Preparing for events that could require evacuations

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Will you be ready if a wildfire, hurricane, tornado, or other disaster in your area necessitates an evacuation? Be sure your planning includes an all hazards analysis and ensures that you have the resources you will need until help from FEMA arrives.

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Evacuation! Probably the worst fear of every healthcare leader. It is the last resort, the nuclear option when all other efforts have been exhausted. It is the option that risks putting lives in danger. It is the option that means abandoning the facility that normally represents a safe haven. Evacuation is just counterintuitive. And yet, sometimes, natural or other disasters make it unavoidable.

These disasters can take many forms. In 2005, Hurricane Katrina forced several hospitals to evacuate. In 2001, floods from rain besieged the Houston Medical District, causing some hospitals to have to evacuate. In 2012 in New York City, five city hospitals were forced to evacuate because of Superstorm Sandy. Other examples include tornadoes like the one that hit a hospital in Joplin, Kansas, in 2011; wildfires, like the 2020 Glass Fire in Napa County, California, which forced thousands of peo-

ple to be evacuated; and, more recently, events in Austin, Texas, where two hospitals had to be evacuated this past February after they lost water and power due to an unusual weather event involving snow, ice, and cold.

On a personal level, I (Freidenfelds) lived through an emergency incident in which evacuation was only narrowly avoided. My healthcare institution in Chicago depended on steam from an external generating source. Steam heats the facility and provides the resource for sterilizing supplies such as surgical tools. On a December day, we lost the steam, and we were experiencing temperature drops throughout the facility. Even though valiant efforts were being made to restore the steam feed, we were unsure when it would return. We declared an emergency, and the hospital Incident Command was activated.

At the time, emergency management programs were not as robust as they are now. Our plan had little in terms of action steps, except to prepare to evacuate. We notified the Office of Emergency Management and Communications (OEMC), the emergency response coordinator in Chicago. Although we staged for an evacuation, we worked tirelessly to avoid that option. In the end, we identified a supplier that had 200 space heaters in stock and had them delivered. We coordinated with our public health department to obtain an "emergency conditions" exception to use the heaters. We were required to deploy manpower to monitor every space heater to ensure protection from causing a fire. The heaters helped stabilize temperatures in patient units until the steam was restored. No evacuation! Lives of patients were saved that day simply by not having to evacuate the facility.

These days, many emergency management (EM) programs require facilities to prepare for patient surges, shelter-in-place emergencies, and evacuations and to apply an all hazards approach to preparing for emergencies; that is, to apply principles that would be effective for any kind of hazard.

According to FEMA, there are four phases of emergency management: mitigation, preparedness, response, and recovery. Healthcare institutions cannot prevent such natural disasters as wildfires, floods, and hurricanes, but with preparedness, we can reduce the impact. Preparedness involves

plans, training, and exercises.

HOW SHOULD HOSPITALS PREPARE?

Assessment is Job One

Preparing for emergencies that could require evacuation starts with a plan, and that plan starts with a Hazard and Vulnerability Assessment (HVA). Each healthcare institution is required to conduct an HVA annually. This assessment should look at all hazards, including environmental hazards. Personnel who should be involved include subject matter experts from the organization (who should constitute an EM committee) as well as outside partners, such as personnel from the local Office of Emergency Management and Communications and from the public health, fire, and police departments

Kaiser Permanente has developed an HVA tool that is publicly available online (https://www.calhospitalprepare.org/hazard-vulnerability-analysis). The tool can be a good guide to developing an understanding of the probability of an incident and its likely severity. The key to the effective use of this tool is to be honest. This is not the time to be optimistic in your evaluation. It is better to understand the gaps and weaknesses during the assessment so that they can be brought to the attention of leadership. The assessment should be made on an enterprise risk management level, and if it is determined that a risk needs to be addressed, financial resources should be allocated to minimize the risk or at least reduce the impact of the hazard or event.

The HVA should contribute details for the plan. The plan should be an all hazards plan that addresses the considerations and the potential actions steps for the organization. We do not recommend writing a plan as a procedure. Every disaster requires different specific steps. A procedure-style plan may cause unnecessary steps to be taken. Do not write a separate plan for each type of event. A good all hazards plan addresses the steps that can be taken regardless of the specific type of hazard.

Attending to Resources

As the plan is developed, identify what resources are needed to bolster preparedness for a disaster. One major takeaway from Hurricane Katrina was that, in the event of an emergency, FEMA may not be able to provide aid for

up to 96 hours after the event occurs. Therefore, The Joint Commission has established a requirement that emergency planners evaluate resource availability for that time period.

In a frequently-asked-questions document relating to The Joint Commission Chapter EM.02.01.01, The Joint Commission says [1]:

Health care organizations are not required to remain fully functional for 96-hours. Nor are they required to stock-pile supplies. They are required to develop an operational plan for 96-hour duration to fully understand capabilities and limitations in order to make effective decisions when under emergency conditions in an organized and prioritized manner.

Decisions would include but not be limited to maintaining emergency services, progressive curtailment of activities, stopping elective/non-emergency services, transfer of patients, evacuation of the facility, or returning to normal operations.

High priority incidents identified in the hazard vulnerability analysis are the issues to be considered in the 96-hour sustainability analysis. Issues include but are not limited to the anticipated actions, emergency supply inventory, access to emergency supplies, and emergency services based upon the assessment process. Exercises should be used to validate or adjust the sustainability plan.

For illustrative purposes, The Joint Commission gives the example of a hospital that that has a 72-hour supply of potable water at full capacity:

Consideration of reducing patient load by early discharge and halting elective procedures could reduce water demand by approximately 50%, thereby extending the hospitals potable water supply to 96 hours. The intent is to have a plan to stretch the supply on hand or to activate a Memoranda of Understanding (MOU) to receive more supplies, or a combination of both actions.

If any of the organization's controlling authorities, such as a local, state, region or federal charter, requires the organization to remain open for a specified period, then the organization is expected to comply.

An important preparedness

component is understanding what resources need to be available and conserved, and which will be exhausted, and when, in a disaster.

Before the steam-loss event in Chicago, Freidenfelds and his colleagues tried to anticipate resource issues by conducting an emergency exercise that ran at least 96 hours. We placed ourselves on that metaphoric "island" where nobody was coming to save us or bring us anything, just like Tom Hanks's character in the film *Cast Away*. We ran one exercise for an assumed slow-moving disaster such as a snowstorm approaching and then conducted another for a fast hit like a tornado. The exercise incorporated loss of power, water, gas, steam, and even some levels of communications. We wanted to know our worst-case scenarios. We divided the 96 hours into smaller intervals of time and took a real inventory of what resources were on hand at each interval, and what was in danger of being exhausted.

This exercise resulted in a series of questions. Could we conserve some resources? If staff could not go home, where would they stay? How would we alter schedules? Would staff be able to shower or otherwise clean up? What did the pharmacy have in stock? How much blood was on hand? What was our potable water stock? How long would the generators keep running given the actual supply of fuel on hand?

Working with the Environment of Care Committee

Once the EM committee has determined vulnerabilities and potential hazards, it is time to collaborate with the environment of care (EOC) Committee to share the results. The EOC and EM committees should work together to determine how to improve preparedness for disasters that may lead to evacuation.

In an article clarifying its environment of care standards, The Joint Commission notes that the standards require high-level management plans for six areas: safety, security, hazardous materials and waste, fire safety medical equipment, and utilities [2]. Further, the plans should address the following activities to support performance in the six areas: risk assessment; staff development; emergency response and proce-

dures; inspection, testing, and maintenance; information collection and evaluation; performance monitoring; and annual evaluation.The article also suggests addressing standards from other chapters in the accreditation manuals, such as standards from the chapters relating to emergency management, life safety, and infection prevention and control.

"The EC management plans should be more than just a compliance exercise for your organization," the article concludes. "To provide true value, staff and leaders must think of them as a way to achieve and constantly maintain a safe environment." At my organization, our motto was, "Let's be more than compliant, let's be ready."

In some jurisdictions, the use of the *NFPA 1600: Standard on Continuity, Emergency, and Crisis Management* is utilized for emergency preparedness. The 2019 edition has placed increased emphasis on crisis management. Organizations are now required to establish and maintain crisis management capabilities, including clarifying assigned responsibilities and processes. The standard also has been reorganized to provide better alignment with the Plan-Do-Check-Act (PDCA) model of continuous improvement. NFPA 1600 divides the code into seven different chapters for compliance. Those chapters cover program management; planning; implementation; execution; training and education; exercises and tests; and program maintenance and improvement.

WHEN EVACUATION IS THE ONLY OPTION

I some instances, the integrity of the facility's structure will be at risk and an evacuation will be necessary. Of course, evacuations need to be conducted in way that maintains patient safety. The plan should address how to move ambulatory and non-ambulatory patients and to which alternate facilities. When we were planning for evacuation in Chicago, we learned that the local public health department would be very helpful in identifying alternate care sites. We learned that public transportation buses could arrive to take ambulatory patients. We called on private ambulance companies to support our needs.

Hopefully, your organization has established a strong relationship with emergency management staff at the various governmental

levels so that you can coordinate your organization's preparedness plans with official community plans. It is highly recommended that evacuation plans be exercised as often as possible. There is nothing that contributes more to a successful execution of a plan than exercise and practice.

CONCLUSION

Preparations for natural disasters should be in a continual process of development, training, exercise, evaluation, and modification. As new staff come on board, they will need to become familiar with their role in the plan and trained in the plan's nuances.

Good emergency management personnel keep an eye on what is happening in the world and consider how their organizations will manage that event. Is it a good practice to ask "What if" as often as possible.

References

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