Performing emergency evacuations
Dear reader,

The recent hurricane that devastated the Gulf Coast of the United States proves that hospital evacuations do happen. However, even if your facility isn’t located in a hurricane-affected area, you still may encounter a situation that forces you to evacuate. Fires, hazardous spills, and even aggressive patients can prompt a hospital evacuation.

Don’t put off getting your hospital evacuation procedures in order. This report will help you establish an evacuation process and guide you through evacuation drills.

Sincerely,

Scott Wallask
Senior Managing Editor
swallask@hcpro.com
781/639-1872, Ext. 3119

Table of contents

Buy time to make valuable evacuation decisions .............................................. 4
Important job duties during a hospital evacuation ........................................... 5
Evacuation staging: Who, what, and where ..................................................... 6
Practice makes perfect: Don’t get stuck during a real evacuation ................. 8
Sample medical facility evacuation matrix .................................................... 10
Buy time to make valuable evacuation decisions

Use these five stages of evacuation

During an evacuation, it could take hours to clear out a hospital and transport patients to alternative care sites. But, you may not have that much time.

Choosing evacuation

When an incident occurs in your facility that requires evacuation, enact your incident command system. In most cases, the incident commander will decide the extent of the evacuation—you may not need a full-building evacuation, but only need to evacuate one wing. The local fire or police department may also help decide whether to evacuate.

During a life-threatening situation, such as an out-of-control fire, if there isn’t time to enact the incident command system, then department leaders, a house supervisor, or a senior safety and security person should take charge and make the evacuation call.

Whether the emergency situation is a small roof leak or a fire, allow the incident commander to do his or her job and direct staff to perform their emergency responsibilities. For example, clinicians involved with patient care and their supervisors should report to their units, says David Hood, a principal at consulting firm Russell Phillips & Associates, LLC, in Rochester, NY.

In an emergent evacuation, every other worker should go to a predesignated location for a labor pool. “If you are going to evacuate your facility, you are going to need a ton of hands,” he says.

Labor pools should be in central locations that are easy to get to from outside the building. Also, think about an exterior site for a labor pool in case incoming folks can’t reach the hospital.

If the decision is made to evacuate, the incident commander should assign a labor pool leader and a transportation leader, who oversees vehicle concerns during relocation. These and other positions help ensure an orderly evacuation (see the chart on p. 5 for more details).

If time allows, each department can send a staffing sheet expressing to the command center which employees can be sent and outlining their level of training, says James Kendig, corporate director of safety, security, parking, and clinical transportation for Health First in Melbourne, FL.

As staff undertake their emergency duties, the process of evacuating patients can begin.

Below we’ve listed five stages of evacuation. This outline may prove valuable during an emergency when hospital staff need to make decisions and organize. HSEM talked to experts about the different stages and learned the critical concerns for each.

Stage 1: Horizontal evacuation

Move patients to a safe area on the floor. This requires moving patients to another smoke compartment on the other side of a smoke-resistant door, which shields patients from the existing problem.

“The smoke compartment gives you a defined place to go [to get away from] a fire, fumes, or even workplace violence,” says Zachary Goldfarb, BS, CEM, EMT-P, CHSP, president of Incident Management Solutions, Inc., in New York City. “Structures are designed in a certain way to create a safe place within a floor.” The safe area on the floor becomes a staging area for patients in anticipation of the next move.

During some emergencies, horizontal evacuation may be the only move you need to make. However, if a horizontal evacuation isn’t the continued on p. 6
Important job duties during a hospital evacuation

When an incident command center orders a full building evacuation, the following positions become vital to ensuring a successful operation. Charge nurses and unit supervisors will automatically assume their emergency duties once they receive evacuation orders. Meanwhile, the incident commander assigns labor pool and transportation leaders. The labor pool leader designates transportation groups.

<table>
<thead>
<tr>
<th>Charge nurses and unit supervisors</th>
<th>Labor pool leader</th>
<th>Transportation leader</th>
<th>Transportation groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Send staff members not involved with patient care to the labor pool.</td>
<td>• Oversees the labor pool of staff members who aren’t otherwise directly caring for patients.</td>
<td>• Coordinates the availability and arrival of vehicles to transport patients through discussions with local authorities and emergency services.</td>
<td>As assigned by the labor pool leader, these groups assist in evacuations in the following areas:</td>
</tr>
<tr>
<td>• Inform the labor pool of equipment that will be transported with patients, such as wheelchairs, gurneys, and oxygen tanks.</td>
<td>• Assign a worker to sign others into and out of the pool.</td>
<td>• Vehicles include ambulances, buses, helicopters, boats, and personal cars and trucks. If hospitals allow the use of personal vehicles, make sure there are enough drivers to spare.</td>
<td></td>
</tr>
<tr>
<td>• Determine which holding areas patients go to based on their acuity levels.</td>
<td>• Directs the setup of the holding areas by assigning unit leaders to each acuity’s holding spot. The unit leaders in turn assign someone to track patients as they arrive in the holding areas and another employee to track patients as they leave for a receiving facility.</td>
<td>• Elevator transportation—If allowed by authorities, moving patients from the evacuating floor to the ground level via elevator</td>
<td></td>
</tr>
<tr>
<td>• Assign someone to document patients leaving the unit, using a patient evacuation tracking form.</td>
<td>• Assigns transportation group leaders to oversee evacuations by unit floor, elevator, stairwell, and discharge floor.</td>
<td>• Stairwell transportation—Moving patients from the elevator or stairway to holding areas</td>
<td></td>
</tr>
<tr>
<td>• Once unit evacuations wrap up, direct remaining staff members to the labor pool and report the unit’s status to the incident command center and the various holding areas.</td>
<td>• Dispatches transportation groups to various units to assist in evacuations.</td>
<td>• Discharge floor transportation—Moving patients from the elevator or stairway to holding areas</td>
<td></td>
</tr>
</tbody>
</table>

Source: David Hood, principal at Russell Phillips & Associates in Rochester, NY.
ultimate solution, it will still give hospital staff a chance to catch their breath and prepare for the next move. Plus, you can’t walk everyone down the stairs at once, so use the staging area within the floor to determine a logical process to arrive at your established point.

Remember to move patients as little as possible and remain within the building, a process known as defend in place.

“The issue with stairs is that there isn’t a lot of space, and you may have a lot of users,” Goldfarb says, noting that it’s important to practice vertical evacuation.

If you do your homework by practicing your evacuation plan, you can minimize confusion and risk by determining which department or rooms evacuate through which stairwells.

Goldfarb points out that the fire department will need sole use of one stairwell during an emergency.

Stage 2: Vertical evacuation

Because emergency conditions can worsen, keeping patients and staff on the same floor during an incident may not always be an option. When the incident commander determines it’s time to move patients down stairs, the evacuation becomes more complicated.

For instance, during a fire the elevator won’t be available leaving the stairs as the only means to get people to a safer floor.

“The issue with stairs is that there isn’t a lot of space, and you may have a lot of users,” Goldfarb says, noting that it’s important to practice vertical evacuation.

If you do your homework by practicing your evacuation plan, you can minimize confusion and risk by determining which department or rooms evacuate through which stairwells.

Goldfarb points out that the fire department will need sole use of one stairwell during an emergency.

Once you’ve outlined which departments use which stairwells, the main challenge becomes physically moving the patients down the stairs. Evacuate people who can walk first, so staff can prepare immobile patients.

When moving immobile patients, be aware that a blanket drag, which involves wrapping patients in bed linens and dragging them down hallways, can be dangerous.

Goldfarb recommends hospitals invest in lifting devices, such as basket stretchers, to aid in moving patients. However, it is crucial that staff train regularly in how to move patients and operate patient-moving equipment.

### Evacuation staging: Who, what, and where

A coordinated approach to full building evacuations involves using predesignated areas to congregate patients and the vehicles that will move them. The chart below offers one example of doing so, using the medical conditions of patients as criteria.

<table>
<thead>
<tr>
<th>Patient acuity level</th>
<th>Holding area location</th>
<th>Vehicle staging location</th>
<th>Patient pickup location</th>
</tr>
</thead>
<tbody>
<tr>
<td>High acuity</td>
<td>Emergency department (ED)</td>
<td>Physician’s parking lot</td>
<td>ED’s ambulance entrance</td>
</tr>
<tr>
<td>Midacuity</td>
<td>Surgery center</td>
<td>Surgery center parking lot</td>
<td>Surgery center main entrance</td>
</tr>
<tr>
<td>Low acuity</td>
<td>Hospital conference center</td>
<td>Conference center parking lot</td>
<td>Conference center main entrance</td>
</tr>
</tbody>
</table>

**Stage 3: Holding areas**
The holding area, also known as an area of refuge, is the last resort before leaving the building. Clinicians should determine to which holding areas they send patients, based on acuity levels. Holding and vehicle staging areas, such as the labor pool, should be pre-designated spots.

“If you are in a one-story building, then you probably don’t have too many areas of refuge,” Goldfarb says. “In a larger facility you will have some options.”

The box on p. 6 shows one way to set up these areas.

A tracking form should follow patients as they progress from their unit to a staging area, and eventually to a receiving facility.

The holding area provides additional time for staff to “check out” patients, ensuring that they have all necessary medications, paperwork, and other requirements to stay alive.

Use duplicate tracking forms so that the hospital has a copy of the information it sent out with a patient, and a receiving facility can then send a final copy of the form back to the original site, Hood says.

Document when each patient leaves a clinical unit, arrives at a holding area, leaves a holding area, and arrives at a receiving facility.

“Once people have to leave a building, there are tremendous problems,” Goldfarb says. “You are then out of the environment of care, out of touch with resources like electricity, power, telephones, and basically in the street.”

**Stage 4: Outside evacuation**
Instructions in the hospital should illustrate, like a grade school evacuation plan, exactly where each department goes in the parking lot or field.

Establishing the outside evacuation area for each unit minimizes confusion and eliminates the problem of hundreds of people trying to get to the same area, Goldfarb says.

Keep in mind that fire departments and rescue teams may need to assemble outside the building in certain areas, so make sure your plan allows space for them.

**Stage 5: Relocation**
The final step in evacuation calls for moving patients to a previously selected, off-campus alternate care site. This is the most complicated type of evacuation because it involves transportation and patient tracking.

During evacuations, discharge patients with less critical conditions to reduce the number of people for whom you have to find new beds.

Placement of outbound patients is probably the trickiest part of an evacuation because most sites lack effective mutual aid agreements with other facilities in the region, Hood says.

Mutual aid plans may exist in varying forms already. Perhaps your old Y2K plans included mutual aid agreements or, if your facility is part of a chain, your corporate owners might have set up a plan.

Also check with your medical directors or nursing directors to see what mutual aid plans they use if a hospital needs to divert patients because of overcrowding; these arrangements may be useful during a disaster.

The basic gist of a mutual aid plan is for the hospitals involved to specify how many free beds they always have available in the event a participating site needs to evacuate patients.

The American Hospital Association offers an example of a mutual aid agreement online. Go to www.google.com and type “AHA hospital mutual aid” in the search line.

Do the work on your mutual aid agreement ahead of time to ensure the smoothest transition as possible.

“Remember, the only way you can get to a transition point fast is if you’ve thought about it ahead of time,” Goldfarb says.
Performing emergency evacuations

Many hospitals find practicing evacuation drills to be a time-consuming, disruptive, and a daunting task. But avoiding evacuation drills can be one of the biggest mistakes a hospital makes.

“Most hospitals just don’t practice evacuations,” says Zachary Goldfarb, BS, CEM, EMT-P, CHSP, president of Incident Management Solutions, Inc., in New York City.

“In the daily battle of maintaining normal hospital operations, it’s easy to hope that an evacuation is unlikely. [In addition,) full-scale preparedness efforts are not cost-effective.”

However, hospital officials shouldn’t assume they will never need to evacuate the building. “I used to think it would never happen to me, but we’ve evacuated five times in seven years,” says James Kendig, corporate director of safety, security, parking, and clinical transportation for Health First in Melbourne, FL. The facility now holds annual evacuation drills.

Part of the problem hospital officials face is how to perform an evacuation drill, especially because evacuating an entire hospital of patients just for practice isn’t logical.

“People will be struck by how long an evacuation takes,” Goldfarb says. “This is not a 20-minute or hour-long operation. It takes a lot of people and a lot of coordination, so if you’re going to get it right, you have to practice.” Here’s a step-by-step guide to help you get started on evacuation drills.

**Step 1: Talk it out**
Organize a discussion group to review your hospital’s evacuation plan. The goal of this group is to discover any problems and weaknesses in your plan.

For example, if there’s a fire on the seventh floor, how would you evacuate patients? How many patients are on that floor? How many staff members do you need to evacuate? Who will move the patients? How will you move the patients? The group’s facilitator must make sure everyone remains objective and on topic.

“[An evacuation] is not a 20-minute or hour-long operation. It takes a lot of people and a lot of coordination, so if you’re going to get it right, you have to practice.”

—Zachary Goldfarb

“This exercise is [like] unpeeling an onion until you get to the details of how evacuations work,” Goldfarb says. “This will allow you to discover whether you’ve really found all the answers.”

**Step 2: Iron out the details**
Take notes during the facilitated discussion and revise your plan as necessary. Once you’ve worked out the details, inform and train employees on any changes.

**Step 3: Take it to the table**
Once you’ve adjusted procedures, conduct a tabletop exercise. Organize a group of department directors to work through a specific evacuation scenario, such as a leaky and damaged roof over the labor and delivery unit at 1 a.m.

“This [exercise involves] playing different roles,” Goldfarb says. Now that you think you know how to evacuate, [go] through individual scenarios [so] you can work out additional wrinkles, discover new information to aid your evacuation procedures, or validate your process.

“What happens when the planned egress route becomes blocked and the alternate is already in use? How do you prioritize needs and resources? Consider every aspect of the evacuation scenario.

**Step 4: Move through the motions**
Conduct an exercise around a specific evacuation
Performing emergency evacuations

scenario. “This is when you actually walk the walk,” Goldfarb says. “You want to do everything shy of moving the patients.” Don’t rush through this exercise because you want to ensure that all steps work along the way—the key to a supply room actually opens the lock, and important phone numbers work and someone answers.

This exercise familiarizes staff with their roles even though they’ve already mentally gone through the evacuation process three times by this point.

**Step 5: Everybody out! The full-scale evacuation**

Practice a complete evacuation that involves moving patients—one of the biggest challenges staff members face during evacuations. Because you don’t want to disrupt patient care, you may choose to use patient simulators or even volunteer staff members to act as patients.

Staff members should practice moving real people, preferably other staff members, to understand the physical challenges involved.

“When you move a patient from the bed to the floor, you don’t want anyone to get hurt,” Goldfarb says.

“It’s easy to say, ‘I would drag the patient to the floor using his or her bed linen,’ ” he adds. “When the patient weighs 225 pounds and is connected to several monitors and infusion devices, one or even two people would find this challenging without hurting themselves or the patient.” Practice drills for the various stages of evacuation (see p. 4. for evacuation stages). The full-scale evacuation should involve staff practicing all aspects of evacuation, including moving patients down stairs and to alternative care sites.

Videotape the exercise for ongoing learning and to show absent staff members.

**Step 6: Practice the paper part**

Depending on the specific risks in your area, another way to practice evacuation is a paper drill, which focuses on gathering more than just physical information, such as moving patients.

During a paper drill, hospital staff go through all the evacuation motions without moving patients, but stress transporting medical records, medication, and bed assignments to an alternative site. Kendig uses the paper drill approach each year to exercise planned evacuations.

Use sample medical records from patients in different units such as oncology, pediatrics, and obstetrics to get a good idea of the issues that relate to each department. Complete check sheets for each patient to make sure you’ve transported all vital equipment and information.

An assigned person will work in the emergency department, almost like an air traffic controller, to keep patients moving out of the building, Kendig says. Another person monitors patients as they leave the building to ensure that they have appropriate medicines and medical records.

Your evacuation plan should assign people to conduct these jobs beforehand. During the paper drill, Kendig says hospital staff actually transport the information to their alternate site to make sure that everything works. Then hospital staff even practice the exercise in reverse, he says.

“You have fewer human issues in a planned evacuation so you’re not necessarily dragging patients down the stairs and can use elevators,” Goldfarb says. “In a planned evacuation, you’re not as concerned with motor skills, but rather administrative skills like tracking patients and coordinating resources.”

---

**NOTICE:**

Study evacuation routes posted below in the event of an emergency or a random, unannounced compliance survey.
### Sample medical facility evacuation matrix

Use this matrix tool, developed by Zachary Goldfarb, BS, CEM, EMT-P, CHSP, president of Incident Management Solutions, Inc., in New York City, to help organize your evacuation response. The tool outlines the necessary steps and notifications required by specific levels of evacuation.

<table>
<thead>
<tr>
<th>Scope</th>
<th>Definition/parameters</th>
<th>Urgency</th>
<th>Authority to evacuate</th>
<th>Relocation site</th>
<th>EOP activation site</th>
<th>Notifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level I</strong></td>
<td>Information received that indicates a situation or event may require patient or ancillary service relocation from portions or all of the facility. For example, National Weather Service issues hurricane, blizzard, or tornado watch/warning.</td>
<td>Planned</td>
<td>Incident commander</td>
<td>As planned</td>
<td>Level I</td>
<td>Per EOP + Network EOC, + local office of emergency management and state/local department of health</td>
</tr>
<tr>
<td><strong>Level II</strong></td>
<td>Need for a horizontal evacuation of patients, visitors, and staff from an area of the building. For example, fire in single room.</td>
<td>Urgent</td>
<td>Incident commander</td>
<td>As planned</td>
<td>Level II</td>
<td>Per EOP + Network EOC</td>
</tr>
<tr>
<td><strong>Level III</strong></td>
<td>Need for vertical evacuation of patients, visitors, and staff from one floor of a building. For example, smoke condition affecting an entire floor.</td>
<td>Emergency</td>
<td>Person in charge of affected area</td>
<td>Adjacent smoke compartment or barrier</td>
<td>Level II</td>
<td>Per EOP + Network EOC</td>
</tr>
</tbody>
</table>

**Notifications**

- Per EOP + Network EOC, + local office of emergency management and state/local department of health
<table>
<thead>
<tr>
<th><strong>Level IV-A</strong></th>
<th><strong>Large area/entire building evacuation</strong></th>
<th>Planned Incident commander</th>
<th>As planned another building on campus, or planned relocation facility</th>
<th>Level I</th>
<th>Per EOP + Network EOC + local office of emergency management and state/local department of health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Urgent Incident commander</td>
<td>Planned local casualty collection point, pending relocation to planned relocation facilities</td>
<td>Level III</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emergency Incident commander</td>
<td></td>
<td>Level IV</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Level IV-B</strong></th>
<th><strong>Entire campus evacuation</strong></th>
<th>Planned Incident commander</th>
<th>Planned relocation facility</th>
<th>Level I</th>
<th>Per EOP + Network EOC + local office of emergency management and state/local department of health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Urgent Incident commander</td>
<td>Planned local casualty collection point, pending relocation to planned relocation facilities</td>
<td>Level IV</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emergency Incident commander</td>
<td></td>
<td>Level IV</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Zachary Goldfarb, BS, CEM, EMT-P, CHSP. Reprinted with permission.*
Performing emergency evacuations