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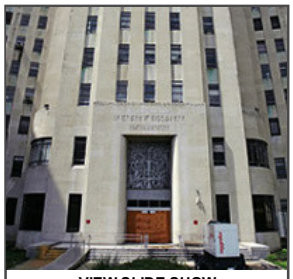
PROFESSION

Patients and hospital staff travel along a flooded street in New Orleans on Sept. 1, 2005, as they return to Charity Hospital after an evacuation attempt failed because of a lack of ground transportation. The hospital was forced to move patients when a generator ran out of fuel. Post-Katrina, some hospitals have contracted with outside companies to handle emergency evacuations so as not to be completely dependent on government assistance. [Photo by NY Daily News / Getty Images]

Katrina's legacy: Rethinking medical disaster planning

The storm served as a wake-up call, prompting physicians, hospitals and government officials to re-examine how to best deliver care in catastrophic conditions.

By KEVIN B. O'REILLY, amednews staff. *Posted Sept. 6, 2010.*



VIEW SLIDE SHOW

When Hurricane Katrina struck five years ago, killing nearly 2,000 people, demolishing the Gulf Coast and breaching New Orleans' levees, it highlighted the weaknesses of the country's medical disaster planning.

About 1,750 patients were stuck in 11 hospitals surrounded by as much as 20 feet of floodwater in New Orleans, according to the Louisiana Hospital Assn. Evacuating the hospitals by boat and helicopter took nearly a week. At least 140 hospital patients and nursing home residents died, according to a December 2008 study in *Disaster Medicine and Public Health Preparedness.*

The scale of the Katrina catastrophe sparked doctors, hospitals and the government to re-examine their plans for preparing and responding to disaster.

In the years since the storm, major steps have been taken to streamline federal disaster preparedness bureaucracies and to assess and respond more quickly to medical needs. Many hospitals have changed their approach to handling critically ill patients in the face of disaster. More physicians are becoming trained in how to deal with catastrophic emergencies, yet efforts to remove the legal impediments that can make it difficult for doctors to serve as first responders have been stymied.

Leadership crisis

The first huge barrier to effective medical response after Katrina was determining who among federal, state and local officials was in charge, said James J. James, MD, DrPH, director of the AMA Center for Public Health Preparedness and Disaster Response and editor-in-chief of the journal *Disaster Medicine and Public Health Preparedness.*

"There's always this terrible fog of communication in these events," said Dr. James, former director of the Miami-Dade County Health Dept. "That's what I think plagued the early response. It's not that we didn't have the response capability; it's that we never activated it."

11 states, D.C. and the Virgin Islands give doctors liability protection when treating disaster victims.

Officials seemed paralyzed by the fear of making the wrong decision.

"You've got to do something -- act," he said. "Someone's got to make a decision."

James B. Aiken, MD, agrees. He was at New Orleans' Charity Hospital during the Aug. 29, 2005, hurricane and now is director of emergency preparedness at the Louisiana State University Health Sciences Center.

"Our experience during Katrina was that once we understood what we needed, the delay wasn't so much that [resources] weren't available, but that the people making the decisions were not willing to commit those resources," said Dr. Aiken, clinical associate professor of emergency medicine at the LSU School of Medicine. "There's just this huge reluctance for the one picking up the phone to say, 'Go.' "

In December 2006, President George W. Bush signed the Pandemic and All-Hazards Preparedness Act to address the who's-in-charge issue. The legislation made the secretary of the Dept. of Health and Human Services the lead federal official responsible for public health and disaster medical response.

The law also created the HHS Office of Assistant Secretary for Preparedness and Response. The office administers the Emergency System for Advance Registration of Volunteer Health Professionals, a national network of state-based credentialing systems intended to make it easier for doctors and others to let officials know they are ready to help when needed.

Dr. Aiken said he saw a difference in how both federal and state officials responded in 2008 during and after Hurricane Gustav, a Category 2

storm.

"There is more of a strike-team mentality now," he said. "Now there is a small group of people that will stand ready and, if not actually be in the area before the threat, come down immediately to be part of the response and assessment."

Meanwhile, federal officials are working to form stronger relationships with public health departments and state and local decision-makers before disaster strikes, while outlining the limits of what can be provided.

"You don't want to be exchanging business cards at the scene of the disaster," said Richard Serino, deputy administrator of the Federal Emergency Management Agency since October 2009. "You want to know the local people ahead of time, and you want to know what's going to be brought to the table and what the expectations are. ... This is a team effort. FEMA's not the one to be able to come in on a white horse to save the day."

Protecting the sickest patients

Hospitals in New Orleans have made many changes in response to Katrina, said Kathy A. Hebert, MD, MPH, who co-wrote a July 2006 Urban Institute report on the challenges that faced hospitals and other custodial institutions during and after the hurricane.

After being evacuated from other areas of the city, people seek medical attention along Route 10 near Causeway Boulevard in New Orleans. Though interest in disaster preparedness spiked after Hurricane Katrina, experts say more training is still needed.
[Photo by John O'Boyle / Star Ledger / Corbis]

Many have moved critical equipment such as emergency generators to higher floors. They have revamped communications lists, adding personal e-mail addresses and contact information for staff members' families, and they have purchased better satellite phones to help communicate should phone lines go down, as they did during Katrina. Some hospitals, such as the Interim LSU Public Hospital, have contracted for their own emergency evacuation help so as to not be dependent on outside government assistance.

The storm also taught doctors and other hospital leaders that the facilities should hold as few people as possible when disaster strikes. Previously, hospitals were used to shelter health professionals and area residents because they could withstand hurricane-force winds.

Moreover, doctors and hospitals are rethinking their approach to moving critically ill patients such as those dependent on ventilators.

Pre-Katrina, the rule was to keep these patients in place. That's because most believed that the danger of moving them could be greater than leaving them in a hospital hit by disaster. But as hospitals lost power after Katrina, many of these patients had to be ventilated by hand for hours or even days. The sickest did not survive the dehydration caused by days with limited water and no air conditioning.

The dilemma of whether to move critically ill patients still vexes physicians in decision-making roles, experts said.

At the Interim LSU Public Hospital, patients who need intensive care will be moved depending on the severity of the approaching storm, Dr. Aiken said.

"For the patients who are critically ill, the risk of evacuating them, based on what we know now, is worth taking," he said. "It's worth risking their lives to put them through the logistics of evacuation rather than sheltering them in place knowing that once something's happened we may not be able to get them out quickly."

Shielding physician responders

Another question of risk haunts medical disaster planning -- how the specter of potential medical and criminal liability hinders physicians' willingness to help meet the surge of patients' needs when catastrophe strikes.

After Katrina, the AMA House of Delegates voted in 2007 to write model legislation that would protect physicians working in declared disaster areas from civil and criminal liability. The legislation has yet to find backing in any state legislature.

However, the Uniform Emergency Volunteer Health Practitioners Act, a model bill proposed in 2006 by the Uniform Law Commission, has been enacted in 11 states, the Virgin Islands and the District of Columbia. The bill gives physicians and other health professionals immunity from civil liability except in cases of gross negligence or willful misconduct.

"Some physicians who talked to us about what they faced said the liability was so unclear and onerous that they personally didn't want to put themselves at the risk of performing some sort of procedure when there are floodwaters at their feet," said Eric Fish, legislative counsel for the commission. The vast majority of states still do not offer specific liability protections for physician responders during disasters.

Whether they respond in their own area or travel out of state, physicians need disaster preparedness training, experts said.

At a minimum, physicians should know how to protect themselves and their families, how to interact with public health and emergency management officials, and how to plan to keep their practices going after disaster strikes, said Raymond E. Swienton, MD, co-director of the Section on Emergency Medical Services, Homeland Security and Disaster Medicine at the University of Texas Southwestern Medical Center in Dallas.

Since 2003, 100,000 health professionals -- about 30% of them physicians -- have taken all-hazards disaster preparedness training courses through the AMA-supported National Disaster Life Support Foundation.

"We've made a dent in the overall mission to adequately train enough of the health care work force," said Dr. Swienton, who helped develop the training courses. "It's only a start in the number that needs to be trained."

Interest in disaster preparedness training has spiked after major catastrophes such as Katrina and the Haiti earthquake, experts said.

Although five years have passed since Katrina, physicians should not forget its lessons.

"We really want to not lose that edge, not to lose the gains we've made," Dr. Swienton said. "The future rests on us not allowing complacency to take hold."

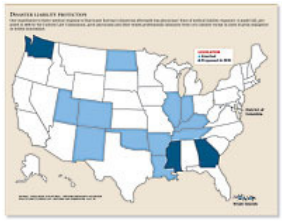
In the **Aug. 16 issue**, *read about how five years after the hurricane the New Orleans' health system has been transformed.*

The print version of this content appeared in the **Sep. 13** issue of *American Medical News*.

ADDITIONAL INFORMATION:

Disaster liability protection

One impediment to faster medical response to Hurricane Katrina's disastrous aftermath was physicians' fears of medical liability exposure. A model bill, proposed in 2006 by the Uniform Law Commission, gives physicians and other health professionals immunity from civil liability except in cases of gross negligence or willful misconduct.



Click to see data in PDF.

Enacted: Arkansas, Colorado, District of Columbia, Illinois, Indiana, Kentucky, Louisiana, New Mexico, North Dakota, Oklahoma, Tennessee, Utah, Virgin Islands

Legislation proposed in 2010: Georgia, Mississippi (measure died in committee),Washington

Source: "Enactment Status Map," Uniform Emergency Volunteer Health Practitioners Act, Uniform Law Commission, July 30 (**www.uevhpa.org/DesktopDefault.aspx?tabid=67**)

Preparing your practice

Office-based physician practices play a key role in immediate and short-term medical disaster response, experts say. By staying open or reopening quickly, they can deliver care to chronically ill or minimally injured patients and help keep them out of hospitals dealing with a surge of emergency patients. An AMA tool kit can help physician offices plan for disasters. Here are some key steps to take before disaster strikes.

STEP 1: Review the local hazard assessment

- Assess the probability of natural, human-made or technological disasters, ranging from a catastrophic Katrina-like event to localized hazards such as a fire or a burst pipe.
- Estimate the overall frequency and potential impact of the disaster on the office and the community.
- Give the most disaster planning attention to the likeliest, most devastating hazards.

STEP 2: Assess your practice continuity

- Make an inventory of things you need to keep going should disaster strike.
- Look at existing insurance policies, financing procedures, employee policies and risk management plans.
- Review personnel, their skills and availability in an emergency, considering where they live, their family responsibilities and any disabilities.
- Check on critical equipment for fire protection, communication, first aid and emergency power.
- Establish offsite storage of paper or electronic medical records and have backup systems for payroll, communications and computer systems.

STEP 3: Develop your practice's plan

- Establish and review annually your plan for how to respond to a disaster.
- Decide who will be in charge during the disaster and appoint an emergency management team and meeting location.
- Create a communications list of staff and patients; local emergency, health department, hospital, fire and police officials; and pharmacy and insurance agents.
- Identify how your practice will respond in the event of shortages of supplies, space or staff; how you will use volunteers; and how you will assure security.
- Determine who will notify staff and others that the emergency is over.

STEP 4: Practice your plan

- Conduct an exercise to test the plan.
- Test your staff phone tree and communication with patients.
- Assess your staff's personal readiness to report to work in an emergency and test their likelihood of doing so.
- Test leadership with written and verbal disaster scenarios to practice decision-making.

STEP 5: Review and revise

- Evaluate the response plan on whether it anticipated all the needed jobs.
- Determine how well the plan was executed. For example, did staff go to the emergency meeting location as planned?
- Evaluate how quickly the plan was put in place. How long did it take to notify staff or complete other actions set out in the plan?

Source: "What to do Before, During and After an Emergency or Disaster: A Preparedness Toolkit for Office-Based Health Care Practices," American Medical Association, 2009 (**catalog.ama-assn.org/Catalog/product/product_detail.jsp?productId=prod1440022**)

WEBLINK

"Hurricane Katrina Deaths, Louisiana, 2005," *Disaster Medicine and Public Health Preparedness*, December 2008 (**www.ncbi.nlm.nih.gov/pubmed/18756175**)

American Medical Association's Center for Public Health Preparedness and Disaster Response (**www.ama-assn.org/go/disasterprep**)

National Disaster Life Support Foundation (**www.ndlsf.org**)

"Health Care and Disaster Planning: Understanding the Impact of Disasters on the Medical Community," Louisiana State Medical Society, 2009 (**www.healthcaredisasterplanning.org**)

"After Katrina: Hospitals in Hurricane Katrina -- Challenges Facing Custodial Institutions in a Disaster," Urban Institute, July 2006 (**www.urban.org/uploadedpdf/411348_katrinahospitals.pdf**)

Emergency System for Advance Registration of Volunteer Health Professionals, U.S. Dept. of Health and Human Services (**www.phe.gov/esarvhp**)

Uniform Emergency Volunteer Health Practitioners Act, Uniform Law Commission (**www.uevhpa.org**)

"Management of Public Health Emergencies: A Resource Guide for Physicians and Other Community Responders," American Medical Association, 2005 (**www.ama-assn.org/ama/pub/physician-resources/public-health/center-public-health-preparedness-disaster-response/management-public-health.shtml**)

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