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Hospital Employee Health®

November 2001 • Volume 20, Number 11 • Pages 121-132

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Survey: Most hospitals are unprepared to protect their staffs in case of an attack

Equipment, policies, training needed, experts say

Hospitals are ill-prepared to cope with a biological or chemical terrorist attack and lack the policies, training, and equipment to protect health care workers, experts in emergency preparedness say.

That failing is coming under increased scrutiny in light of the Sept. 11 attack on the World Trade Center and the Pentagon. While individual hospitals reassess their community's risk of attack, the

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- Researchers ask: Do voluntary guidelines work?

Joint Commission on Accreditation of Healthcare Organizations in Oakbrook Terrace, IL, is considering how to assure compliance with a new standard on emergency preparedness. Keeping employees safe is a critical aspect, which means employee health should be active in the planning process, experts say.

The Joint Commission standard requires hospitals to conduct a "hazard vulnerability analysis." That analysis may be fundamentally different after Sept. 11.

"We now clearly have an enemy who is capable and interested in doing repeated and large-scale activities in this country that would produce a large number of casualties," says **Robert Wise**, MD, vice president of the division of research standards for the Joint Commission. "They've already shown their ability, and they've been clear about their interests. When a hospital looks at its environment, should these types of possibilities be on the radar screen?"

The answer isn't simple in a time when hospitals are financially stressed. Wise advises that planning for potential terrorist events should occur as a part of a communitywide effort. Meanwhile, Joint Commission officials are meeting with representatives of other health care organizations and federal agencies to discuss what resources hospitals should have and what outside support they might receive.

Wise stresses that preparedness begins with the basic ability to cope with hazardous materials and major disasters, including a provision to support staff and their families. That may include providing temporary housing, transportation, and counseling, he says. Employee health should be involved in planning, awareness training, and policy development, he says.

"If staff do not feel their families are being taken care of, they're not going to come to work," he says. "If they don't come to work, you've basically brought your hospital down. We would expect the hospital is giving consideration to these issues."

Before Sept. 11, few hospitals took seriously the threat of biological or chemical terrorism — despite recommendations by the Centers for Disease Control and Prevention that hospitals create a "bioterrorism readiness plan."[1]

In a 1998 survey of 186 hospital emergency departments (EDs) in four northwestern states, only about half (48%) of respondents agreed that "biological and / or chemical weapons are a real enough threat to [the] community that [the] hospital should make specific plans in preparation to treat victims of such weapons."[2]

One-quarter of hospitals reported having no isolation or decontamination resources of any kind in the ED — either internal decontamination units or portable, outdoor units — that could be used in the case of a chemical event. Most hospitals reported having no respiratory protective equipment that would be appropriate against chemical agents, such as respirators with supplied air, the researchers reported in the *American Journal of Public Health.*

Based on a hypothetical incident involving 50 victims of sarin gas poisoning, only 6.5% of hospitals had a "minimum recommended" level of preparedness, the researchers concluded. Only 9% of hospitals had a written plan for handling victims of bioterrorism as well as a sufficient antibiotic inventory.

"It's possible the survey has underestimated [the situation]," says **Bill Daniell**, MD, MPH, associate professor in the department of environmental health at the University of Washington in Seattle, who conducted the research with lead author Donald Wetter, who is now with the Office of Emergency Preparedness of the U.S. Public Health Service in Atlanta.

"Even if you allow for that, there's a striking degree of lack of preparedness for these types of incidents," says Daniell. "Up until the recent terrorist attack in New York City, this was pretty low priority on people's radar screens."

Daniell and others point to the sarin gas incident in Tokyo in 1995 as an example of what could happen. Thousands of people flooded area hospitals after members of a cult poisoned the subway system with sarin gas. Patients ranging from the exposed to the "worried well" came to the hospital on their own, without previous decontamination, and hospital workers developed symptoms of secondary poisoning.

Being able to safely assess and decontaminate even one victim of chemical exposure is the minimum level of preparedness, says **Henry Siegelson**, MD, FACEP, an emergency physician based in Atlanta and an expert on hospital disaster preparedness. While that may seem basic, many hospitals don't have that capability, he says. Secondary poisonings have been reported after victims of chemical poisoning came to an ED.[3] **(For more information, see related article, p. 126.)** "Very, very few hospitals have policies and procedures and equipment that will enable them to protect their employees from potential exposure to chemical hazards," he says.

Hospitals often rely too much on the preparedness of "first responders," the emergency teams that treat victims at the site of an incident, says **Susan McLaughlin**, MBA, CHSP, MT(ASCP)SC, president of SBM Consulting Ltd., in Barrington, IL, and an expert on hospital preparedness. "People have written into

Where to Turn for More Information on Preparedness

Where can you get some guidance in developing a plan for hazardous materials, chemical or biological terrorism events? Here are few resources:

- ✔ **Centers for Disease Control and Prevention:** The CDC offers information on potential agents of biological terrorism and guidance documents on hospital preparedness. For a document that specifically addresses hospitals, go to: www.cdc.gov/ncidod/hip/Bio/bio.htm.
- ✔ **U.S. Occupational Safety and Health Administration:** Hospitals must conform with OSHA requirements designed to protect workers from hazardous materials. OSHA has a guidance document for hospital emergency response, which includes a list of resources and references, at www.osha-slc.gov/Publications/OSHA3152/osha3152.html.
- ✔ **Agency for Toxic Substances and Disease Registry:** This agency provides recommendations for hospital medical management of patients exposed during a hazardous materials incident, as well as information on toxic substances. Web site: www.atsdr.cdc.gov/.
- ✔ **American Society for Healthcare Engineering:** The society is offering audio courses on hospital emergency preparedness. Telephone: (312) 422-3820. Web site: www.ashe.org.
- ✔ **Disaster Planning International:** This company provides training to hospitals and physicians and assists in the development of disaster plans. Telephone: (888) 307-3741. Web site: www.disaster-dpi.com/.
- ✔ **SBM Consulting:** Consultant Susan McLaughlin helps hospitals analyze the potential of hazardous events and develop plans. Telephone: (847) 420-3229. E-mail: sbmconsult@msn.com.
- ✔ **Haz/Mat DQE:** This company manufactures decontamination kits and provides preparedness analysis and training. Telephone: (800) 355-4628. Web site: www.hazmatdqe.com.

Emergency Management: What JCAHO Expects

Standard EC.1.4
A plan addresses emergency management.

Intent of EC.1.4
The emergency management plan describes how the hospital will establish and maintain a program to ensure effective response to disasters or emergencies affecting the environment of care. The plan should address four phases of emergency management activities: mitigation, preparedness, response, and recovery.

The plan provides processes for:

A. Identifying specific procedures in response to a variety of disasters based on a hazard vulnerability analysis performed by the hospital.
B. Initiating the plan (including a description of how, when, and by whom the plan is activated);
C. Defining and, when appropriate, integrating the hospital's role with communitywide emergency response agencies (including the identification of who is in charge of what activities and when they are in charge) to promote interoperability between the hospital and the community.
D. Notifying external authorities of emergencies.
E. Notifying personnel when emergency response measures are initiated.
F. Identifying personnel during emergencies.
G. Assigning available personnel in emergencies to cover all necessary staff positions.
H. Managing the following during emergencies and disasters:
   - patients' activities including scheduling, modifying, or discontinuing services, control of patient information, and patient transportation;
   - staff activities (for example, housing, transportation, and incident stress debriefing);
   - staff-family support activities;
   - logistics of critical supplies (for example, pharmaceuticals, medical supplies, food supplies, linen supplies, water supplies);
   - security (for example, access, crowd control, traffic control);
   - interaction with the news media.
I. Evacuating the entire facility (both horizontally and, when applicable, vertically) when the environment cannot support adequate patient care and treatment.
J. establishing an alternative care site(s) that has the capabilities to meet the clinical needs of patients when the environment cannot support adequate patient care including processes that address, when appropriate, management of patient necessities (for example, medications, medical records) to and from the alternative care site; patient tracking to and from the alternative care site, interfacility communication between the hospital and the alternative care site, or transportation of patients, staff, and equipment to the alternative care site.
K. continuing and/or re-establishing operations following a disaster.

The plan identifies:

L. An alternative means of meeting essential building utility needs (for example, electricity, water, ventilation, fuel sources, medical gas/vacuum systems) when the hospital is designated by its emergency plan to provide continuous service during a disaster or emergency.
M. Backup internal and external communication systems in the event of failure during disasters and emergencies.
N. Facilities for radioactive or chemical isolation and decontamination.
O. Alternate roles and responsibilities of personnel during emergencies, including who they report to within a command structure that is consistent with that used by the local community.

The plan establishes:

P. An orientation and education program for personnel who participate in implementing the emergency management plan. Education addresses specific roles and responsibilities during emergencies, the information and skills required to perform duties during emergencies, the backup communication system used during disasters and emergencies, and how supplies and equipment are obtained during disasters or emergencies.
Q. Ongoing monitoring of performance regarding actual or potential risk related to one or more of the following:
   - staff knowledge and skills;
   - level of staff participation;
   - monitoring and inspection activities;
   - emergency and incident reporting;
   - inspection, preventive maintenance, and testing of equipment.
R. How an annual evaluation of the emergency management plan's objectives, scope, performance, and effectiveness will occur.

Source: Joint Commission on Accreditation of Healthcare Organizations, Oakbrook Terrace, IL, 2001. The standard is available on line at www.jcaho.org/standard/ecer.html.

their plan that the fire department will decontaminate people in the field, but we can't count on that any longer."

The need for preparedness may give employee health professionals a strong argument for additional resources, notes **Michael Bell**, MD, medical

Hospitals offer emotional support

Near ground zero, employees overcame fear

Near ground zero on Sept. 11, dedication overcame fear. Health care workers heard rumors of further attacks, of other buildings collapsing, of a bomb in the hospital. They coughed and squinted from dust. But they kept working.

The staff at New York University (NYU) Downtown Hospital and Saint Vincents Hospital in New York City have been among those who provided inspiration in the aftermath of the terrorist attack on the World Trade Center. The hospitals, in turn, mobilized in the weeks after to support their staff and address their emotional needs.

"Not only are these health care workers, not only have they helped the victims, but they were really also victims," says **William Lee**, vice president of human resources at NYU Downtown Hospital, which is only four blocks from the site. "Almost all of our staff saw the buildings burn, the towers collapse, people jump. They were covered in dust. Everybody was hit by the cloud [of dust and debris when the towers collapsed].

"Some employees thought it was a nuclear attack," he says. "Some thought it was a bioterrorism attack. All kinds of things went through our staff's minds."

The 150-bed hospital treated about 500 victims within a couple of hours of the attack. Staff began triaging patients in the hospital's courtyard when the towers collapsed and the enormous black cloud engulfed the area. They quickly moved patients indoors. Even there, some dust came in through loose windows.

"Many of our employees had corneal abrasions and breathing difficulties," Lee says. "All of the employees were given vials of eye drops to help alleviate the symptoms of dust blowing in their eyes."

Meanwhile, the hospital lost phone service and electrical power. Staff used a generator and received a swift donation of a CT scan with its own power source from General Electric Corp.

In the following days, employees continued to show their determination to work. When food service and housekeeping employees were turned away from police checkpoints as "nonessential" employees, they found other routes to the hospital. "These employees knew they were essential to make sure the place was clean and the employees were fed," says Lee.

Two miles away, the 600-bed Saint Vincents hospital set up secondary emergency rooms in the rehabilitation center and endoscopy suite. **Ruth E. Smith**, MD, MBA, director of personnel health services for Saint Vincents Catholic Medical Centers, switched from treating employees to treating victims of the attack.

Mobilizing its disaster preparedness plan, the hospital was prepared to treat waves of rescued victims after the first onslaught of patients. Sadly, there were no further patients.

About a week after the event, both hospitals began offering emotional support services to employees. "Employees can't sleep," Lee says. "Employees' children are very afraid that their parents are coming back to work."

The hospital provided educational sessions and information sheets, and set up small support groups that encouraged employees to talk about what they saw and experienced.

The Local 1199 New York Health and Human Service Union (SEIU) arranged for counselors to come from Kaiser Permanente in California. Other counselors came from Thomas Jefferson University in Philadelphia and New York sites. The hospital offered individual counseling, and shared their resources with the local community.

Saint Vincents advised managers to be alert for symptoms of acute stress reaction and, using hospital resources, offered educational sessions and counseling for employees.

Saint Vincents is one of the few hospitals in the country that maintains an emergency response plan and conducts regular drills. Still, Smith says, the hospital is reviewing what additional steps it should take to be prepared for potential chemical or biological terrorism.

In those events, hospitals would need to do even more to protect health care workers. "I think we need to have a careful plan thought out," she says. "I don't think any of us have a full-blown plan to handle employees who are secondary casualties [of an attack]." ■

epidemiologist at the Centers for Disease Control and Prevention in Atlanta and lead author of CDC's guidance paper on bioterrorism.

Respirators require medical evaluations and fit-testing, preparedness plans call for frequent staff training, and employee health may be involved in organizing periodic drills, experts say.

"You might be able to make the case for an additional person or expanded resources to meet an expanded job description. [Employee health] can be an important part of preparedness," Bell says.

In fact, by working with infection control professionals, employee health can help boost everyday protections. The rigorous adherence to standard precautions would provide protection against biological terrorism agents, he notes.

It's important to use "any mechanisms by which

we can make sure routine practices are a little more disaster-proof," Bell says.

"We don't have a warning saying, 'Now's the time to be careful.' We're always at risk for complacency." But now is the opportunity for employee health professionals and others to use the heightened awareness to improve our ability to respond, he says.

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1. Association for Professionals in Infection Control and Epidemiology; Centers for Disease Control and Prevention. *Bioterrorism Readiness Plan: A Template for Healthcare Facilities.* www.cdc.gov/ncidod/hip/Bio/bio.htm.
2. Wetter DC, Daniell WE, Treser CD. Hospital preparedness for victims of chemical or biological terrorism. *Am J Public Health* 2001; 91:710-716.
3. Geller RJ, Singleton KL, Tarantino ML, et al. Nosocomial poisoning associated with emergency department treatment of organophosphate toxicity — Georgia, 2000. *MMWR* 2001; 49:1,156-1,158. ■

Terrorism plans can be cost-effective

Preparing for hazmat poisoning is a first step

Could your hospital safely treat a single victim of a chemical poisoning without endangering emergency department (ED) staff? Could you handle 50 or more victims?

If hospitals can cope with hazardous material spills or poisonings, they are on track to develop readiness for chemical or biological terrorist events, preparedness experts say.

That capability must be available 24 hours a day, seven days a week, and must be backed up by updated policies and periodic training, says **Henry Siegelson**, MD, FACEP, an emergency physician based in Atlanta and an expert on hospital disaster preparedness.

"Unless there are policies and procedures in place for the management of a victim exposed to a chemical, then the health care worker can very rapidly become a victim," Siegelson says, who has provided consulting worldwide through Disaster Planning International, based in Indianapolis.

"It's much more than just training. It's more than equipment," he says. "It's also policies and procedures and exercises. I believe that every single hospital that has an emergency department must be able to, without exception, manage at least one or two victims of a hazardous material exposure on a 24-hour basis, anytime day or night. You cannot depend on the fire department. You cannot depend on any other agency to help. This must be an internal capability. This is a community responsibility for the hospital."

Starting with a solid hazardous materials disaster plan is a cost-effective strategy for hospitals, says **Susan McLaughlin**, MBA, CHSP, MT(ASCP) SC, president of SBM Consulting Ltd., in Barrington, IL, and an expert on hospital preparedness.

"The one thing that's important is sustainable planning. If you plan to manage a small hazardous materials incident, like an industrial accident, an agricultural accident, even a hazmat accident in the hospital, when you have a big incident, you will be able to gear up from there," she points out.

That advice may seem basic, but many hospitals lack the training or clear policies to protect health care workers.

In one case, three health care workers at a Georgia hospital suffered symptoms that required inpatient treatment after they cared for a patient who had ingested a veterinary insecticide concentrate in a suicide attempt.

One staff member required intubation and ventilator support for 24 hours and was hospitalized for nine days. The staff had not followed decontamination procedures before treating the patient and had not used personal protective equipment.

Surveillance in six states showed that from 1987 to 1998 at least 46 health care workers suffered secondary contamination after providing care to pesticide-contaminated patients, according to the National Institute for Occupational Safety and Health.

"It sounds logical that hospitals already would have this capability, but many do not," says Siegelson. "This involves policies, procedures, personal protective equipment, and decontamination equipment that allow the health care worker to deliver care." He recommends taking these steps toward preparedness:

1. chemical preparedness, including proper decontamination and protective equipment and awareness and operations-level training;

2. incident command systems, which enable the hospital to organize resources to respond during disasters;

3. syndromic surveillance, which allows the hospital to recognize patterns of patient complaints that might suggest a biologic attack;

4. reporting to the health department of data collected from syndromic surveillance;

5. exercises and drills in the community;

6. responding to an actual event.

Preparedness doesn't have to be a budget-buster, Siegelson says.

For example, an outdoor decontamination unit costs far less than an internal one that requires new construction or remodeling. If the hospital is flooded with the "worried well" who have minimal, if any, exposure, the hospital can use simple decontamination kits that allow people to remove their clothing even in a public place. The kit, manufactured by Haz/Mat DQE in Indianapolis, leaves the patient draped in a poncho-like garment. ■

Joint Commission targets needle safety in surveys

Agency issues first-ever alert on worker safety

If a federal law and regulation weren't enough to compel needle safety, the Joint Commission on Accreditation of Healthcare Organizations in Oak Brook Terrace, IL, has turned up the heat with an announcement: Compliance with needlestick safety rules could affect your accreditation.

In its first-ever sentinel event alert to address worker safety, the Joint Commission informed hospitals that in April 2002, its surveyors will begin assessing organizational compliance with the Needlestick Prevention and Safety Act.[1] The alert, sent to hospitals around the country, greatly raises the profile of needle safety and ensures that surveyors will ask about exposure control plans, needlestick laws, and the effectiveness of new devices.

The alert might seem almost an afterthought after so much activity on needlestick prevention in the past two years. But needlestick expert **Janine Jagger**, PhD, MPH, director of the International Health Care Worker Safety Center at the University of Virginia in Charlottesville, estimates that, except for needleless IV infusion systems, fewer than 50% of sharps devices in use have safety features.

"I'm very concerned that in some quarters the law is not really being taken seriously," she says. "In some cases, it's [apparently] being viewed as optional."

While lauding the Joint Commission's action, some worker advocates questioned why the agency gave hospitals a grace period to comply. "The big question for us is why April 2002 if the law has gone into effect already?" asks **Karen Worthington**, MS, RN, COHN-S, occupational safety and health specialist with the American Nurses Association (ANA) in Washington, DC.

Whenever the Joint Commission incorporates new regulations beyond the agency's own standards, hospitals receive some time to gear up, notes **Richard J. Croteau**, MD, executive director for strategic initiatives at the Joint Commission.

"Just because something is published in the *Federal Register*, it doesn't always get to the people who actually need to implement change in an organization," he says.

"We've found the sentinel event alert to be very

(Continued on page 129)

OSHA's Needle Safety Basics

The major components of the needlestick safety law and revised bloodborne pathogens standards have been widely publicized. Here are the basics the federal Occupational Safety and Health Administration (OSHA) says are required to meet the new rules:

EXPOSURE CONTROL PLAN

An annual review and update of the Exposure Control Plan should reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens. The employer must:

- take into account innovations in medical procedure and technological developments that reduce the risk of exposure (e.g., newly available medical devices designed to reduce needlesticks);
- document consideration and use of appropriate, commercially available, and effective safer devices (e.g., describe the devices identified as candidates for use, the method(s) used to evaluate those devices, and justification for the eventual selection).

No one medical device is considered appropriate or effective for all circumstances. Employers must select devices that, based on reasonable judgment:

- will not jeopardize patient or employee safety or be medically inadvisable;
- will make an exposure incident involving a contaminated sharp less likely to occur.

EMPLOYEE INPUT

Employers must solicit input from nonmanagerial employees responsible for direct patient care regarding the identification, evaluation, and selection of effective engineering controls, including safer medical devices. Employees selected should represent the range of exposure situations encountered in the workplace, such as those in geriatric, pediatric, or nuclear medicine, and others involved in direct care of patients. OSHA will check for compliance with this provision during inspections by questioning a representative number of employees to determine if and how their input was requested. Employers are required to document, in the Exposure Control Plan, how they received input from employees. This obligation can be met by:

- listing the employees involved and describing the process by which input was requested;
- presenting other documentation, including references to the minutes of meetings, copies of documents used to request employee participation, or records of responses received from employees.

RECORDKEEPING

Employers who have employees who are occupationally exposed to blood or other potentially infectious materials, and who are required to maintain a log of occupational injuries and illnesses under existing recordkeeping rules, must also maintain a sharps injury log. That log will be maintained in a manner that protects the privacy of employees. At a minimum, the log will contain the following:

- type and brand of device involved in the incident;
- location of incident (e.g., department or work area);
- description of the incident

The sharps injury log may include additional information as long as an employee's privacy is protected. The format of the log can be determined by the employer.

MODIFICATION OF DEFINITIONS

The revision to the bloodborne pathogens standard includes modification of definitions relating to engineering controls. Two terms have been added to the standard, while the description of an existing term has been amended:

- Engineering controls include all control measures that isolate or remove a hazard from the workplace, such as sharps disposal containers and self-sheathing needles. The original bloodborne pathogens standard was not specific regarding the applicability of various engineering controls (other than the above examples) in the health care setting. The revision now specifies that "safer medical devices, such as sharps with engineered sharps injury protections and needleless systems" constitute an effective engineering control, and must be used where feasible.
- Sharps with engineered sharps injury protections is a new term, which includes non-needle sharps or needle devices containing built-in safety features that are used for collecting fluids or administering medications or other fluids, or other procedures involving the risk of sharps injury. This description covers a broad array of devices, including:
  1. syringes with a sliding sheath that shields the attached needle after use;
  2. needles that retract into a syringe after use;
  3. shielded or retracting catheter;
  4. intravenous medication (IV) delivery systems that use a catheter port with a needle housed in a protective covering.
- Needleless systems is a new term defined as devices which provide an alternative to needles for various procedures to reduce the risk of injury involving contaminated sharps. Examples include:
  1. IV medication systems that administer medication or fluids through a catheter port using non-needle connections;
  2. jet injection systems that deliver liquid medication beneath the skin or through a muscle.

effective in getting the message to the right people," Croteau explains.

The message about safer sharps might seem loud and clear. But the actual implementation of devices varies greatly among hospitals and within a single institution. Needleless IV systems have received the greatest acceptance, while blunt or retractable devices meet significant resistance in operating rooms. **(See *Hospital Employee Health*, September 2001, p. 104 and February 2001, p. 18.)**

For hollow-bore needles, which pose the highest risk of transmission of bloodborne pathogens, reliable estimates of safety vs. conventional devices in use are not available.

In an on-line survey of 4,826 nurses conducted by the ANA, 18% reported that their facilities do not provide safe needle devices for injections, IV insertions, and phlebotomy procedures.[2] **(See related article, p. 130.)** "I hope that in another year the 20% [figure in the survey] on needlestick devices is a lot lower," Worthington says.

Time is up

Hospitals have had several years to phase in safer devices. In 1998, California became the first state to mandate the use of safety devices, and other states quickly followed with similar laws of their own. In 1999, the U.S. Occupational Safety and Health Administration (OSHA) issued a compliance directive to inspectors, clarifying the importance of "engineering controls."

The Needlestick Prevention and Safety Act passed Congress with bipartisan support and was signed into law late last year. The revised bloodborne pathogens standard implementing the law became effective on July 17, after OSHA completed a 90-day education and outreach program. States with state occupational health and safety plans were required to apply equivalent or stricter rules by Oct. 18, 2001.[3]

A Joint Commission alert may seem almost belated. But for hospitals and other facilities that rarely see an OSHA official, the Joint Commission is a much more compelling presence. "It puts the issue out in front of every accredited facility," says Joint Commission spokeswoman **Janet McIntyre**. "It really does put them on alert that this is an important issue."

In some hospitals, the alert also may be an internal tool to gain support for the switch to new devices.

"This may be a great tool for me to use when I speak with the OR physicians," commented **Joyce Cain**, RN, manager of the employee Health Clinic at Piedmont Hospital in Atlanta, who is working with different physician groups that have resisted using new devices.

In special cases, if physicians insist that patient care would be compromised on a particular procedure without the conventional device, the law and OSHA rules allow for exceptions. But safer devices must be carefully evaluated, with input from frontline health care workers.

"I'm just going to give it to them straight," says Cain. "I'm not telling [the physicians] how to practice, but they need to adopt safer devices."

What will the Joint Commission be looking for as evidence of compliance with the law and OSHA regulations?

Clearly, hospitals will need to have the basic, required documentation:

- an exposure control plan that is updated annually and shows consideration of new devices;
- a needlestick log that protects worker privacy but includes details on exposures and devices;
- evaluation panels that have considered more than one device and that include frontline health care workers. **(For a recap of the requirements, see box, p. 128.)**

But when the Joint Commission surveyors begin focusing on needlestick safety next April, they won't necessarily expect an entire, hospital-wide conversion, Croteau says.

"We would expect them to do an organization-wide assessment of the risks," he says. "Based on that, they'll make decisions about implementing change. We understand that they may not and perhaps should not make a change throughout the entire organization [for a particular device]."

Start with pilot tests

The Joint Commission encourages using pilot tests to introduce significant changes, Croteau says. For example, new disposal containers could be used in one or two units before being implemented throughout the hospital.

The Joint Commission traditionally focuses on patient safety, and its sentinel event alert points out that patients may be at risk from unsafe needles, as well. The alert cites two cases, involving an infant and a child, of needlestick injuries among patients. Those cases involved needles left in patient beds. "Techniques that are used to protect health care workers from needlestick- and sharps-related injuries can also protect patients," the alert notes.

References

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Noncompliance creates needle safety dilemma

Hospitals finds 72% of devices unactivated

Overall, needle safety devices have a remarkable record of effectiveness, as they reduce needlestick injuries by about 80%. So when Montefiore Medical Center in New York City failed to see a decline in injuries after introducing a new butterfly-type blood collection device, **Judith Schrager**, RN, MS, then administrative nurse manager of infection control, investigated.

The problem: 72% of 616 butterfly devices retrieved from randomly selected disposal containers had not been activated. A follow-up staff survey revealed that 90% of staff were noncompliant with using the safety feature.[1]

The predicament faced by Montefiore points out the difficulty in obtaining staff buy-in for some types of safety devices and frustrations in selecting products in a relatively new and evolving marketplace. Schrager ultimately hopes to find the answer in new products that emerge with simpler activation or passive activation.

"It's clear that the legislation is more advanced than the technology," says Schrager, who is now administrative nurse manager in the infectious disease clinic of the hospital's AIDS center.

Needlestick expert **Janine Jagger**, PhD, MPH, who is director of the International Health Care Worker Safety Center at the University of Virginia in Charlottesville, acknowledges that the selection of needle safety devices can be time-consuming. Even after careful evaluation, the first selection may not work well enough. Jagger suggests sharing experiences with colleagues at other hospitals and seeking solutions that have worked for others.

"I just don't think we can expect to have uniformly outstanding compliance and risk reduction with every single new device that

CE questions

After reading each issue of *Hospital Employee Health*, the nurse will be able to do the following:

- identify particular clinical, administrative, or regulatory issues related to the care of hospital employees;
- describe how those issues affect health care workers, hospitals, or the health care industry in general;
- cite practical solutions to problems associated with the issue, based on overall expert guidelines from the Centers for Disease Control and Prevention, the National Institute for Occupational Safety and Health, the U.S. Occupational Safety and Health Administration, or other authorities, or based on independent recommendations from clinicians at individual institutions.

17. According to the emergency management standard of the Joint Commission on Accreditation of Healthcare Organizations, staff support during a disaster or an emergency event includes:
    A. supplemental pay
    B. importation of additional staff
    C. housing, transportation, and incident stress debriefing
    D. management working alongside staff

18. According to a survey of emergency departments at hospitals in the northwestern United States, what percentage of hospitals are prepared to handle a hypothetical incident involving 50 victims of sarin gas poisoning?
    A. none
    B. about 6%.
    C. about 12%
    D. about 20%

19. According to **Henry Siegelson**, MD, FACEP, emergency physician based in Atlanta and an expert on hospital disaster preparedness, what is the first step toward preparedness for chemical and biological terrorism events?
    A. chemical preparedness
    B. protection against biological agents
    C. respiratory protection programs
    D. natural disaster preparedness

20. According to its sentinel event alert issued in September, when will the Joint Commission on Accreditation of Healthcare Organizations begin assessing compliance with the Needlestick Prevention and Safety Act?
    A. immediately
    B. within 30 days
    C. April 2002
    D. July 2002

we implement," she says. "This is a trial-and-error process that we're going through. We need to be communicating our results to other people and listening to what their results are."

Montefiore began by conducting trials of three butterfly devices at four hospital units. All of them received poor reviews, Schrager says. The hospital even waited six more months when the committee learned that another, more user-friendly product was expected to become available. It never came on the market, she adds.

"We decided to go ahead and implement the device that got the least negative remarks and also happened to be utilized at neighboring institutions where our residents [went on rotation]," she explains.

The hospital launched an intensive in-service education campaign. With a sustained series of sessions that included all shifts as well as attending physicians, the education programs reached virtually 100% of staff, Schrager estimates.

The majority of the users of the butterfly devices was medical students, physician assistants, and residents; most of them were not activating the device, they acknowledged in a survey. "Most of the comments were that they don't use them because they have to change their technique, [and] they're not willing to do that," says Schrager. "That's mostly because it's an active device, not a passive one."

Part of the problem may be one of poor role modeling. Residents may be influenced by seeing others who do not activate the device, Schrager says.

The experience will influence the way selection committees look at new products, Schrager says. And it points out the importance of continually reviewing the technology as it improves.

"We concluded that education alone was not sufficient to encourage people [to activate safety devices]," she says. "Truly good protective systems really should be passive so the user doesn't have to worry about changing technique."

Meanwhile, Montefiore will continue to use the butterfly safety device, hoping that some needlesticks may be prevented among those who do activate them.

Reference

1. Schrager J, Raffa R, Currie BP. Documented lack of efficacy of safety butterfly needle device. Presented at the 2001 annual meeting of the Society for Healthcare Epidemiology of America conference. Toronto; April 2001. ■

CDC urges reassessment of flu vaccine needs

Share vaccine to ensure high-risk coverage

The Centers for Disease Control and Prevention is asking providers of influenza vaccine to assess their vaccine needs and to share their supply, wherever possible.

Orders of influenza vaccine were placed earlier than usual this year, as providers anticipated possible supply problems. The CDC then became concerned that some providers may have over-ordered, possibly creating an imbalance in the availability of vaccine to high-risk individuals. "[The] CDC is asking for this reassessment to

Hospital Employee Health® (ISSN 0744-6470) is published monthly by American Health Consultants®, 3525 Piedmont Road, Building Six, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodical postage paid at Atlanta, GA 30304. POSTMASTER: Send address changes to **Hospital Employee Health**®, P.O. Box 740059, Atlanta, GA 30374.

Subscriber Information

Customer Service: (800) 688-2421 or fax (800) 284-3291. Hours of operation: 8:30 a.m.-6 p.m. Monday-Thursday, 8:30 a.m.-4:30 p.m. Friday EST. E-mail: customerservice@ahcpub.com. World Wide Web: www.ahcpub.com.

Subscription rates: U.S.A., one year (12 issues), $399. Outside U.S., add $30 per year, total prepaid in U.S. funds. Two to nine additional copies, $319 per year; 10 to 20 additional copies, $239 per year. For more than 20 copies, contact customer service for special handling. Missing issues will be fulfilled by customer service free of charge when contacted within 1 month of the missing issue date. **Back issues**, when available, are $67 each. (GST registration number R128870672.)

This continuing education offering is sponsored by American Health Consultants®, which is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation. Provider approved by the California Board of Registered Nursing, provider number CEP 10864.

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Statement of Ownership, Management, and Circulation

1. Publication Title	2. Publication No.	3. Filing Date
Hospital Employee Health	9 7 4 4 - 6 4 7 0	9/27/01
4. Issue Frequency: Monthly	5. Number of Issues Published Annually: 12	6. Annual Subscription Price: $399.00

7. Complete Mailing Address of Known Office of Publication *(Not Printer) (Street, city, county, state, and ZIP+4)*
3525 Piedmont Road, Bldg. 6, Ste. 400, Atlanta, Fulton County, GA 30305

Contact Person: Willie Redmond
Telephone: 404/262-5448

8. Complete Mailing Address of Headquarters or General Business Office of Publisher *(Not Printer)*
3525 Piedmont Road, Bldg. 6, Ste. 400, Atlanta, GA 30305

9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor *(Do Not Leave Blank)*

Publisher *(Name and Complete Mailing Address)*
Brenda Mooney, 3525 Piedmont Road, Bldg. 6, Ste. 400, Atlanta, GA 30305

Editor *(Name and Complete Mailing Address)*
Coles McKagen, same as above

Managing Editor *(Name and Complete Mailing Address)*
Coles McKagen, same as above

10. Owner *(Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual. If the publication is published by a nonprofit organization, give its name and address.)*

Full Name	Complete Mailing Address
American Health Consultants	3525 Piedmont Road, Bldg. 6, Ste 400
	Atlanta, GA 30305

11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box → ☐ None

Full Name	Complete Mailing Address
Medical Economics Data, Inc.	Five Paragon Drive
	Montvale, NJ 07645

12. Tax Status *(For completion by nonprofit organizations authorized to mail at nonprofit rates.) (Check one)*
The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:
☐ Has Not Changed During Preceding 12 Months
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PS Form **3526**, September 1998 *See instructions on Reverse)*

13. Publication Name: Hospital Employee Health
14. Issue Date for Circulation Data Below: November 2001

15. Extent and Nature of Circulation		Average No. of Copies Each Issue During Preceding 12 Months	Actual No. Copies of Single Issue Published Nearest to Filing Date
a. Total No. Copies *(Net Press Run)*		1920	1892
b. Paid and/or Requested Circulation	(1) Paid/Requested Outside-County Mail Subscriptions Stated on Form 3541. *(Include advertiser's proof and exchange copies)*	1643	1592
	(2) Paid In-County Subscriptions *(Include advertiser's proof and exchange copies)*	0	0
	(3) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution	14	14
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c. Total Paid and/or Requested Circulation *(Sum of 15b(1) and 15b(2)*		1657	1606
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g. Total Distribution *(Sum of 15c and 15f)*		1672	1621
h. Copies Not Distributed		248	271
i. Total *(Sum of 15g, and h.*		1920	1892
Percent Paid and/or Requested Circulation *(15c divided by 15g times 100)*		99	99

16. Publication of Statement of Ownership
Publication required. Will be printed in the November issue of this publication. ☐ Publication not required.

17. Signature and Title of Editor, Publisher, Business Manager, or Owner: Publisher — Date: 9/27/01

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PS Form **3526**, September 1999 *(Reverse)*

facilitate a broader distribution of early season vaccine to providers with high-risk patients," the agency reported.

There will be no shortage of vaccine supply this year, but the release has been delayed, the CDC says. Its influenza officials say approximately 60% of the total supply should be distributed by the end of October. About 30% of the total influenza vaccine supply will be delivered in November, and the final 10% is expected in early December. Influenza activity usually peaks in January or later.

Persons at greatest risk from influenza include those more than 65 years of age, those in nursing homes, and those with certain chronic diseases, particularly of the lungs and heart. Health care workers who work with that high-risk population are also a priority for vaccination.

Based on manufacturing estimates, the CDC reports that 79.1 million doses will be available this season, a larger supply than last year and comparable to 1999. ■

Hospital Employee Health®

Nursing shortage may work in your favor for salary boost

In tight times, EHPs still need to prove their worth

Employee health professionals (EHPs) may be benefiting from efforts to retain experienced nurses, as they reported somewhat higher salary increases this year in the exclusive 2001 *Hospital Employee Health* survey.

But continuing financial concerns at hospitals make it imperative for EHPs to demonstrate the value of their work in reduced injury rates, medical claims, absenteeism, and enhanced working conditions, employee health experts say.

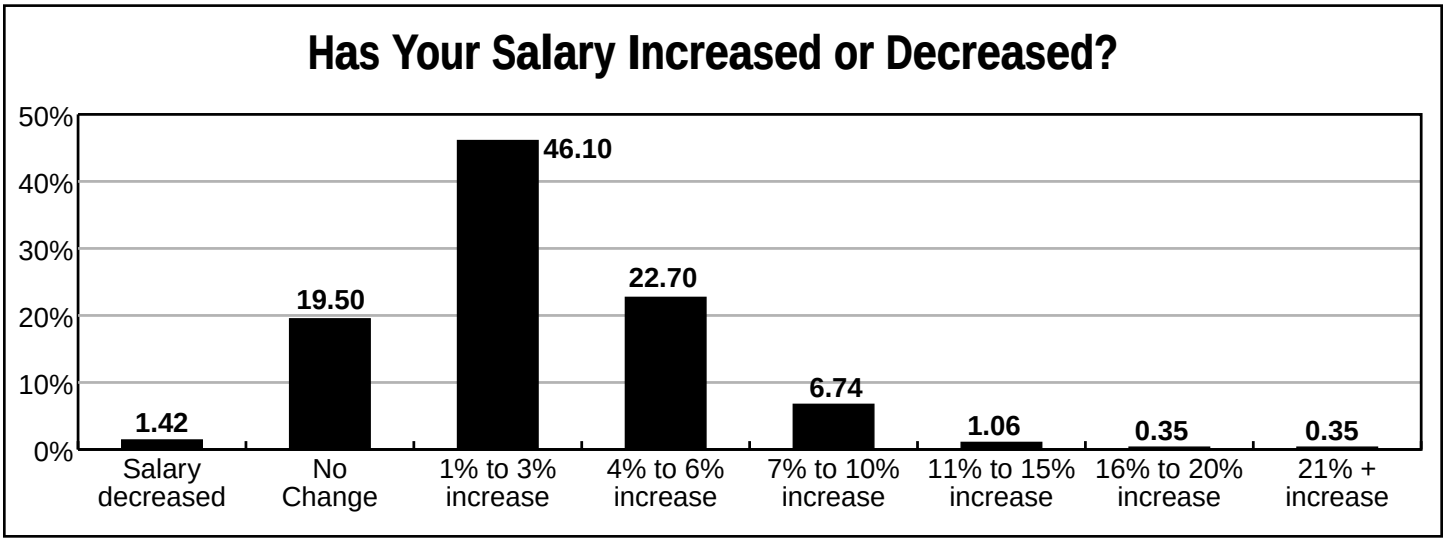
"If you want to hold your own, you've got to communicate the value of what you bring to the organization," says **Charlene M. Gliniecki**, RN, MS, COHN-S, a former employee health manager who is now vice president of human resources at El Camino Hospital in Mountainview, CA. "Even though it's obvious to us what we do and why we do it, people in the executive level don't always see how all the pieces fit together unless we tell them."

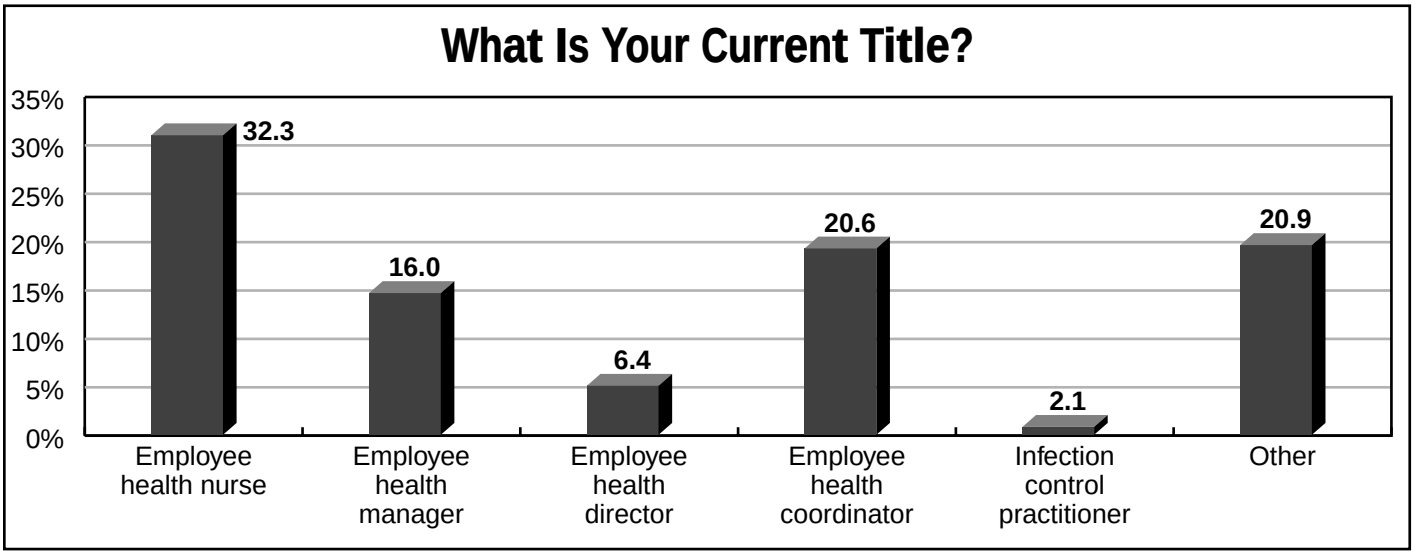
This year, 23% of EHPs responding to the survey said they received a 4% to 6% salary increase and 7% earned 7% to 10% more, while a total of only 24% reported raises in those higher levels last year. Still, most of those EHPs received modest raises in 2001; about half (46%) received a 1% to 3% raise.

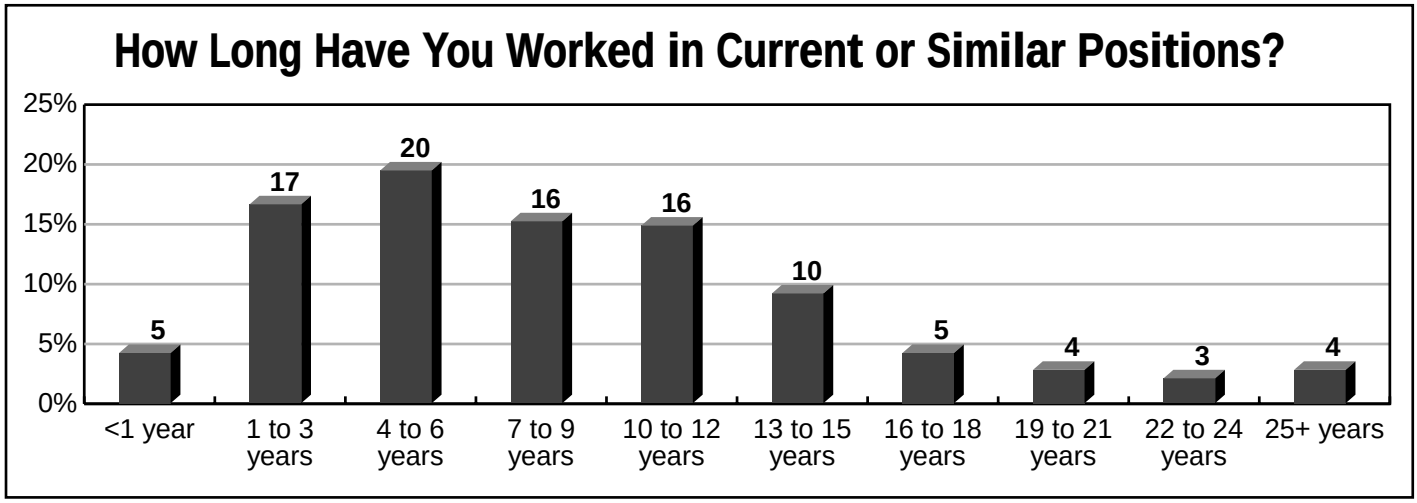
Almost 20% said they received no salary increase. However, some of them may receive an annual bonus or profit sharing.

Salaries were highest in the Northeast and West Coast, reflecting the higher cost of living there. There were no substantial differences between for-profit and not-for-profit hospitals.

Salary adjustments are becoming more commonplace as some hospitals seek to remain competitive







with other facilities in their region.

For example, Sewickley (PA) Valley Hospital conducted an overall salary and wage evaluation. "There were people who got substantial raises," says **MaryAnn Gruden**, MSN, CRNP, NP-C, COHN-S/CM, employee health nurse practitioner. She also is executive president of the Association of Occupational Health Professionals in Healthcare (AOHP), based in Reston, VA.

"We want to retain and recruit employees and we want to be competitive in the marketplace," she says. "Those salaries will be reviewed annually and adjustments will be made accordingly."

EH staffing still a problem

Unfortunately, most EHPs did not get something else they need in their work: increased staff. Almost half (44%) of the survey participants reported no change in staffing, while 13.5% saw a reduction. About a third (36.5%) said they added employees in their department in the past year.

"Most of the people I talk to are still struggling a lot with their staffing," says Gruden, noting that an AOHP survey showed concerns about inadequate staffing. "I'd be interested in learning more about that group that got the increases and what they did. Would they share their secrets with the rest of us?"

In fact, sometimes low staffing may go hand-in-hand with salary increases, notes Gliniecki. "This is a common practice when [companies] look at improving the productivity of the work force," she says. "You look at doing the work with less people, but you make a commitment to pay [those] people more."

New regulations can raise the profile of employee health. In the first-ever sentinel event alert on worker safety, the Joint Commission on Accreditation of Healthcare Organizations in Oakbrook Terrace, IL, announced it would assess organizational compliance with needlestick prevention. **(See article, p. 127.)**

Employee health is part of a broader team that works on needlesticks and other safety issues.

EHPs will still need to demonstrate their value to that team, says Gliniecki. One way for EHPs to improve their visibility is by quantifying the value of their activities to administration, she says.

In a weak economy, EHPs have to make sure they remain key players in the hospital, explains **Deborah V. DiBenedetto**, MBA, RN, COHN-S/CM, ABDA, a Yonkers, NY-based occupational health consultant and president of American Association of Occupational Health Nurses (AAOHN) in Atlanta. "We've got to be aggressive and assertive and take command. That's what we have to do in the marketplace today."

Most EHPs are seasoned professionals. In the *HEH* survey, 52% of respondents said they have worked in health care for 25 or more years. More than half have worked in their current position for 10 or more years.

A major draw for those in employee health is flexibility. Two-thirds (68%) said flexible work schedules are extremely or very important to them. Just 13% said that benefit is not provided.

Hospitals also are supporting nurses who want to further their education. Some 92% of respondents said they could receive tuition reimbursement.

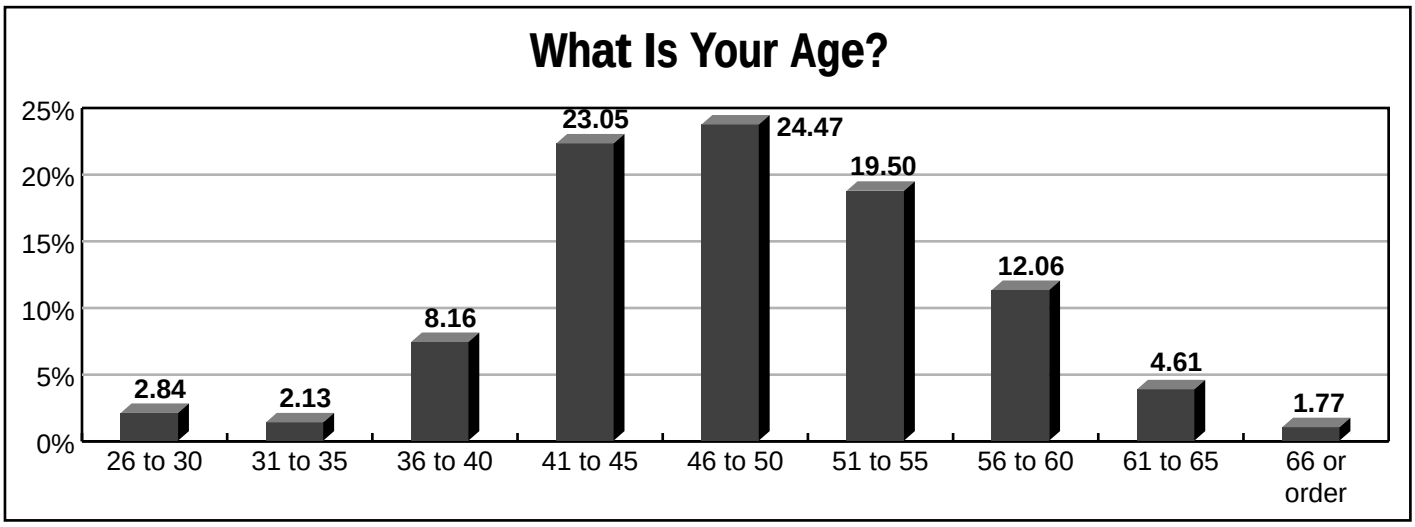
About 59% said that benefit is extremely or very important.

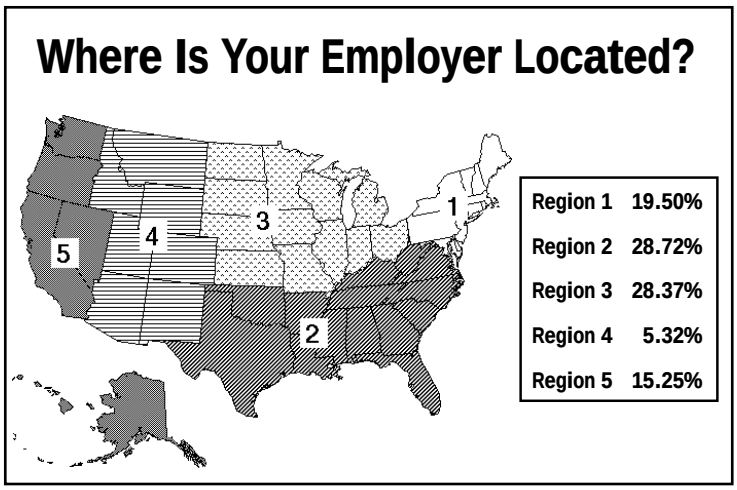
At the same time, the growing cost of certain benefits may erode whatever gains EHPs make in salary. In the survey, 62% of EHPs said their contribution to the cost of medical benefits rose in the past 12 months.

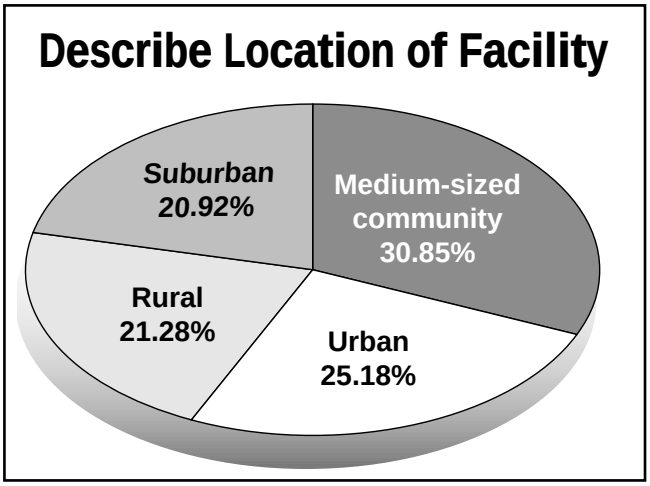
For those who have been in their positions for 10 or more years and have developed a strong expertise in employee health, possibilities for career growth may not be readily apparent. Taking on additional duties, such as coordinating the hospital's overall safety program or compliance with the Americans with Disabilities Act, may be a path for greater compensation, Gliniecki says.

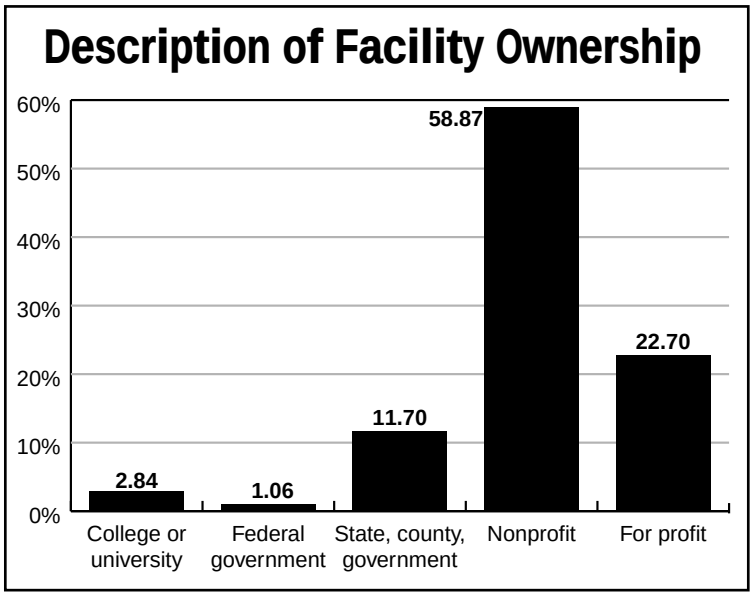
Certification continues to be an important professional accomplishment, stresses Gruden. "I think certification is extremely important as a way to build your credibility in the organization and to stay current in all the issues that are impacting in employee health," she says.

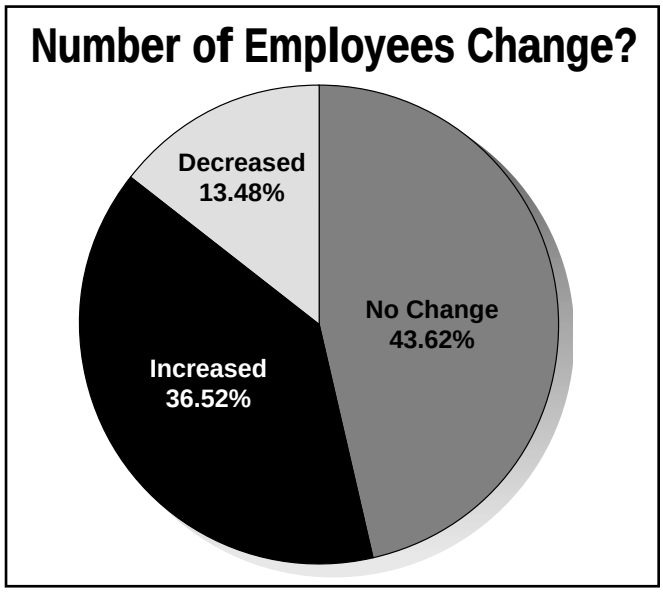
Yet in the *HEH* survey, just 13.5% of EHPs reported having attained their COHN-S. Another

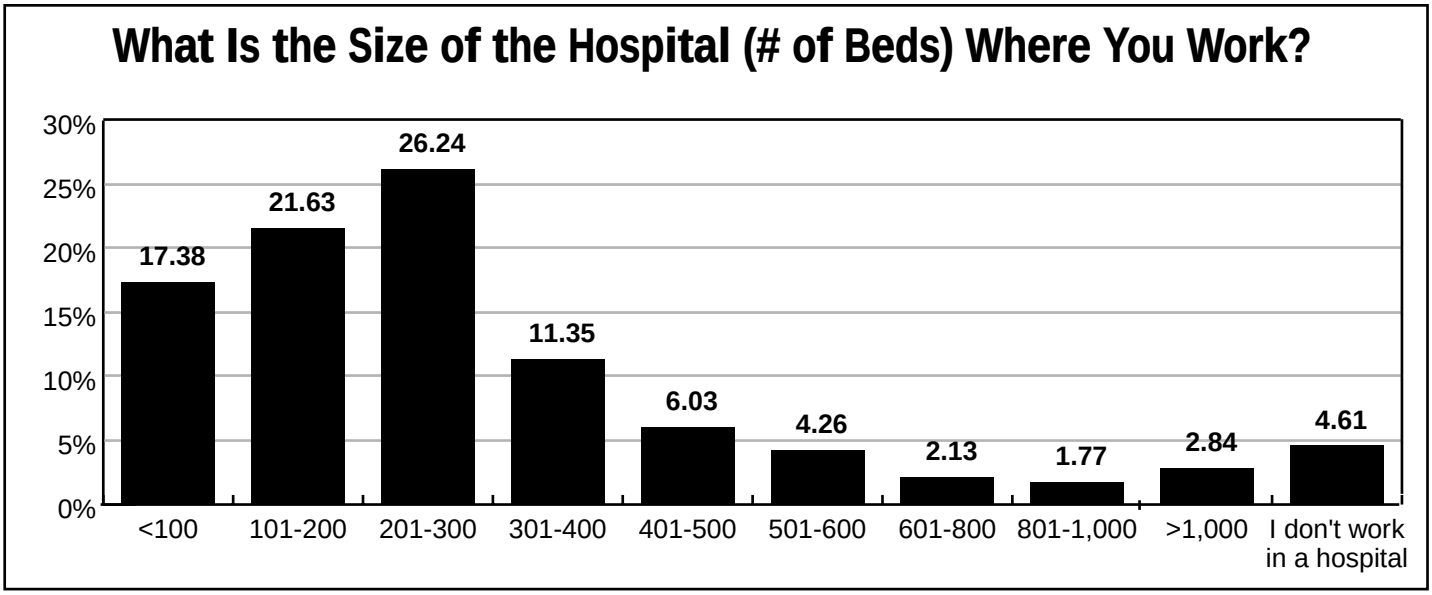












9% were certified in infection control.

Even some business-oriented education can be helpful, DiBenedetto notes. Professional organizations such as the AAOHN provide workshops on demonstrating the value of employee health activities.

Some EHPs are adding revenue to the hospital by providing their services to outside customers, she explains.

EHPs contribute to the hospital's bottom line just by keeping staff healthy or getting them back to work. For example, a return-to-work program that matches employees to appropriate assignments may save money by reducing lost workdays, she says. EHPs also may be able to show how accident reviews or hazard evaluations led to a reduction in injuries.

If they need benchmarking data, EHPs can use information from the National Surveillance System for Healthcare Workers (NaSH) of the Centers for Disease Control and Prevention, the EPINet system run by the International Health Care Worker Safety Center at the University of Virginia in Charlottesville (www.med.virginia.edu/medcntr/centers/epinet/), or the Bureau of Labor Statistics (www.osha.gov/oshstats/work.html).

"Make sure people know what we do," Gliniecki advises. "Make sure to communicate the results. Make sure we can show how our contribution is tied into the main strategic plan or the objectives of the organization. It is absolutely essential that we run our departments almost like a business. We realize that we are accountable for the results and we are here to provide support to the organization, to solve problems for the organization." ■