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National Public Health and Hospital Institute

NPHHI is an affiliate of the National Association of Public Hospitals and Health Systems

Research Brief
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FINDINGS FROM THE NPHHI PRELIMINARY EMERGENCY PREPAREDNESS SURVEY

As a part of our effort to provide public hospitals with timely and critical information, the National Public Health and Hospital Institute (NPHHI) has begun an emergency preparedness research study. The project goals are to:

- Tell the story of emergency preparedness in safety net hospitals,
- Ascertain common and promising practices among NAPH members,
- Identify capacity and resource constraints, as measured against Joint Commission on Accreditation of Healthcare Organization (JCAHO) standards, and
- Describe the special role for public hospitals in emergency planning (e.g., coordinating care and providing services to special populations like non-English speakers, the homeless, the elderly, children, and the chronically ill).

One component of this project is a survey of NAPH member hospitals. In April 2006, NPHHI completed the initial iteration, or Phase I, of this survey. Respondents to the Phase I survey represent 39 hospitals from 14 states, vary in size from 25 to 1,606 staffed beds, and are generally representative of the NAPH membership in terms of occupancy rates and financial status. NPHHI staff have refined the survey instrument and will begin Phase II, a more comprehensive version of the survey, in the fall of 2006. A final report will be available by the summer of 2007. This *Research Brief* highlights results of the preliminary survey.

Role of Safety Net Hospitals in the Community During an Emergency

Almost all respondents are part of local emergency preparedness planning efforts and have agreements in place to share resources in an emergency. Half of the responding hospitals are Level I trauma centers, but because many are in large metropolitan areas with other nearby hospitals, only 8 percent report being the only Level I trauma center in the county. Roughly half are designated to receive patients through the National Disaster Medical system. Another 29 percent run or provide direction to the 911 system, while 35 percent house the county public health department in their system, and 17 percent have responsibility for the medical oversight of mass gatherings.

Emergency Response Plans

All hospitals are mandated by law to have an emergency response plan. Most respondents report that their plans were established prior to 2001 and have been updated in the past 12 months. All hospitals developed their plans in conjunction with other community agencies, most commonly public health departments and EMS. These emergency plans generally address many types of incidents and provide direction for a variety of processes.

A majority of responding hospitals reported that they had experienced an incident that required activating the emergency plan. Most clinical staff members have had some training on the contents of the plan within the last 12 months. The plan was activated successfully in nearly all cases, but the incident highlighted gaps that needed to be addressed.

Staff and Surge Capacity

Many NAPH member hospitals, even in the absence of a community-wide disaster, are at or near capacity and suffer from chronic staff shortages. Nearly all respondents (91 percent) indicate insufficient numbers of registered nurses (RNs), and over 50 percent report shortages of respiratory therapists, pharmacists, and medical technicians. Most hospitals have a plan

to credential licensed individuals who may volunteer during a disaster; 93 percent have a plan for credentialing physicians, and 73 percent have a plan for credentialing nurses.

Despite staff shortages, most responding hospitals have a surge capacity of an additional 10 percent within six hours and 30 percent within 12 hours. (That is, they can increase their capacity within the hospital an average of 10 percent of staffed beds in six hours and 30 percent in 12 hours.) Just over half of respondents have identified an alternative care site in the community.

In the event of a major infectious disease outbreak, 54 percent reported that they have a plan to encourage workers to come to work. Most such plans include care vaccinations for staff and their families. However, 39 percent of hospitals (50 percent of small hospitals and 29 percent of larger hospitals) do not think they can get a sufficient number of trained staff to respond to an event that increases the patient load by 25 percent or more. Even respondents who believe they could bring in enough staff note that they could not sustain sufficient staffing for long.

Training

Almost all hospitals report that their staff has received training in the identification, diagnosis, and treatment of diseases and conditions that may result from terrorism or a pandemic. Although it varies by condition, over half of this training occurred in the past 12 months. The condition for which the largest number of hospitals provided training in the past year is influenza.

Physicians and RNs were the most likely to receive the training. It is also common to provide training to lab staff as well as physician assistants and nurse practitioners. Almost all hospitals report having emergency drills, and 82 percent have had full-scale drills or functional exercises in the past 12 months.

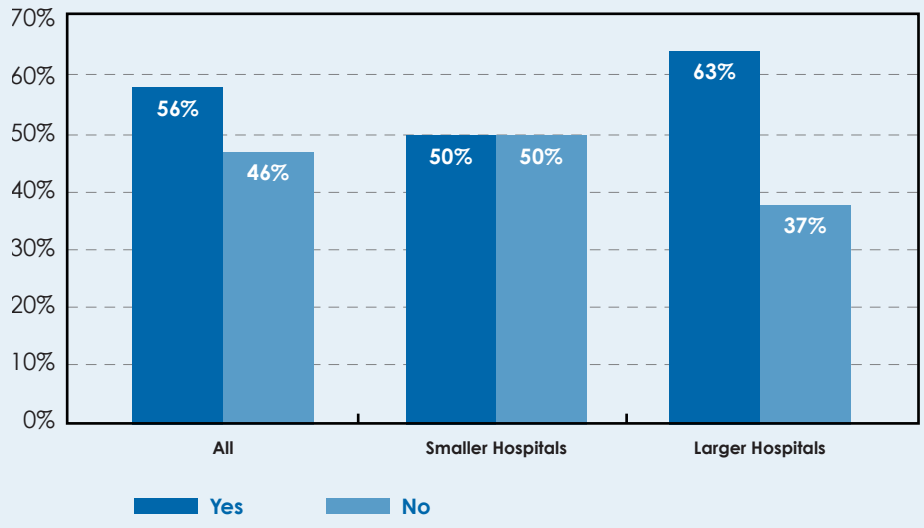
Resources

The survey asks a series of questions about nine types of equipment that would be needed in the event of biological or chemical event—the number on hand, whether that number was adequate, and if not, what number would be adequate. The percent of hospitals reporting that they have an inadequate supply of equipment varied by type of equipment with 6 percent reporting not enough mechanical ventilators to 24 percent reporting not enough decontamination showers. (With the exception of the decontamination showers, more hospitals reported adequate supplies of relatively inexpensive equipment and shortages of relatively expensive equipment.)

If patient load increased by 25 percent, all hospitals would have an adequate supply of bronchial dilators to last 72 hours. A substantial minority of hospitals report not having an adequate supply of antivirals (21 percent), nerve agents (21 percent), biological agents (43 percent), and cyanide antidotes (46 percent). Only 79 percent of hospitals said they had adequate amounts of medical supplies.

Half of the responding hospitals do not have a plan to back up their medical records in an emergency. Although most hospitals have a communications systems to coordinate with public safety officials and have alternative communications systems within the hospital, fewer than half have a mobile command center for communications within the hospital. Almost half of the respondents identified that, if they

FIGURE 1 Does Hospital Have a Plan to Back Up Medical Records?



SOURCE The NPHHI Preliminary Emergency Preparedness Survey

Almost all hospitals report that their staff has received training in the identification, diagnosis, and treatment of diseases and conditions that may result from terrorism or a pandemic.

had additional funding, they would purchase additional communication equipment.

Financing

Of responding hospitals, 55 percent do not have a dedicated budget for emergency planning. Among those who do, all but one is under $200,000 per year. Most hospitals receive outside financing, mostly from the federal Health Resources and Services Administration (HRSA). Hospitals purchased a wide variety of items with their funds, including communications equipment, security devices, medical equipment, supplies, training, PPE equipment, and decontamination showers.

Needs and Priorities

In terms of planning priorities, hospitals were most likely to rate "leadership from other local or state agencies," "cooperation from other hospitals," and "information about appropriate medical protocols" as sufficiently addressed. The items most commonly cited as critically needed are additional funding for the following: surge facilities, increased security, capital improvement, staff training, and information systems.

When asked to list the four highest priorities if additional funds were made available, roughly half of respondents listed staff training and communication equipment. The other commonly cited priorities included security, isolation, surge facilities, pharmaceutical caches, capital improvement, equipment, and additional staff.

The survey also asked respondents to cite their biggest threat, the event for which they are best prepared, and the event for which they are least prepared. Natural disasters were most commonly cited as the biggest threat (46 percent). Other types of incident cited as biggest threats more than twice were bomb/explosive events (21 percent), pandemic disease (14 percent), and mass casualty trauma (14 percent). In 17 of 28 responding hospitals (61 percent), the hospital is best prepared for its biggest threat. Hospitals reported being least prepared for pandemic disease (25 percent) and nuclear/radiological events (21 percent).

TABLE 1 Priority of Needs, Given Additional Funding

Funding Priority	Percent of hospitals citing this need as one of their four highest priorities if funding became available (n=26)
Staff training	52%
Communication equipment	48%
Security	28%
Isolation	21%
Surge facility	21%
Pharmaceutical caches	17%
Capital improvement	14%
PPE	14%
Equip (Vents, ICU etc)	14%
Additional staff—general	10%
Decontamination area	10%

SOURCE The NPHHI Preliminary Emergency Preparedness Survey

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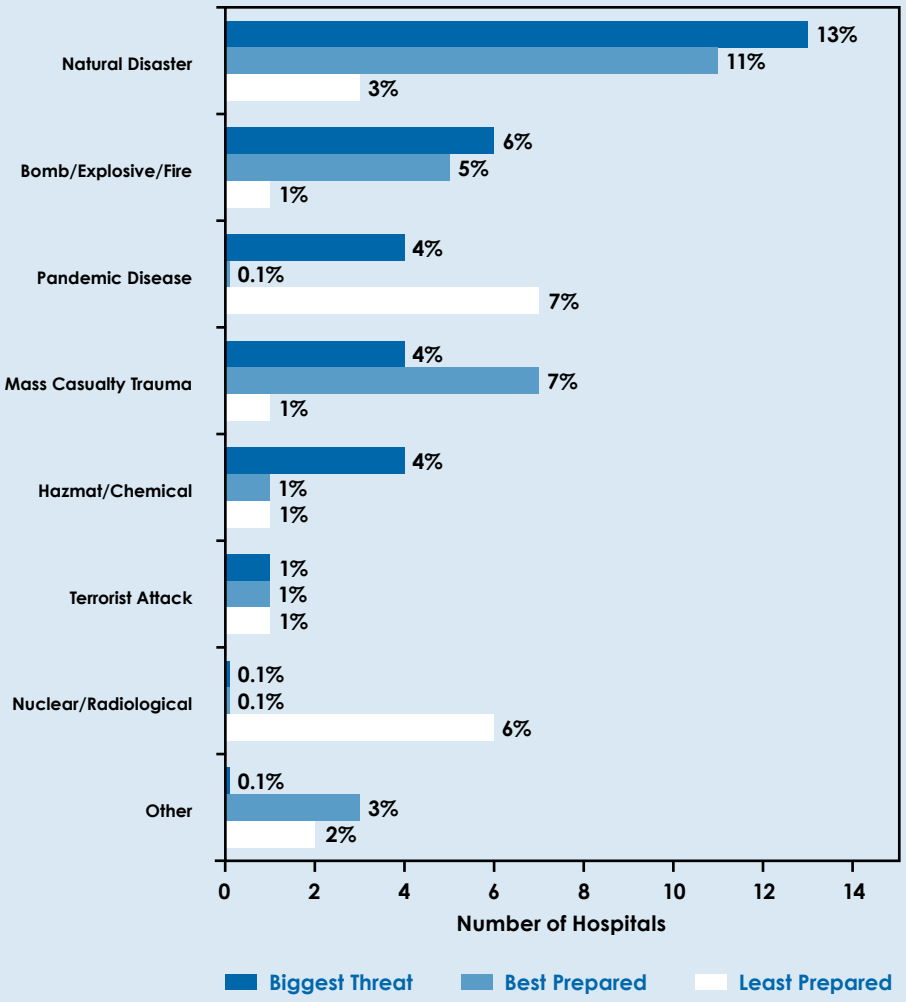
FIGURE 2 Perception of Threat and Preparation for Specific Events



SOURCE The NPHHI Preliminary Emergency Preparedness Survey

Summary

This survey provided initial impressions of the state of emergency preparedness in NAPH member hospitals and health systems: responding hospitals have emergency plans in place and have focused their energy on the threats that seem most likely to occur.

Most have conducted drills and staff training, although many believe that more training is needed. Many of the respondents, however, report important shortfalls in staffing and equipment that would hamper their ability to weather a sustained emergency. Additional funding to prepare for emergencies is critical. Over the course of the year, NPHHI will refine the survey instrument and work with members to develop additional findings. Further findings also will be used to inform NAPH advocacy and communication messages around emergency preparedness. ■