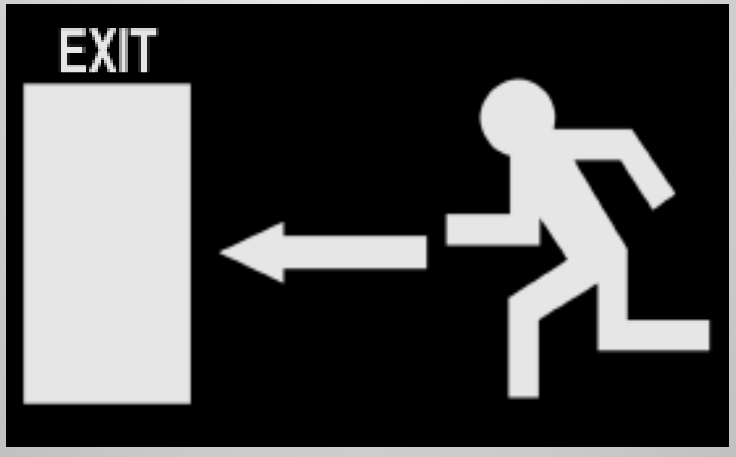
Performing emergency evacuations



A supplement to Healthcare Security and Emergency Management

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,

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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.

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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.

Charge nurses and unit supervisors	Labor pool leader	Transportation leader	Transportation groups
• Send staff members not involved with patient care to the labor pool. • Inform the labor pool of equipment that will be transported with patients, such as wheelchairs, gurneys, and oxygen tanks. • Determine which holding areas patients go to based on their acuity levels. • Assign someone to document patients leaving the unit, using a patient evacuation tracking form. • 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.	• Oversees the labor pool of staff members who aren't otherwise directly caring for patients. • Assign a worker to sign others into and out of the pool. • 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. • Assigns transportation group leaders to oversee evacuations by unit floor, elevator, stairwell, and discharge floor. • Dispatches transportation groups to various units to assist in evacuations.	Coordinates the availability and arrival of vehicles to transport patients through discussions with local authorities and emergency services. 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.	As assigned by the labor pool leader, these groups assist in evacuations in the following areas: • **Evacuating floor transportation**—Moving patients from their unit to an elevator or stairway • **Elevator transportation**—If allowed by authorities, moving patients from the evacuating floor to the ground level by elevator • **Stairwell transportation**—Moving patients from the evacuation floor to ground level via stairs • **Discharge floor transportation**—Moving patients from the elevator or stairway to holding areas

Source: David Hood, principal at Russell Phillips & Associates in Rochester, NY.

evacuation decisions

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ultimate solution, it still will 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.

"Keeping patients in beds or wheel contraptions is in their best interest because they are more mobile," Kendig says. "Unless you have no power or water, your best option is always to try to defend in place."

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.

Patient acuity level	Holding area location	Vehicle staging location	Patient pickup location
High acuity	Emergency department (ED)	Physician's parking lot	ED's ambulance entrance
Midacuity	Surgery center	Surgery center parking lot	Surgery center main entrance
Low acuity	Hospital conference center	Conference center parking lot	Conference center main entrance

Source: David Hood, principal at Russell Phillips & Associates, LLC, in Rochester, NY. Reprinted with permission.

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 predesignated 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. ■

Practice makes perfect: Don't get stuck during a real emergency evacuation

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.

> **"[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 it."**
>
> ***—Zachary Goldfarb***

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.

"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.

"This drill takes it a step further from not only thinking about what works, but what can go wrong," Goldfarb says. For example, what would you do if a nurse falls and sprains his or her ankle during an evacuation?

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

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.

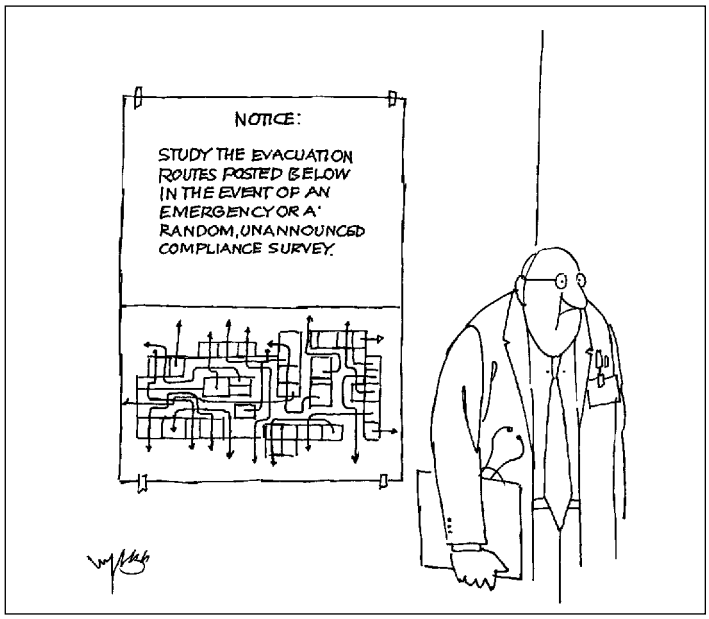
During a paper drill, hospital staff go through all the evacuation motions without moving patients, but stress transporting medical records, medication, and bed assignments to an alternative site. Kendig uses the paper drill approach each year to exercise planned evacuations.

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." ■



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.

Scope	Definition/parameters	Urgency	Authority to evacuate	Relocation site	EOP activation site	Notifications
Level 1 **Alert for potential evacuation**	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.				Level I	Per EOP + Network EOC, + local office of emergency management and state/local department of health
Level II **Limited area/horizontal evacuation**	Need for a horizontal evacuation of patients, visitors, and staff from an area of the building. For example, fire in single room.	Planned	Incident commander	As planned	Level I	Per EOP + Network EOC
		Urgent	Incident commander	As planned	Level II	
		Emergency	Person in charge of affected area	Adjacent smoke compartment or barrier	Level II	
Level III **Limited area/vertical evacuation**	Need for vertical evacuation of patients, visitors, and staff from one floor of a building. For example, smoke condition affecting an entire floor.	Planned	Incident commander	As planned	Level I	Per EOP + Network EOC + local office of emergency management and state/local department of health
		Urgent	Incident commander	As planned	Level II	
		Emergency	Person in charge of affected area	Two floors below emergency (not below grade)	Level II	

Level IV-A **Large area/entire building evacuation**	Need for a complete evacuation of patients, visitors, and staff from multiple floors or the entire building. For example, an uncontrolled fire or failure of a critical system in the hospital.	Planned	Incident commander	As planned another building on campus, or planned relocation facility	Level I	Per EOP + Network EOC + local office of emergency management and state/local department of health
		Urgent	Incident commander		Level III	
		Emergency	Incident commander	Planned local casualty collection point, pending relocation to planned relocation facilities	Level IV	
Level IV-B **Entire campus evacuation**	Need for complete evacuation of patients, visitors, and staff from the entire hospital campus. For example, environmental emergency requiring regional evacuation.	Planned	Incident commander	Planned relocation facility	Level I	Per EOP + Network EOC + local office of emergency management and state/local department of health
		Urgent	Incident commander	Planned local casualty collection point pending relocation to planned relocation facilities	Level IV	
		Emergency	Incident commander		Level IV	

Source: Zachary Goldfarb, BS, CEM, EMT-P, CHSP. Reprinted with permission.

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