I t was the summer of 2009 when Nicole Lurie, MD, was named to lead the nation’s response to health emergencies and disasters, and the H1N1 flu virus loomed. It was the potential pandemic experts had worried about for decades. But Lurie, a medical doctor and researcher, already understood many of the gaps in disaster readiness. As director of a project the RAND Corp. was doing for the federal government, she had been deeply involved in planning for a pandemic.

“I was in a really good place to understand the issues and what some of the major gaps were,” said Lurie, assistant secretary for preparedness and response in the U.S. Department of Health and Human Services (HHS). “A huge area had to do with vaccines, our national capacity to make lot of vaccines quickly.” Now the nation has much greater vaccine manufacturing capabilities and is already preparing for a new pandemic threat, the H7N9 bird flu that in February 2013 emerged in China.

There are many more potential threats on the horizon than a flu pandemic, and Lurie’s job is to help the nation prepare for them all. Her purview includes coordinating response at all levels to the devastation brought by hurricanes, floods, tornadoes, mass shootings, explosions, bioterrorism — natural and man-made disasters that are a threat to human health and national security. Although much had been done to strengthen the emergency management infrastructure after 9/11, Hurricane Katrina made it clear that much more needed to be done. The Pandemic and All-Hazards Preparedness Act, enacted by Congress in 2006, created Lurie’s office.

It has become increasingly obvious that public and private cooperation is essential, Lurie said, and funding is critical. This year HHS awarded $916 million for health care disaster planning. Of the total, $332 million was given to states for hospital preparedness, a program managed by Lurie’s office. Another $584 million went to public health departments under the Public Health Emergency Preparedness cooperative agreement.1 The agreement is intended to help public health departments upgrade their ability to respond to public health threats.

Cooperation when disaster hits won’t hurt the competitiveness of health care, Lurie said.

“I think at the beginning of this, those [competition] barriers were probably much more significant than they are now, especially since, as a country, we have been confronted with a series of events,” she said. “It is good business to be prepared, but it’s also good for your business if your whole community is prepared. You are going to have a hard time coming back after a disaster if your community doesn’t come back.”

Recently, Lurie has been focusing on broadening the umbrella, looking less singularly at hospitals and more broadly at health systems, with
an eye to making more resources available to vulnerable people in communities and strengthening community resiliency overall. Among the most vulnerable are people whose mental health is fragile and those who depend on medications or medical equipment for their health, or even — in the case of insulin or dialysis, for instance — for their life.

The goal, she said, is to be sure that “hospitals, and primary care, and nursing homes, and all the other parts of the health care system are connected and can really work as one.” Hospitals, clinics and physicians, particularly those working with the poor, should be aware of and plan for other hazards their patients could face during emergencies.

For example, many patients who rely on equipment that requires power — anything from respirators to powered wheelchairs — don’t have emergency plans to deal with outages. “I’ve come to realize how few people have family and friends to rely on, places to go or know the resources available to them so they can stay at home in a disaster,” Lurie said. Hospitals could help, she said, by helping people who receive medical equipment on discharge to develop a preparedness plan, adding, “I think there are huge opportunities that are untapped.”

Both shelters and emergency rooms are often ill-equipped to handle the demand to recharge devices when disaster strikes. Her office, she said, has funded some pilot programs to assist state and local public health authorities address the problem. These include an effort to develop a device that reads the power level and back-up battery life of durable medical equipment and sends a signal when it is not receiving adequate power. “During disasters and prolonged power outages, this information could be accessed by local officials to quickly identify and address the power needs of medically frail individuals,” she said.

Her office also is looking at ways to employ social media, such as a Facebook app that would help people connect with family and friends in a crisis and perhaps to develop community registries of vulnerable people who are willing to participate. She is intrigued by an example of a tweet sent out on Twitter, during massive power outages after Superstorm Sandy, requesting help for a quadriplegic who needed a generator and by dialysis centers who reached out to patients to ask them to come in early as the storm was moving in.

Another problem for vulnerable people in communities is access to medications when disaster strikes. “Some public insurers have a policy that pharmacies can wait 48 hours to fill prescriptions,” Lurie noted. “That doesn’t help patients who need antiviral medications immediately.”

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**DISASTER PREPARATION LIST**

Lurie’s list of what a hospital needs to do to be prepared:

1. **Recognizes that no hospital stands alone when responding to a disaster.** Works with regional competitors and partners in daily health delivery — EMS, long-term care, public health, emergency management — and builds a coalition to improve health resilience for a community.

2. **Prepares the hospital and its staff in disaster response,** develops continuity of operations plans, conducts disaster tabletops, drills and exercises engaging their entire facility, not just the emergency department; possesses disaster response protocols to allow emergency credentialing of staff, possesses a disaster response coordinator and interdisciplinary support team to develop standard procedures for disaster preparedness and response and continuous disaster readiness improvement.

3. **Has the right tools in place.** Uses the health emergency Incident Command System when responding to an event; uses remotely backed-up electronic health records, so that other facilities can get patient information.

4. **Works with its patients** who are being discharged, especially those who are medically fragile or power-dependent to ensure they understand how to keep their batteries charged and that they have a backup supply of medication. There’s need for clear, simple language, Lurie said. “Many of my patients have a basic education level and don’t read all that well,” she said. “It is important to use plain language in all of the materials we produce for the public, and I insist on it.” Vulnerable patients also may need help identifying “lifelines” — people they can contact from home in case of an emergency.

5. **Shares best practices with competitors and coalition partners in the community,** such as public health departments, as well as with other hospitals across the country.
“I’ve come to realize how few people have family and friends to rely on, places to go or know the resources available to them so they can stay at home in a disaster.”

Nicole Lurie, MD

That’s a problem the agency is discussing with insurers and trying to resolve, she said.

“Preparedness agencies recommend that people have a 10-day supply of their regular medications in case of an emergency,” she said. “None of my patients have money for a 10-day supply of medicine to take home with them. So I recognize that at the federal level, we need to work with insurers to help people become better prepared.”

Each new disaster teaches new lessons, Lurie said.

“[Hospital] generators were moved out of the basement after Katrina,” Lurie said. “That was even the case at Bellevue [Hospital Center] and NYU [New York University Langone Medical Center]. It turned out they [still] weren’t above sea level and were flooded.”

One lesson learned from Katrina and applied during Sandy was the need for evacuation plans when a health care facility is struck by disaster. The two New York hospitals that lost power were able to safely evacuate patients to other facilities.

“The same thing happened at Joplin [Missouri] with the [2011] tornado,” she said. “All of their patients were evacuated safely to a neighboring — and, by the way, competitive — hospital.”

In Joplin, St. John’s Mercy Hospital (since renamed Mercy Hospital Joplin) became the image of the tornado’s destruction. Lurie singled out Lynn Britton, president and CEO of the Mercy health system, for his post-disaster actions.

“He has called and reached out to other CEOs to share what he learned from his experience so that they would not start learning from scratch,” Lurie said. “He’s been a national leader in sharing what was learned.”

“He’s also been a national leader in making plans to take good care of the workforce and emphasize what is needed for a community, post-disaster,” she said. For one thing, communities are too often not prepared to deal with the psychological impact of disaster on individuals living in a devastated community. Assistance in disaster readiness is available, she said.2

One thing learned from the range of disasters that have hit the country is that while each brings different challenges, there is a core set of capabilities that every health care provider needs.3

“We have moved from having a plan for a single kind of event, like an anthrax attack, a pan flu, an explosion, to what we call an all-hazards approach,” she said. “There is a set of core capabilities that if you have, you can deal with any kind of disaster.” Every health care facility needs to plan, drill and be ready for disaster in whatever form it takes.

MARIE ROHDE is a freelance writer based in Milwaukee.

Some information for this article was contributed by Pamela Schaeffer, editor of Health Progress.

RESOURCES
2. The Disaster Distress Helpline, which may be helpful for hospital staff stressed during disasters or to their patients and patients’ families: http://disasterdistress.samhsa.gov/.
4. Core capabilities (what hospitals should be capable of doing to respond and recover from all hazards): www.phe.gov/Preparedness/planning/hpp/reports/Documents/capabilities.pdf.
5. Specific hospital preparedness and response stories (including Joplin tornado and Hurricane Sandy stories) are here: www.phe.gov/Preparedness/planning/hpp/events/Pages/default.aspx.