-stress, no-fault environment.
- Respond on the basis of your knowledge of current plans and capabilities and insights derived from your training and experience.
- Decisions are not precedent setting and may not reflect your organization’s final position on a given issue. This exercise is an opportunity to discuss and present multiple options and possible solutions.

Assumptions and Artificialities

In any exercise, assumptions and artificialities may be necessary to complete play in the time allotted. During this exercise, the following apply:

- The scenario is plausible, and events occur as they are presented.
- There is no hidden agenda, and there are no trick questions.
- All players receive information at the same time.
- The exercise will be conducted in a no-fault learning environment in which systems and processes, not individuals, will be evaluated.
MODULE 1: EARTHQUAKE RESPONSE

Initial Situation

[03/31/2010]: 1300 Hours

Throughout the state of Indiana it is a beautiful spring day. The skies are clear and blue, the trees and flowers are in bloom and there is a gentle breeze blowing from the west. The temperature is 50 degrees Fahrenheit. Many of the school systems throughout Indiana are on spring break and the students are out enjoying the fine day. The health centers throughout the State are experiencing a busy day with many families taking advantage of the spring vacation to bring their school-age children in for necessary visits. Additionally, many health center staff members have taken time off work to spend with their families during spring break.

[03/31/2010]: 1301 Hours

Suddenly, the ground begins to shake. In the southwest area of the state (areas of the map below in yellow through turquoise) the shaking is violent causing patients and staff to lose their balance and items to fall from the walls, shelving units to topple and other unsecured items to topple. Staff and patients duck under the nearest secure furniture, cover and hold on until the shaking stops. There is clamor of noise and confusion as the shaking lasts for about 30 seconds. The lights go out and although it is bright outside, there are many places within the health centers that are dark. Obstructions now lay strewn throughout the normal walkways and throughout the health center. There are screams, moaning and children crying.

In the region of the state in the lighter shades of blue (as indicated on map), there is shaking that causes items to fall from shelves and pictures to fall from the walls, causes light fixtures to sway and some patients and staff to lose their balance and fall. The shaking is sufficiently felt that there is a great deal of noise and confusion. There is some obstruction of the walkways and exam rooms.
Questions

Based on the information provided, participate in the discussion concerning the issues raised in the Initial Situation. Identify any additional requirements, critical issues, decisions, or questions that should be addressed at this time.

The following questions are provided as suggested general subjects. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

- What will be your next actions?
- Has your health center conducted a Hazards Vulnerability Analysis (HVA)? Was earthquake considered a risk? Have you developed a written process/procedure to address this hazard?
- Who comprises the internal incident management structure used by your health center? Is it similar in structure to the Incident Command System (ICS)? Who would assume responsibility to manage the event?
- What actions will you take to make sure everyone is accounted for? If someone is missing, what do you do then?
- What safety concerns do you have thus far? How will you address the safety of those staff and patients impacted by the earthquake?

Example of Incident Command System
Situation Update #1

[03/31/2010]: 1310 Hours

Power remains out in the health centers most severely impacted. Debris is scattered throughout the health center and ceiling tiles have fallen and, in some instances, bricks and other building materials appear to have collapsed part of the facility. Because of all the debris it is difficult to determine whether the building is still structurally sound. Some staff members have located flashlights and are walking around determining who is injured and the severity of the injured. Some staff and patients are dazed and unsure what to do. Many of the patients are frightened and some of the children are crying inconsolably. One of the staff locates and turns on the emergency radio to determine what has happened and hears the update below.

Meanwhile, in the health centers impacted, but not as severely, some staff members begin to determine if anyone is injured. Some staff and patients are dazed and confused. Because of all the debris it is difficult to determine whether there is any damage to the facility. One staff member turns on the emergency radio and hears the following update:

- Earthquakes affecting the New Madrid Seismic Zone and the Wabash Valley Seismic Zone have occurred simultaneously. The magnitude of the New Madrid was M7.7 and the magnitude of the Wabash Valley was M7.1. At this point it is too early to know the extent of the damage; however several states were affected including Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee.

- It is likely that aftershocks will be felt.

- There is damage to the fire stations and hospitals in the Evansville area. At this time there is no information indicating the full extent of the damage and whether they are functional.

- There are widespread power outages in southwestern Indiana. The coal burning power plants in southwest Indiana were damaged and they are evaluating the extent of the damage and determining when power will be restored.

- There is some damage to the highways and the Indiana Department of Transportation is determining the full extent and will provide updates.
Questions

• What critical functions must continue today to keep your organization functioning? Who will do them?

• By now, what damage information do you have about your own location? Who performed the damage assessment? What did you ask them to check?

• If some staff or patients are injured, where should they go? Who will care for them there?

• What gaps do you have in terms of personnel, supplies, and equipment to adequately respond to an incident such as this which results in damage to your facility and injury to your patients and/or staff? (i.e.: sufficient triage supplies, sheltering in place supplies, behavioral health support).

• What entities are available in your community, region, or state that could bolster your personnel, supplies, and/or equipment during an incident? Do you have established partnership with these entities as evidenced by written mutual aid agreements (MAAs), memorandums of agreement (MOAs) or memorandums of understanding (MOUs)?
**Situation Update #2**

**[03/31/2010]: 1400 Hours**

In the areas most hard-hit, the building managers report that there is structural damage to an extent not fully able to be determined and some water damage from broken pipes in your facilities. An estimate is that the facility will be unavailable for about a week, depending on the availability of supplies. Staff continues to monitor the emergency radio.

In the secondary areas news continues to be broadcast about the damages sustained in southern and southwest Indiana. The health centers not immediately impacted by this event consider what assistance they can offer to the areas most severely damaged.

As staff continues to monitor the emergency radio, the following update is broadcast:

- The Governor has proclaimed a state of emergency and requested a Federal declaration of emergency.
- Power remains out in southern/southwest Indiana with no estimate on when it will be restored.
- There have been some aftershocks, but they have been negligible.

**Questions**

- Who will determine whether you need to evacuate? If evacuating, what, if anything, will employees be directed to take with them? Do you have an established, written process/procedure for evacuation?
- Have you established an Alternate Care Site to utilize if your facility is damaged beyond use? If so, have you formalized this arrangement through a MAA, MOA or MOU?
- Who would determine whether to send staff home? Is there a mechanism to address payment for staff if the building is closed? Has your facility considered business interruption insurance?
- What types of resource support would you require in order to appropriately manage the response-generated demands from an earthquake? (i.e.: communications, coordination).
- How would the health centers not severely impacted by the earthquake be able to provide assistance to those hardest hit? What operational challenges would this present? How would authorization for assistance be granted?
  - For FQHCs: what are the concerns with the Federal Tort Claims Act (FTCA)?
  - For State-Funded: are there any liability issues that would arise from offering assistance?
MODULE 2: COMMUNICATIONS: METHODS & MEANS

[03/31/2010]: 1410 Hours

In those areas severely affected, staff members and patients attempted to use the phones and found that phone service, landline and cellular, still were not working. The digital phone system of the health centers was unusable because of the power outage; a staff member lifted the receiver of the fax machine and determined that there was no dial tone. Internet service not dependent upon phone lines is functional. Some text messages are getting through, but appear to be delayed.

As staff continues to monitor the emergency radio, the following update is broadcast:

- There are unconfirmed reports of numerous injuries and survivor videos have already been posted to You Tube.

- Video footage of the impacted area is starting to appear as the news crews provide aerial coverage of the impacted area. Many buildings have suffered severe damage in the Evansville area. Some infrastructure damage has occurred in southwest Indiana.

- There is still no phone service in southern/southwest Indiana and the phone circuits are overloaded. Officials have asked that calls be limited to emergencies.
Questions

- Has your health center established a method of knowing which stakeholders, internal and external, should be contacted and how to contact them? What tools to maintain this information do you use?

- What are the available means of communication available to your facility? What alternative communication resources will you use?

- Has your health center established or linked into a mechanism that would allow you to share information regarding available or needed resources to other partners?

- If your facility must close or move to another location, how will you notify your patients?

- What information will you share with your staff members regarding the incident? How will your staff members who are not present be notified?

- If your facility would decide to send staff home, how would you maintain communication regarding the evolving situation?

- What types of resource support would you require in order to appropriately manage the response-generated communication demands from this earthquake event?
APPENDIX A: AREA MAPS

Figure A.1 Indiana Seismic Hazards


Figure A.2.a Indiana Power Plants

http://www.hecweb.org/File/powerplants.pdf
Figure A.2.b Indiana Power Plants

Map Legend:
- Circles Represent a Thirty Mile Radius around Power Plants
- Major Cities are Shown


Figure A.3 Damage Assessments from the Mid-America Earthquake Center
Images from the Mid America Earthquake Center: http://www.ideals.illinois.edu/handle/2142/8971
## APPENDIX B: ACRONYMS

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<thead>
<tr>
<th>Acronym</th>
<th>Term</th>
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<tbody>
<tr>
<td>CUSEC</td>
<td>Central U.S. Earthquake Consortium</td>
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<tr>
<td>DHS</td>
<td>U.S. Department of Homeland Security</td>
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<tr>
<td>EOP</td>
<td>Emergency Operations Plan</td>
</tr>
<tr>
<td>FOUO</td>
<td>For Official Use Only</td>
</tr>
<tr>
<td>FTCA</td>
<td>Federal Tort Claims Act</td>
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<tr>
<td>HSEEP</td>
<td>Homeland Security Exercise and Evaluation Program</td>
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<tr>
<td>HVA</td>
<td>Hazards Vulnerability Analysis</td>
</tr>
<tr>
<td>ICS</td>
<td>Incident Command System</td>
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<tr>
<td>IPHCA</td>
<td>Indiana Primary Health Care Association</td>
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<tr>
<td>MAA</td>
<td>mutual aid agreement</td>
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<tr>
<td>MOA</td>
<td>memorandums of agreement</td>
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<tr>
<td>MOU</td>
<td>memorandum of understanding</td>
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<td>POC</td>
<td>point of contact</td>
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<td>SitMan</td>
<td>Situation Manual</td>
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<td>SOP</td>
<td>Standard Operating Procedures</td>
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<td>Target Capabilities List</td>
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<td>tabletop exercise</td>
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<td>U.S. Geological Survey</td>
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