



ShakeOut Exercise Manual

For Hospitals

Are You Ready to ShakeOut?

Major earthquakes can cause unprecedented catastrophes. With earthquakes as an inevitable part of our future, hospitals should make plans and take actions to ensure that disasters do not become catastrophes. What we do *now*, will determine what our lives will be like *afterwards*. With this in mind, the Earthquake Country Alliance (www.earthquakecountry.org) created the ShakeOut, an earthquake drill and preparedness activity in which everyone can participate. To register as a ShakeOut participant, go to our website (www.shakeout.org) and sign up for the drill in your area. In particular, hospitals of all sizes can use the drill to get their employees, volunteers, partners, and even their patients, involved and prepared for a big earthquake. Furthermore, the level of your staffs' own personal and family preparedness will be key to their availability to support your organization's response and recovery efforts after a disaster.

Although they were created for ShakeOut drill events across the nation the instructions on the following pages can be used or adapted for earthquake drills *anywhere* and *anytime*. The following drill and exercise guidelines are designed for hospitals and other organizations and their personnel where each drill uses the general earthquake response of *Drop, Cover, and Hold On* (www.dropcoverholdon.org) as its foundation. To be flexible, the following pages provide three options for drill designs ranging from very simple (Level 1) to advanced (Level 3), each with steps to be taken before, during, and after the drill or exercise. Going forward, your organization can customize and build one that suits your specific needs.

Drills and Exercises for Hospitals

Level 1 – Simple: *Drop, Cover, and Hold On* Drill.....Page 2

This drill uses simple steps to inform all employees how to perform *Drop, Cover, and Hold On* - a quake-safe action designed to protect lives from falling furniture and flying objects than can become projectiles during ground shaking.

Level 2 – Intermediate: Decision-Making Tabletop Exercise.....Page 3

This decision-making exercise is designed to have key staff and leaders think through more complex issues related to operations in the immediate aftermath of this earthquake, then afterwards to review and discuss what worked or what did not, in order to make changes for the next exercise or actual earthquake.

Level 3 – Advanced: Hospital Functional ExercisePage 6

This operations-based exercise tests command and control during a major earthquake including emergency response and/or recovery duties in your Emergency Operations Plan. The exercise incorporates simulated incidents, decision-making, and policies tested, and then a review afterwards to discuss what worked or what did not in order to make changes for the next earthquake or exercise.



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Level 1 – Simple: Drop, Cover, and Hold On Drill

This drill uses simple steps to inform all employees how to perform *Drop, Cover, and Hold On* – a quake-safe action designed to protect lives from falling furniture and flying objects that can become projectiles during ground shaking.

BEFORE the Drill

1. If you will participate in a ShakeOut drill, register your facility as an official participant at www.ShakeOut.org (make sure to register in your state or region).
2. Inform your employees/staff and volunteers regarding:
 - The date and time of your drill.
 - How to correctly perform *Drop, Cover, and Hold On*, wherever they are.
 - Your expectations for their participation (i.e. *Drop/Cover/Hold On*, gather at a central location for a head count, post-drill discussions).
 - If your drill is part of a ShakeOut, encourage employees, volunteers, etc. to invite friends, families, and neighbors to register at www.ShakeOut.org, in their region, so they participate as well and receive information directly.
3. Inform patients and visitors of the drill.
4. (Optional) Download realistic sound effects and safety information to play during your drill by downloading recordings from www.ShakeOut.org/resources.
5. Review Hospital Incident Command System Earthquake Incident Planning Guide and Incident Response Guide available at www.emsa.ca.gov/hics/hics.asp, www.hicscenter.org and www.calhospitalprepare.org.
6. If your facility participated in a prior ShakeOut Drill or Exercise, review past After Action Reports and Improvement Plans.

DURING the Drill

1. Via the public announcement (PA) system, email, cell phone/text message, or verbal direction:
 - Announce that the earthquake drill has begun and to *Drop, Cover, and Hold On*.
 - (Optional) Play the audio recording (see above) on your PA or, alternatively, play it on a computer in each office.
 - Suggest that while down on the floor, employees look around at what would be falling on them in a real earthquake. These items should be secured or moved after the drill.
2. After at least one minute, announce that the shaking is over and that employees can stand up again. Thank them for participating.
3. Encourage employees to discuss their experiences with one another.

AFTER the Drill

1. Ask for feedback on how the drill went.
2. Schedule the next drill for one year later (or sooner if employees need to practice).
3. Share photos and stories at www.ShakeOut.org
4. Review “7 Steps to an Earthquake Resilient Business” for additional ideas.
5. Encourage employees to prepare at home using the 7 Steps to Safety from “Putting Down Roots in Earthquake Country” (see www.earthquakecountry.org).



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Level 2 – Intermediate: Tabletop Exercise

This exercise is a discussion-based exercise for decision-makers to consider how the earthquake would impact your facility and identify plans and policies and procedures to be used during the event. In addition to the Tabletop Exercise, it also includes the brief Level 1 focus drill in terms of the entire facility employee participation in a *Drop, Cover, and Hold On* drill.

BEFORE the Exercise

1. If you will participate in a ShakeOut exercise, register your facility as an official participant at www.ShakeOut.org (make sure to register in your state or region).
2. Bring together an Exercise Planning Team to design the exercise.
 - Determine or review your plans, policies and procedures for an earthquake.
3. If your facility participated in a prior ShakeOut Drill or Exercise, review past After Action Reports and Improvement Plans.
4. Determine the exercise objectives.
 - What would you like your exercise to address? Potential issues to include for discussion:
 - Does the facility have a process to assess damage to hospital structure and infrastructure?
 - Would the facility lose power, water or medical gasses?
 - Does the facility have procedures to establish redundant communications internally and externally?
 - Would facility access be limited?
 - How would transportation be affected?
 - Would transportation issues affect staff and patient access?
 - How would you decide evacuation versus shelter-in-place?
 - How and where would you evacuate patients?
 - What type of evacuation equipment does the facility have?
 - Who is trained to use the facility evacuation equipment?
 - How will you direct employees/staff during and immediately following the shaking?
 - Does the facility have procedures to track patients, beds, and staff?

Consider using the HICS Earthquake and Evacuation Incident Planning Guides to develop objectives that are available at www.emsa.ca.gov/hics/hics.asp, www.hicscenter.org, and www.calhospitalprepare.org – and is found under the scenario section.

5. Determine the scope and timeframe of your exercise.
 - Learn about potential earthquakes for your area and the Exercise Planning Team can use the HICS Earthquake and Evacuation Scenarios available at www.emsa.ca.gov/hics/hics.asp, www.hicscenter.org and www.calhospitalprepare.org as a base, or develop your own with specific details of how you might expect the shaking to impact your facility (i.e., the building, operations, service providers, employees, patients, and volunteers). For other ideas, review the 2008 San Andreas scenario at www.ShakeOut.org/scenario.
6. Develop a Situation Manual (SITMAN). Examples are available at www.calhospitalprepare.org and <https://hseep.dhs.gov>.
7. Finalize the scenario; making sure it supports your exercise objectives.
8. Invite your facility's key decision-makers (Exercise Planning Team, leaders, and key directors and managers) to participate in the exercise. Have staff review appropriate plans and policies and procedures prior to the exercise.
 - If your exercise is part of ShakeOut, encourage employees, volunteers, clients, etc. to invite friends, families, and neighbors to





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Level 2 – Intermediate: Tabletop Exercise (con't)

register at www.ShakeOut.org so they participate as well and receive information directly.

8. (Optional) Download realistic sound effects and safety information to play during your tabletop exercise by downloading recordings from www.ShakeOut.org/resources.
9. Determine the addition of post-shaking evacuation procedures to the exercise, if needed:
 - **Post-Shaking:** Based on the age and type of your building, and the environment inside/outside of building, etc., determine whether your facility would evacuate after a real earthquake, or whether you would first *assess the building's damage* before directing employees to either stay put or evacuate.
 - **Post-Earthquake Tsunami Threat:** If your facility is in a coastal area, consider whether or not you will need to have plans to evacuate to higher ground.

The Night BEFORE the Exercise

1. Create a brief written description of the earthquake's impact using your hospital along with questions that address the exercise objectives for participants to consider.
 - Tape the earthquake brief under desks and conference tables or provide participants sealed envelopes to open during the exercise.
 - To increase participation, include a surprise under the desk (candy, light stick, lunch coupons, etc.) While a serious subject, you can increase numbers by also adding some fun.

DURING the Exercise:

1. Invite your organization's decision-makers (Exercise Planning Team, leaders, and key directors and managers) assemble in a pre-determined room a few minutes before your exercise and share your exercise objectives. When the exercise is announced, tell all participants to also *Drop, Cover, and Hold On*.
2. Via your public announcement system, email, cell phone/text reminder or verbal direction:
 - Announce that the exercise has begun and to *Drop, Cover, and Hold On*.
 - (Optional) Play the audio recording (see above) on your PA.
 - Suggest that while down on the floor, participants and all staff look around at what might fall on them during a real earthquake. Secure or move items after the exercise to prevent injury and damage.
3. After at least one minute, announce that the shaking is over and for everyone to stand up again.
4. In the room with the Tabletop Exercise participants:
 - Have everyone sit back at the table.
 - Provide the exercise Situation Manual.
 - Read your scenario with details of the earthquake impacts.
 - To make the potential impact more vivid, you can show the downloadable video of expected shaking. This can be found on the ShakeOut website: www.ShakeOut.org/resources.
5. Now go around the table to discuss what your facility can expect to happen and decisions that will be made based on the scenario.
 - Try to have the discussion flow in chronological order of what would be the expected activities and priorities in the first minutes, hours, days, etc. following the details of the scenario and brief.
 - However, if all issues are solved within a particular timeframe, move the scenario timeline forward to day/week/month later and begin the discussion again to address new issues.
6. Have someone document the issues, and proposed solutions. Which policy decisions need to be made in advance? What changes in practice are required? What plans, policies and procedures need developed or updated?



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Level 2 – Intermediate: Tabletop Exercise (con't)

AFTER the Exercise

1. For your general employee population, hold hotwash/staff meetings as soon as possible after the *Drop, Cover, and Hold On* focus drill portion to discuss what happened, people's experience during the drill, what they were thinking about, what caused concern, what worked well and what did not work well. Take this opportunity to:
 - Discuss the importance of preparedness at work and at home. (Staff's and volunteers' home/family preparedness will allow them to either stay at work, or return to work more rapidly, to support your organization's mission and recovery).
 - Review post-disaster employee responsibilities.
 - Update emergency contact lists and go over phone tree procedures.
 - Discuss your safety and organization resumption priorities.
 - Discuss staff emergency responsibilities and potential Hospital Incident Command (HICS) roles.
 - Share lessons learned from the exercise or real experiences.
 - Listen attentively to staff suggestions.
2. At your management level:
 - Review staff and management emergency responsibilities.
 - Discuss staff notification procedures (phone tree or mass notification tools) and ensure emergency contacts lists are kept up to date.
 - Review and recommend safety and operations resumption priorities for your Emergency Operations Plan.
3. For the Tabletop Exercise participants, verify whether you met your exercise objectives or not. Discuss what happened regarding people's experience, areas of concern, and what worked well or did not, and then document all comments to officially end the exercise.
4. Determine your next steps and assign people to those tasks to follow-up.
 - Assemble data gathered to develop After Action Report
 - Develop an Improvement Plan to address areas of improvement.
 - Assign a team to begin reviewing or updating your Emergency Operations Plan and other policies and procedures based on experiences from this exercise.
 - Discuss the importance of preparedness at work and at home encouraging participation.
5. Review "7 Steps to an Earthquake Resilient Business" for additional ideas, available at www.earthquakecountry.org/roots.
6. Schedule next exercise one year from now (or sooner) so employees can practice life safety actions and to exercise the emergency procedures of your Emergency Operations Plan, especially after changes.
7. Share your stories and photos at www.ShakeOut.org.
8. Encourage employees to prepare at home using the 7 Steps to Safety from "Putting Down Roots in Earthquake Country" (see www.earthquakecountry.org).



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Level 3 – Advanced: Functional Exercise

This operations-based exercise tests command and control during a major earthquake including emergency response and/or recovery duties in your Emergency Operations Plan. The exercise incorporates simulated incidents, decision-making, and policies tested, and then a review afterwards to discuss what worked or what did not in order to make changes for the next earthquake or exercise.

BEFORE the Exercise

1. If you will participate in the ShakeOut exercise, register your facility as an official participant at www.ShakeOut.org (make sure to register in your state or region).
2. Bring together the Exercise Planning Team to design the exercise.
 - Determine or review your plans, policies and procedures for an earthquake.
3. If your facility participated in a prior ShakeOut Drill or Exercise, review past After Action Reports and Improvement Plans.
4. Determine the exercise objectives.
 - What would you like your exercise to address? Potential issues to include for discussion:
 - Does the facility have a process to assess damage to hospital structure and infrastructure?
 - Would the facility lose power, water or medical gasses?
 - Does the facility have procedures to establish redundant communications internally and externally?
 - Would facility access be limited?
 - How would transportation be affected?
 - Would transportation issues affect staff and patient access?
 - How would you decide evacuation versus shelter-in-place?
 - How and where would you evacuate patients?
 - What type of evacuation equipment does the facility have?
 - Who is trained to use the facility evacuation equipment?
 - How will you direct employees/staff during and immediately following the shaking?
 - Does the facility have procedures to track patients, beds, and staff?

Consider using the HICS Earthquake and Evacuation Incident Planning Guides to develop objectives that are available at www.emsa.ca.gov/hics/hics.asp, www.hicscenter.org, and www.calhospitalprepare.org – and is found under the scenario section.

5. Determine the scope and timeframe of your exercise.
 - For example, test a specific part of your organization’s emergency plan for an hour.

Learn about potential earthquakes for your area and the Exercise Planning Team can use the HICS Earthquake and Evacuation Scenarios available at www.emsa.ca.gov/hics/hics.asp, www.hicscenter.org, www.calhospitalprepare.org as a base, or develop your own with specific details of how you might expect the shaking to impact your facility (i.e., the building, operations, service providers, employees, patients, and volunteers). For other ideas, review the 2008 San Andreas scenario at www.ShakeOut.org/scenario.

6. Develop an Exercise Plan (EXPLAN). Examples are available at www.calhospitalprepare.org and <https://hseep.dhs.gov>.
7. Finalize the scenario; making sure it supports your exercise objectives.





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Level 3 – Advanced: Functional Exercise (con't)

8. Select an Exercise Director to run the exercise. Determine other staffing role requirements such as assigning personnel as observers, and evaluators to document activities in chronological order.
9. Ensure training of all exercise participants, such as Hospital Incident Command System – HICS updates and evacuation equipment training, so they are fully aware of their roles and responsibilities. All participants, evaluators and decision-makers should review the disaster plan.
10. Create a Master Scenario Events List (MSEL) that is a timeline for your exercise, such as:
 - 1000 a.m. – Earthquake starts, employees *Drop, cover, and Hold On*.
 - 1001 a.m. – Lights go out and computers go down.
 - 1003 a.m. – Sprinklers in South East corner of first floor turn on.

MSEL templates and examples are available at www.calhospitalprepare.org and <https://hseep.dhs.gov>.

The MSEL includes a list of “injected events.” “Injects” are surprise events that could reasonably occur during the exercise (e.g., aftershocks, specific problems related to your services, etc.). These events can be “injected” (or provided to the participants in the form of a note, a person acting out a role in the exercise, etc.) periodically during the exercise to get participants thinking of issues and solutions without overwhelming them.

11. (Optional) Download realistic sound effects and safety information to play during your drill by downloading recordings from www.ShakeOut.org/resources.
12. Inform your employees/staff, volunteers and patients:
 - The date and time of your exercise
 - How to correctly perform *Drop, Cover, and Hold On*, wherever they are.
 - This includes taking cover beneath a sturdy table or desk, or dropping to the floor near an interior wall and covering your head with your hands and arms.
 - Develop special procedures for unique locations such as rooms and offices with glass walls.
 - Your expectations for their participation (i.e., *Drop, Cover and Hold On*, gathering at a central location for a head count, playing a role such as a “injured” that will need medical assistance, and/or having post-exercise discussions, etc.).
 - If your exercise is part of the Great California ShakeOut, encourage employees, volunteers, etc. to invite friends, families, and neighbors to register at www.ShakeOut.org, in their region, so they participate as well and receive information directly.
13. Determine the addition of the post-shaking evacuation procedures to the exercise, if needed:
 - **Post-Earthquake:** Based on the age and type of your building, and the environment inside/outside of building, etc., determine whether your facility would evacuate or Shelter-in-Place after a real earthquake, and how you would first *assess the building’s damage* before directing employees to either stay put or evacuate. Consider new safety hazards outside of your facility caused by the shaking.
 - **Post-Earthquake Tsunami Threat:** If your facility is in a coastal area, consider whether or not you need to have plans to evacuate to higher ground.

The Night BEFORE the Exercise



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1. Create a brief written description of the earthquake's impact using your scenario along with some questions for employees to consider.

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- Tape this description under desks and conference tables or provide employees sealed envelopes to open during the exercise. (You can use email, but it is more affective if they do not read this until during the exercise.)
- To increase participation, include a surprise under the desk (candy, light stick, lunch coupons, etc.) While a serious subject, you can increase numbers by also adding some fun.

DURING Exercise

1. Via your public announcement system, email, cell phone/text reminder or verbal direction:
 - Announce that the earthquake drill has begun and to *Drop, Cover, and Hold On*.
 - (Optional) Play the audio recording (see above) on your PA or, alternatively, play it on a computer in each office.
 - Suggest that while down on the floor, employees look around at what might fall on them during a real earthquake. Secure or move items after the drill to prevent injury and damage.
2. After at least one minute, announce that the shaking is over and for everyone to stand up again.
3. Announce the beginning of the exercise and for employees to follow their response procedures.
4. As the exercise progresses distribute individual "inject events" to specific participants. Have exercise evaluators observe and document how these surprise issues are handled.
5. When the exercise objectives are met, announce that the exercise is over

AFTER the Exercise

1. Assemble the Exercise Director and evaluators with their documentation to summarize activities, actions, decisions, and solutions from the exercise.
 - Discuss whether you met your exercise objectives or why not.
 - Document lessons learned, best practices and necessary actions to improve your employee training, emergency procedures, and incorporate into the Emergency Operations Plan.
2. Hold hotwash/staff meetings/debriefings as soon as possible after the exercise so all employees/staff can discuss and document what happened during the exercise, what decisions were made, what worked, what didn't, etc. Take this opportunity to:
 - Discuss preparedness at work and at home. (Employees' and volunteers' home/family preparedness will allow them to either stay at work (or return to work more rapidly) to support your organization's mission and recovery).
3. Next, assemble exercise participants including your decision-makers and leaders.
 - Depending on the size of your facility, you may need to have groups meet separately, followed by a leadership meeting with representatives from each group.
 - Discuss and document comments of what happened during the exercise, what decisions were made, what worked, what didn't, etc.
 - Listen attentively to staff suggestions.
 - Encourage the sharing of lessons learned from the exercise or real experiences.
 - Review pre and post-disaster employee responsibilities.
 - Discuss need to update emergency contact lists and any other critical documents in plan.
 - Discuss any changes to your safety and organization resumption priorities.
 - Discuss possible changes to company staff emergency responsibilities.
 - Cover the importance of preparedness at work and at home, encouraging participation.





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- Document and accept all comments then thank all the participants to officially end the exercise.

Level 3 – Advanced: Functional Exercise (con't)

4. At your Emergency Preparedness Planning level:
 - Develop After Action Report and Improvement Plan.
 - Review lessons learned and recommendations to be added to the plan.
 - Update staff and management emergency responsibilities.
 - Discuss process to keep critical documents up to date.
 - Determine or assign staff update your Emergency Operations Plan with lessons learned from the exercise.
 - Review the updated Emergency Operations Plan and associated policies and procedures with recommended safety and operations resumption priorities and procedures.
5. Determine next steps and assign people to those tasks to follow-up.
 - Schedule training as needed to address plan changes.
 - Make sure future exercises follow trainings so that employees can work through the most current procedures.
6. Schedule next exercise one year from now (or sooner) so employees can practice life safety procedures, decision-making, and to exercise the emergency procedures of your Emergency Operations Plan.
7. Share your exercise stories and photos at www.ShakeOut.org.
8. Review “7 Steps to an Earthquake Resilient Business” for additional ideas, available at www.earthquakecountry.org/roots.
9. Encourage employees to prepare at home using the 7 Steps to Safety from “Putting Down Roots in Earthquake Country” (see www.earthquakecountry.org).