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AHC Media

OSHA: Health worker injuries 'unacceptable and intolerable'

Next wave of inspections targets nursing homes

Nurses' aides have more serious work-related musculoskeletal injuries than any other occupation, and registered nurses rank fifth in MSDs — despite years of efforts to promote safe patient handling. Those and other dismal injury statistics spurred the U.S. Occupational Safety and Health Administration to announce new, targeted inspections of nursing homes, an action that could ultimately increase scrutiny of hospitals as well.

"It is unacceptable that the workers who have dedicated their lives to caring for our loved ones when they are sick are the very same workers who face the highest risk of work-related injury and illness," said **David Michaels**, MD, MPH, assistant secretary of labor for OSHA, in a statement. "These injuries can end up destroying a family's emotional and financial security. While workplace injuries, illnesses and fatalities take an enormous toll on this nation's economy, the toll on injured workers and their families is intolerable."

A new National Emphasis Program for nursing homes will focus on back injuries from resident or patient handling, exposure to bloodborne pathogens and other infectious diseases, workplace violence, and slips, trips and falls. OSHA has guidelines but no standard for two of those areas (lifting and workplace violence), which means the agency would rely on the general duty clause that requires employers to maintain a workplace free of recognized, serious hazards.

Although hospitals are not part of the National Emphasis Program, it's clear that they also are in OSHA's sights.

"The rates of injuries and illnesses among hospital and health care workers underscore OSHA's concern about the safety and health of these workers," Michaels said. "The workers that care for our loved ones deserve a safe workplace and OSHA is diligently working to make this happen."

When the details of the NEP are unveiled, compliance officers will receive a special directive and training. "You're now going to have an army of compliance officers trained to identify all the same hazards that exist in [hos-

pital] workplaces," says **Eric J. Conn**, an attorney who heads the OSHA group at Epstein Becker and Green in Washington, DC. "You've got a heightened awareness. I think we can expect hospitals will see more citations just like ones that will come out of the NEP."

It is part of a more aggressive enforcement strategy, he says. "The agency used to be reactionary. They're now proactive in identifying a specific hazard or industry they want to focus on, educating their compliance officers and then sending them out to find [violations]," he says.

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AHC Media

Most hazardous job in U.S.?

This is not the first time that nursing homes have been a focus for OSHA. In 2002, after wrestling a settlement from nursing home giant Beverly Enterprises of Fort Smith, AR, over resident handling injuries, OSHA launched a National Emphasis Program. The agency conducted 1,000 inspections of nursing homes but issued only seven ergonomic-related citations.

OSHA also has included nursing homes in its targeted inspections of high-hazard workplaces, but its ergonomic enforcement remains low. In 2010, OSHA issued five general duty clause citations of nursing homes, but none involved resident handling, MSD injuries or other ergonomic issues.

Yet nurses' aides have one of the most hazardous jobs in America. They have the third-highest incidence of non-fatal occupational injuries and illnesses, behind bus drivers and police officers, according to the U.S. Bureau of Labor Statistics. State-run nursing homes have the highest injury and illness rates of any industry, including firefighters and ironworkers.

OSHA noted that the rate of MSDs that involve lost work days actually rose by 10% for nurses' aides, orderlies and attendants in 2010. The rate of 249 cases per 10,000 workers is about seven times higher than the rate for general industry.

"We look at these latest BLS statistics as a clarion call for a paradigm shift on how OSHA allocates their inspection and rulemaking resources," says **Bill Borwegen**, MPH, safety and health director for Service Employees International Union (SEIU), which represents more than a million health care workers.

"OSHA spends over 80% of the inspection resources in manufacturing and construction, which have lower injury and illness rates than hospitals and health care," he says. "It's time for them to apply their limited resources where people are getting hurt."

The focus on nursing homes and health care should not be limited to an emphasis program, Borwegen says. "The agency has a construction directorate at their headquarters. Maybe it's time to have a service sector or a health care sector directorate. They need to figure out how to revamp the way they do their job in light of these alarming BLS statistics."

The American Health Care Association, the Washington, DC-based organization that represents the long-term care industry, responded to a query from HEH with a statement from **Greg Crist**, vice

president of public affairs:

"As a profession that cares for others, we realize that we must also take care of those that dedicate their time in our facilities. AHCA remains committed to providing resources and training opportunities to our members to develop and implement various workplace safety programs. And we are encouraged to see declining injury rates in nursing and residential care facilities over the last few years. But we must continue to advance in this endeavor and we hope to work with OSHA to uphold this commitment to our caregivers."

Managers lack focus on safety

The focus on nursing homes comes as no surprise to **Pamela Dembski Hart**, BS, MT(ASCP), CHSP, a safety consultant and principal and founder of Healthcare Accreditation Resources in Boston who has provided training, assessment and consulting services to nursing homes.

"The nursing home population has increased, and without proper oversight and education about safe work practices and engineering controls, injury rates obviously will increase too," says Dembski Hart.

Nursing homes have a high turnover of staff and often have employees who have limited English skills, which contributes to the difficulty maintaining trained and skilled employees. Managers and administrators also may fail to understand the importance of OSHA regulations and the methods necessary to implement them, she says.

For example, there's widespread misunderstanding of the Bloodborne Pathogen Standard, she says. Nursing homes must evaluate and provide safer sharps (as required by the Needlestick Safety and Prevention Act) and annual interactive training that is tailored to the employees' work or job description. Instead, employers often provide general training to nurses and housekeepers at the same time, even though they encounter different hazards, she says.

Nursing homes often fail to update their exposure control plans annually, reevaluate new safety devices, or even include frontline workers in the device evaluation, she says.

Chemical hazards are another area of concern. When chemicals such as surface disinfectants or housekeeping cleaners are transferred to a spray bottle or other secondary container, the new container needs a label showing its identity and hazard levels for flammability, reactivity, health effects and protective equipment.

"I'll go in a janitor's closet and there's no protective equipment," says Dembski Hart, noting that latex and vinyl gloves do not provide protection against most chemicals. "If I pulled a chemical off a shelf and said, 'Find me the MSDS [material safety data sheet], they frequently wouldn't know where to find it. Does it contain hazardous ingredients? Ninety percent [of employees] couldn't answer that because they haven't received appropriate training or any training."

This year, the person asking the question may be an OSHA inspector — and the response could be a citation and fine. ■

CDC urges better flu, pertussis vaccination

New guidelines a 14-year update

Hospitals should boost the pertussis vaccination rates of their employees, track and report their influenza vaccination rates, and review employees' immunity to measles, mumps and rubella (MMR), according to updated recommendations from the Centers for Disease Control and Prevention.

The agency issued an update to the 14-year-old guidelines on I*mmunization of Healthcare Personnel* (http://1.usa.gov/ukOECq). The new document is a compilation of previous recommendations by the Advisory Committee on Immunization Practices (ACIP), a federal advisory panel to CDC. (*See highlights, p. 4.*)

The recommendations now will become a dynamic document, updated at least annually online, says **Abigail Shefer**, MD, FACP, associate director for science in CDC's National Center for Immunization and Respiratory Disease.

Among the changes since 1997: Stronger language urging pertussis and influenza vaccination of health care personnel, which includes employees who do not have direct patient care responsibilities as well as volunteers, students and contract workers.

In 2010, there were 27,555 cases of pertussis nationwide, the highest number in 63 years. More than 9,000 of those cases were in California, where 10 infants died. Hospital outbreaks have been associated with transmission to or from health care workers.[1]Yet in 2009, only 17% of health care workers had received a pertussis booster, which is the Tdap vaccine, according to the National Health Interview Survey.[2]

The guidelines emphasize that all health care workers should receive a single dose of Tdap, regardless of when they received their last tetanus booster. Tdap is a tetanus, diphtheria and acellular pertussis vaccine.

Meanwhile, CDC also stressed the need for all health care workers to receive the flu vaccine and said that flu vaccination should be a measure of quality of care. CDC did not comment on the use of mandates, but recommended a "comprehensive influenza vaccination strategy" tailored to the needs of health care organizations.

"It probably does take an aggressive approach for facilities to achieve [high vaccination rates] both for influenza and Tdap," says Shefer.

According to the guidelines, it is no longer adequate for health care workers to report that they previously had measles, mumps or varicella. They would need documentation from a health care provider regarding a history of varicella or herpes zoster. Measles, mumps and rubella would require laboratory confirmation of disease.

Bruce Cunha, RN, MS, COHN-S, manager of employee health and safety at the Marshfield (WI) Clinic, would have liked CDC to go a step farther with its MMR recommendations. Cunha documents post-vaccination titers. If a new employee reports previous MMR vaccination but has no documentation of a post-vaccination titer, he tests. If the titer is negative, Cunha gives the employee a dose of vaccine and tests again. "We have very, very clear evidence of who is immune and who is a non-responder," he says.

In an outbreak, Cunha doesn't have to scramble to determine the immune status of employees. For example, during a mumps outbreak about five years ago, "we had no employees who had any issues with mumps because we know they're all immune — by titer, not by vaccination history," he says.

"Immunization does not equate to immunity," he says. "You cannot say a person is immune just because they got immunized."

Health care facilities may go beyond the recommendations, notes Shefer. CDC did not recommend titer testing because it was not considered to be cost-effective, she says.

CDC also leaves some latitude for health care workers born before 1957. They are still presumed to be immune to mumps because they are likely to have had natural disease. However, CDC says health care facilities "should consider" vaccinating those employees with two doses of MMR if they don't have laboratory confirmation of immunity or disease. In the case of an outbreak, health care facilities "should recommend" two doses of MMR to those unvaccinated employees born before 1957 and without lab confirmation of immunity or disease.

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Key features of CDC guidelines

The Centers for Disease Control and Preventions new guidelines -- *Immunization of Healthcare Personnel* (http://1.usa.gov/ukOECq) — include the following highlights and updated recommendations:

Health care personnel (HCP) are defined as all paid and unpaid persons working in health-care settings who have the potential for exposure to patients and/or to infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air.

HCP might include (but are not limited to) physicians, nurses, nursing assistants, therapists, technicians, emergency medical service personnel, dental personnel, pharmacists, laboratory personnel, autopsy personnel, students and trainees, contractual staff not employed by the health-care facility, and persons (e.g., clerical, dietary, housekeeping, laundry, security, maintenance, administrative, billing, and volunteers) not directly involved in patient care but potentially exposed to infectious agents that can be transmitted to and from HCP and patients

Hepatitis B: HCP and trainees in certain populations at high risk for chronic hepatitis B (e.g., those born in countries with high and intermediate endemicity) should be tested for HBsAg and anti-HBc/anti-HBs to determine infection status.

Influenza: Emphasis that all HCP, not just those with direct patient care duties, should receive an annual influenza vaccination. Comprehensive programs to increase vaccine

coverage among HCP are needed; influenza vaccination rates among HCP within facilities should be measured and reported regularly.

Measles, mumps, and rubella (MMR): History of disease is no longer considered adequate presumptive evidence of measles or mumps immunity for HCP; laboratory confirmation of disease was added as acceptable presumptive evidence of immunity. History of disease has never been considered adequate evidence of immunity for rubella. The footnotes have been changed regarding the recommendations for personnel born before 1957 in routine and outbreak contexts. Specifically, guidance is provided for 2 doses of MMR for measles and mumps protection and 1 dose of MMR for rubella protection.

Pertussis: HCP, regardless of age, should receive a single dose of Tdap as soon as feasible if they have not previously received Tdap. The minimal interval was removed, and Tdap can now be administered regardless of interval since the last tetanus or diphtheria-containing vaccine. Hospitals and ambulatory-care facilities should provide Tdap for HCP and use approaches that maximize vaccination rates.

Varicella: Criteria for evidence of immunity to varicella were established. For HCP they include written documentation with 2 doses of vaccine, laboratory evidence of immunity or laboratory confirmation of disease, diagnosis of history of varicella disease by health-care provider, or diagnosis of history of herpes zoster by health-care provider.

Meningococcal: HCP with anatomic or functional asplenia or persistent complement component deficiencies should now receive a 2-dose series of meningococcal conjugate vaccine. HCP with HIV infection who are vaccinated should also receive a 2 dose series. Those HCP who remain in groups at high risk are recommended to be revaccinated every 5 years. ■

Is flu shot efficacy being oversold?

Study shows it reduces flu by 59%

Getting a flu shot doesn't provide as much protection as was previously reported, according to new analysis of more than 5,000 studies. Now it's time to be honest about the limitations of the vaccine to build trust with health care workers, says an international expert in risk communication.

"There is evidence that health care workers underestimate the value of the vaccine. Do they underestimate the value of the vaccine because the sales pitch hasn't been aggressive enough or because it's been too aggressive and dishonest?" says **Peter Sandman**, PhD, a risk communication consultant based in Princeton, NJ.

"Over the long haul, you can't ground public health in the ethics of a bad used car salesman. And that's what they've done. They've gotten away with it much longer than they would have if it wasn't public health," he says.

The evaluation of flu studies, published in *Lancet Infectious Diseases*, showed that even when the influenza vaccine is well-matched to the prevailing strain, its efficacy is only 59% for laboratory-confirmed flu in people 18 to 65 years of age.[1] Just a couple of weeks before the study was published online, the Centers for Disease Control and Prevention revised its online information about flu vaccine effectiveness. Previously, the agency had said well-matched inactivated influenza vaccine was 70% to 90% effective. CDC now reports that "recent [randomized controlled trials] of inactivated influenza vaccine among adults under 65 years of age have estimated 50-70% vaccine efficacy during seasons in which the vaccines' influenza A components were well matched to circulating influenza A viruses."[2] "We have said for a long time that there's a range of vaccine effectiveness. We have said for a long time that we need better vaccines," says CDC spokesman **Tom Skinner**, who says the CDC and vaccine manufacturers are working toward developing improved influenza vaccines. "But the vaccines that we have now are all that we have. Vaccine continues to be the single most important thing people can do to protect themselves against flu."

Efficacy varies widely based on age, vaccine type, and other factors, and in some cases is lower than 59%, says **Michael Osterholm**, PhD, MPH, director of the Center for Infectious Disease Research and Policy (CIDRAP) and lead author of the study.

"Overall, we just have a lot of work to do in the flu world," he says. "Overstating the effectiveness of this vaccine doesn't help anybody."

'Clarion call' for a better vaccine

Both Osterholm and Sandman agree that getting the flu vaccine is important. So why is the issue of flu vaccine effectiveness so important?

Currently, there's little incentive to invest in a new vaccine technology, says Osterholm, who urges public health officials to issue a "clarion call" for a better vaccine. "When you have a vaccine that's promoted by the public health community as being effective, and it's cheap, why would you spend a billion dollars to produce another one?" he says.

Meanwhile, health care workers already have some doubts about the efficacy of the vaccine. In an Internet-based survey of almost 2,000 health care workers conducted by the Centers for Disease Control and Prevention, only about half (54%) of unvaccinated health care workers agreed with the statement, "Influenza vaccination can protect me from getting influenza." Less than half (46%) of those unvaccinated employees said getting the flu vaccine was worth the time and expense.[3]

The rationale for vaccinating health care workers is to protect vulnerable patients. But Osterholm notes that there's little data to support commonly held beliefs about the flu vaccine. For example, there's no evidence that influenza vaccination can lead to "herd immunity," or prevention of outbreaks because most people are vaccinated, he says.

"We find there are a lot of facts that are stated in the flu world that hardly can be called facts," he says.

Even the widely cited 1997 article that found a reduction of mortality in long-term care when health care workers were vaccinated had a major caveat: Because of the low number of flu cases in the study, the authors stated, "[W]e do not have any direct evidence that the reductions in rates of patient mortality and influenza-like illness that were associated with HCW vaccination were due to prevention of influenza."[4]

"It really points out that there is a relative absence of good data to evaluate the effectiveness of these vaccines," Osterholm says.

A vaccine that prevents 59% of influenza is still a good bet, says Sandman. But he argues that it isn't good enough to support mandatory vaccination programs that require masking of unvaccinated employees. After all, about 40% of the vaccinated workers are also unprotected, he says.

"Anyone who claims they do science-based medicine and science-based health policy ought to be looking at the Osterholm study," he says.

Efficacy varies by age, vaccine

The flu vaccine remains the best tool to protect health care workers and their patients from influenza, agrees Osterholm. But he also highlights important differences in the protection it provides for different populations. This also has implications for health care worker vaccination.

Osterholm and colleagues analyzed 5,707 studies from 1967 to early 2011 and found only 31 that met their strict criteria. Vaccine efficacy was determined by randomized controlled trials that examined risk of acquiring influenza after vaccination, and vaccine effectiveness was determined by observational studies that measured relative flu risk after vaccination based on lab-confirmed influenza.

The analysis of flu studies showed that:

The live attenuated influenza vaccine (LAIV) is very efficacious for children but not for adults. In randomized, controlled studies, the LAIV showed an impressive 83% efficacy in children 6 months to 7 years old. However, there were not studies that met the inclusion criteria to demonstrate efficacy in older children. Osterholm notes that one study showed LAIV was 50% less efficacious in adults than the trivalent inactivated vaccine (TIV). "[The] differences could be related to the inability of the live attenuated viruses to infect some adults because of their past exposure to similar strains," the authors speculated.[5]

Although more research is needed, those results call into question the practice of giving the nasal vaccine to health care workers who want to avoid a shot. Today, if you're a young child you should be getting LAIV, and if you're an adult you should be getting TIV," says Osterholm.

Efficacy of the trivalent inactivated vaccine has not been established for children or adults over 65.

There were no randomized, controlled trials involving solely people over 65 or children aged 2 to 17, Osterholm and colleagues reported. About a third (35%) of observational studies showed significant effectiveness of the TIV against lab-confirmed flu. Meanwhile, the match of TIV to the prevailing strains did not show the expected influence. "Our study could not identify a close relationship between match and vaccine effectiveness," says Osterholm. "We had studies in years that there were very, very good matches and in years that there were poor matches in which the effectiveness data were identical."

Adjuvants produce only a modest increase in effectiveness.

Adjuvants were used in Canada and Europe to boost the effectiveness of the H1N1 pandemic vaccine. Four studies showed a median vaccine effectiveness of 69%, according to the analysis. Yet interestingly, older adults who had been exposed to the pandemic strain in their childhood apparently

retained substantial immunity 60 or 70 years later. "There's a lot we don't know about the human immune response to the influenza infection and vaccine," says Osterholm.

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Flu shot mandate in 1 in 4 hospitals

Few fire HCWs who decline shot

Mandatory influenza vaccination programs are gaining traction at hospitals around the country, but few hospitals have opted for the most stringent policies.

A survey of 808 hospitals found that 56% had a requirement for influenza vaccination of employees in the 2010-2011 influenza season. By the study's definition, a hospital's vaccination requirement could include declination statements or personal belief exemptions. Yet one in four (24.8%) had consequences for declining vaccination — a dramatic increase from the 2007-2008 season, when just 37 (5%) had such policies.[1]

Just 29 hospitals reported having a policy that involved terminating employees who refused vaccination and didn't have a medical or religious exemption, or 3.6% of the total. Three-quarters of hospitals with consequences for declining vaccination required health care workers to wear masks

"[Hospitals] definitely want to achieve the highest rates of vaccination possible," says lead author **Brady Miller**, MPH, who was a post-graduate fellow working with the Centers for Disease Control and Prevention and is now a medical student at the University of Michigan in Ann Arbor.

But hospitals increase the requirements incrementally, he says. "If it doesn't have to [involve] terminating non-vaccinated people, they don't want to go that far," he says.

Hospitals were less likely to include non-employees in their requirements, such as medical staff, volunteers, students or contractors.

Hospitals also were liberal in the use of exemptions. More than half (55%) of the hospitals with consequences for failing to be vaccinated allow personal belief exemptions, the study found. "Hospitals may titrate up their vaccination programs and incrementally increase the stringency," says Miller.

How successful were the mandatory policies at raising vaccination rates? Not surprisingly, hospitals that terminated employees for failing to get the vaccine had the greatest increase in their rates, with an increase of about 24%. Hospitals that used other consequences had an increase of about 18%, and hospitals without mandates had an increase of about 10%.[2] Interestingly, the authors reported that hospitals that allowed non-medical exemptions had increases in their vaccination rates that were similar to those that did not allow non-medical exemptions.

Overall, the H1N1 pandemic led to an increase in health care worker vaccination rates. Increases were greatest for hospitals that had lower rates before adding vaccination requirements.

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New drugs raise HCV cure rate

Another reason to follow needlesticks

Safer sharps do not eliminate the risk of hepatitis C for health care workers, but new drugs can spare them from a dire prognosis.

With the Food and Drug Administration approval of Victrelis, produced by Merck of White-

house Station, NJ, and Incivek, from Vertex in Cambridge, MA, health care workers with HCV have a greater chance of a complete cure. Both drugs boost the effectiveness of interferon and ribavirin by blocking the virus' ability to replicate. They can reduce the viral load to undetectable levels and enable many people to cut the difficult HCV treatment regimen from 48 to 24 weeks.[1]This is a time of unprecedented medical advances for people with HCV, says **Douglas Dieterich**, MD, professor of medicine in the Division of Liver Disease at Mount Sinai Medical Center in New York. There are about 50 hepatitis C drugs under development, some with the potential for post-exposure prophylaxis.

"[The new drugs] changed the cure rate from 40% to 80%. They made the risk-benefit ratio [of treatment] hugely different," he says.

It's also a new reason for health care workers at risk for blood exposures to get tested, he says. "Frankly, I think everybody should be tested for hepatitis A, B and C, but health care workers in particular should be getting tested for hepatitis C," he says.

A fateful stick

Dieterich knows the importance of these new treatments from the perspective of a patient and a provider. He developed acute hepatitis C after a needlestick when he was a third-year medical student.

It was 1977 — before HIV/AIDS and before the widespread use of needle safety devices. Hepatitis C had not been identified, but it was called non-A, non-B hepatitis. Dieterich was taking blood from an ICU patient who had severe liver disease and pancreatitis when he was stuck with a 14-gauge hollow bore needle. "I knew I was in trouble right away," he says.

At that time, there was little that could be done after a needlestick. "When I stuck myself, there was nothing available to treat it," he says. "I got a gamma globulin shot. That was about it. After I got sick, there was nothing really to do except use prednisone."

Only about 20% to 30% of people with newly acquired HCV infection develop symptoms of acute disease, according to the Centers for Disease Control and Prevention. Dieterich was one of them. He became sick, but struggled to continue his medical studies. He had originally planned to specialize in ophthalmology, but instead switched to gastroenterology with a specialty in liver disease.

When interferon and ribavirin treatment became available, Dieterich took it — twice, because the first regimen didn't work. He suffered from fatigue, irritability, depression, nausea, and diarrhea.

So Dieterich understands what HCV-positive health care workers go through when he prescribes the treatment. He is optimistic about the benefits of these new drugs, but knows the challenges that remain. Patients with chronic hepatitis C may have no symptoms, but enduring the treatment can prevent serious liver disease or the need for an eventual liver transplant, he says.

That's why it's so important to prevent needlesticks, Dieterich says. "This should not reassure them. Taking the treatment is not a panacea. The side effects are difficult," he says. "But if something happens and they do get hepatitis C, we can treat it and cure it almost all the time."

Higher occupational risk?

How many health care workers acquire HCV

Did you know?

For every 100 persons infected with HCV, approximately:

- 75 to 85 will go on to develop chronic infection
- 60 to 70 will go on to develop chronic liver disease
- 5 to 20 will go on to develop cirrhosis over a period of 20–30 years
- 1 to 5 will die from the consequences of chronic infection (liver cancer or cirrhosis)

In the event of a needlestick:

- Perform baseline testing for anti-HCV on the source patient.
- Perform baseline and follow-up testing for health care workers exposed to an HCV-positive source, including baseline testing for anti-HCV and ALT activity AND
- Conduct follow-up testing for anti-HCV at 4 to 6 months and ALT activity. If earlier diagnosis of HCV infection is desired, testing for HCV RNA may be performed at 4 to 6 weeks.
- Seek confirmation by supplemental anti-HCV testing of all anti-HCV results reported as positive by enzyme immunoassay.

Source: Centers for Disease Control and Prevention: http://1.usa.gov/sltyD1

from a needlestick? CDC estimates the risk to be 1.8%, but a review of studies indicated a seroconversion rate of about .5% after an exposure to HCV.[2] Seroprevalence studies did not show a higher rate for health care workers, but an analysis of death certificates by researchers at the Centers for Disease Control and Prevention indicated that health care workers have an occupational risk. Twenty years of data (1984 to 2004) from the National Occupational Mortality Surveillance System found that female health care workers have a 20% greater risk of dying from hepatitis C than women in other occupations. Male health care workers have a 50% elevated risk.[3]

Overall, hepatitis C is a "hidden epidemic." An estimated 3.2 million Americans have the chronic infection but most aren't aware of it. "Most people who are identified are those who have an abnormal liver enzyme on a routine physical," says **Miriam Alter**, PhD, director of the infectious disease epidemiology program at the University of Texas Medical Branch in Galveston.

The CDC is reviewing its screening recommendations to improve detection of chronic HCV. "CDC is currently working to evaluate whether one-time routine hepatitis C screening for anyone born from 1945 to 1965 is warranted," says CDC spokesperson **Jennifer Horvath**. "This extensive process is underway now and any forthcoming recommendations would add to, not replace, current risk-based screening recommendations.

"Baby boomers are disproportionately affected by hepatitis C in the U.S., and many of them were infected decades ago," she says. "Reaching this population with screening is critical to slowing and stopping the serious health consequences that are already taking place."

By the time chronic HCV patients develop symptoms, they already have significant liver damage, says Alter. Chronic HCV infection is the most common reason for liver transplants. (*See box on p.8.*)

Meanwhile, health care workers should report and follow up on needlesticks to determine if the source patient is positive and to detect seroconversion, she says. "It's extremely likely that you could cure your HCV infection," she says.

Taking the drugs is not easy, however. "The new treatments are very promising, but they come with a price," says Alter. "They have quite substantial side effects associated with them."

Despite the reduction in needlesticks nationwide, Dieterich still sees a steady stream of health care workers from around the country who have acquired HCV from a needlestick. "I'm treating one now, a house officer with acute hepatitis C from a needlestick," he says. "The good news is that it happens relatively rarely now because of all the safeguards. The bad news is it still sometimes happens."

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A green workplace is a healthy workplace

Hospitals going beyond cleaners

Go green for safety.
That could be the mantra of a growing number of hospitals that are finding that green practices help build a culture of safety. Greener chemicals and cleaning processes may be environmentally responsible, but they also present fewer health concerns for employees, patients and visitors.

As green cleaning becomes the norm, so does an attitude toward chemical safety. For example, Dartmouth-Hitchcock Medical Center in Lebanon, NH, switched to less toxic chemicals years ago. But the hospital also considers safety and green practices in facility design and housekeeping techniques.

"It is a culture, a culture of a safer organization," says **John J. Welenc**, acting director of the hospital's housekeeping service. "It spreads out like a vine."

Hospitals are finding it easier — and less costly — to switch to greener chemicals, says **Xiaobo Quan**, PhD, EDAC, research associate at the Center for Health Design in Concord, CA, and co-author of a report on green cleaning in health care.1 Slowly, hospitals are beginning to use other methods, such as changes in flooring materials, he says.

"We are still moving from the narrow perception of green cleaning to a broader view," he says. "The ultimate goal is to reduce the use of harsh

chemicals. There are multiple ways. It's not just the selection of green products."

Making a green choice in design

In fact, a survey of 150 hospitals, clinics, and experts in health care environmental issues showed that facilities emphasize using less toxic chemicals and reducing toxic waste but less commonly recognize other green practices.

Only 16% identified operational changes, such as placing mats at entrances to reduce floor soil and training employees to minimize the amount of chemicals they use. Only 2% mentioned design changes, such as better ventilation, use of ultraviolet light to kill microorganisms, and changes in floor finishes. The survey and report were sponsored by the Health Care Research Collaborative of Health Care Without Harm, an international coalition based in Arlington, VA.

"Building design can reduce the overall risk of infection," says Quan, citing the use of single patient rooms and HEPA filters. "If you reduce the risk of infection, there's less need for cleaning. There's less need of harsh chemicals."

The report details how five hospitals have integrated green practices into their operations and safety protocols. Those hospitals have valuable lessons to share, but Quan also hopes that further research will answer questions about the best way to ensure a safe environment — including effective infection control. "There's very little research comparing green cleaners or how they perform compared to so-called non-green cleaners," he says.

'Do the right thing'

Dartmouth-Hitchcock has been using green chemicals for 10 years. Any cleaning chemical that has a hazard rating above 1 (slightly toxic) must be approved by the safety committee, says Welenc. That means fewer volatile organic compounds, which can cause eye, nose and throat irritation and headaches. "The main reason we do it is for the health of our employees," he says.

Housekeepers use microfiber mops, which are lighter than the wet cotton string mops and have less ergonomic hazard, he says. As the hospital renovates or builds, new flooring is either rubber or vinyl that has a permanent finish that doesn't need stripping and waxing. "We try to do the right thing as much as we can," Welenc says. "Putting in flooring that doesn't require a finish is something we're committed to."

Dartmouth-Hitchcock trains housekeepers in safer techniques, such as wiping surfaces with a dampened cloth rather than spraying the cleaner. "It's pretty simple. You've got this disinfectant that kills. The more you spray it in the air, the more it kills," and the more housekeepers breathe in, Welenc says. "If you explain it in those terms, it sinks in."

The hospital is also experimenting with some new methods, such as ionized water. A battery-powered spray dispenser adds an electric charge to the water, giving it cleaning and germ-killing properties.

Employees are attuned to the risk of asthma from chemical odors, but sometimes they are still reluctant to change longstanding cleaning practices, says Welenc. "Commit to the program, whatever you do. Don't let the naysayers sway you," he says. If housekeepers complain that the new products don't clean as well, try new techniques or tools, he suggests. Dartmouth-Hitchcock has used smaller scrubbers to get to difficult-to-reach areas or bendable attachments.

Value analysis of chemicals

Ridgeview Medical Center in Waconia, MN, has had a green team — the Hospital Environmental Awareness and Resource Reduction Team — since 2001. New products go through a value analysis. "We look at employee satisfaction, health hazards, reduced exposures, and disposal in addition to cost," says Todd Wilkening, CHST, director of facilities.

In fact, all new chemicals that come into the hospital receive scrutiny, says **Kathy Kruger**, RN, BSN, manager of employee health. "Sometimes we make a decision not to bring them in and we go with an alternative product," she says. "The title and purpose of the product can seem innocent, but when you actually see what the hazardous ingredients are, it gives you another perspective."

Ridgeview also reviewed its level of cleaning to make sure it was not over-cleaning — using more toxic cleaners than were necessary. For example, offices didn't need to be cleaned with quaternary cleaners and the OR floor did not need to be disinfected, Wilkening says.

The hospital educated employees about the benefits of the new cleaning products, in health and environmental effects. The environmental commitment is multidisciplinary, says Kruger. "It isn't solely an issue for the environmental services department," she says. "We really see it in the broadest sense as a safety issue."

Green practices also benefit the community. Ridgeview shreds its confidential paper, which is then used as animal bedding by local farms. Grease and oil in the dietary service is recycled, and the hospital tries to minimize the use of Styrofoam.

The primary goal is an environmentally sound, healthy workplace. But there are other benefits, says Wilkening. "Employees are learning a lot [about environmental practices] that they take home with them," he says.

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1. Quan X, Joseph A, Jelen M. Green cleaning in healthcare: Current practices and questions for future research. Health Care Research Collaborative, September 2011: http://bit.ly/siSd3T. ■

CDC seeks employers for 'Healthy Worksite'

Want help setting up a workplace wellness program that can improve the health of your employees? The Centers for Disease Control and Prevention is launching a National Healthy Worksite Program and will work with up to 15 employers in each of seven regions nationwide. This program does not provide grant funds, but participating employers will receive assistance in drafting policies, implementing programs and evaluating outcomes.

To be eligible, employers must either have no wellness program or have a program that provides only a limited number of interventions. Employers of more than 500 fulltime employees must invest at least $50,000 in the program over two years. If the workplace has more than 1,000 employees, the program must be conducted in a smaller "autonomous organizational unit."

CDC will hold informational webinars on Jan. 13 and Jan. 20, and employers must apply for certification as an eligible employer between Jan. 20 and Feb. 3. CDC will announce the selected employers "on or about" April 30.

More information is available at www.cdc.gov/NationalHealthyWorksite or by emailing NationalHealthyWork@cdc.gov. ■

CNE OBJECTIVES

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 the clinical, administrative and regulatory issues particular to the care of hospital employees affect health care workers, hospitals, or the health care industry at large;
- cite solutions to the problems faced in the care of hospital employees based on expert guidelines from relevant regulatory bodies, or the independent recommendations of other employee health professionals.

CNE INSTRUCTIONS

Nurses participate in this CNE/ CME program and earn credit for this activity by following these instructions.

1. Read and study the activity, using the provided references for further research.
2. Log on to **www.cmecity.com** to take a post-test; tests can be taken after each issue or collectively at the end of the semester. *First-time users will have to register on the site using the 8-digit subscriber number printed on their mailing label, invoice or renewal notice.*
3. Pass the online tests with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%.
4. After successfully completing the last test of the semester, your browser will be automatically directed to the activity evaluation form, which you will submit online.
5. Once the completed evaluation is received, a credit letter will be e-mailed to you instantly. ■

COMING IN FUTURE MONTHS

■ Raising employee safety to the level of patient safety

■ Dementia and the aging workforce

■ Could you be an OSHA VPP star?

■ A data-driven approach to safety

■ Top 10 OSHA citations

CNE QUESTIONS

1. In a new National Emphasis Program for nursing homes, which four hazards will OSHA focus on?
   A. Tuberculosis, chemical exposure, burns, slips and falls
   B. Lockout/tagout, recordkeeping, hazard communication, infection control
   C. Resident handling, bloodborne pathogens, workplace violence, slips and falls.
   D. Influenza vaccination, disease transmission, fatigue, stress.

2. According to an analysis of flu studies published in Lancet Infectious Diseases, what is the overall efficacy of the flu vaccine?
   A. 43%
   B. 59%
   C. 69%
   D. 73%

3. According to an analysis of influenza studies published in Lancet Infectious Diseases, for which group is the live attenuated influenza vaccine (LAIV) most efficacious?
   A. Children 6 months to 7 years
   B. Children 8 to 17 years
   C. Adults 18 to 49
   D. Adults over 65

4. According to a report on green practices in hospitals by the Center for Health Design in Concord, CA, what is a design change that can reduce toxic chemicals?
   A. Removing carpeting from hallways.
   B. Creating small patient rooms.
   C. Placing disposable mats in the hallways.
   D. Using flooring that doesn't require stripping or waxing.

2011 SALARY SURVEY RESULTS

Hospital Employee Health®

Shortage of OHNs to emerge as RNs retire

Employers want OH skills, certification

In this economy, it may be hard to imagine employers eagerly wooing you to work for them. But a pending shortage of registered nurses — and occupational health nurses, in particular — is on the horizon.

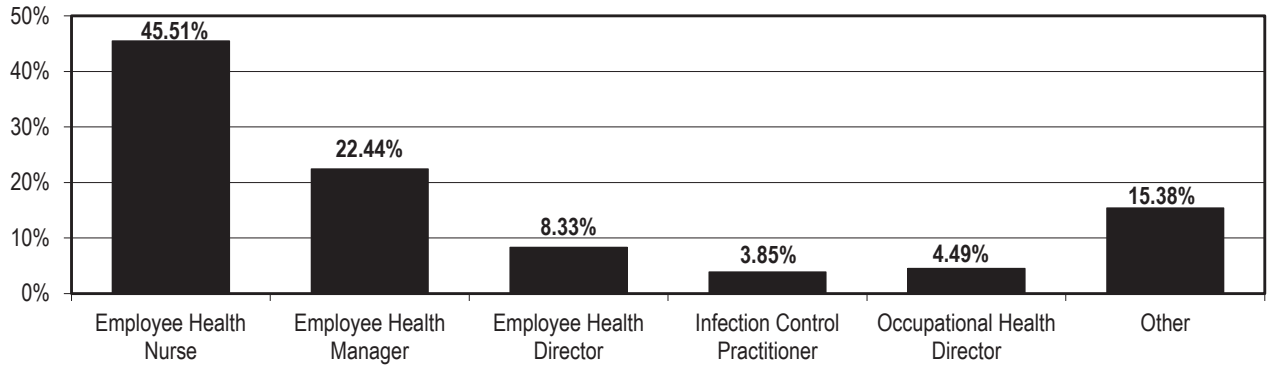
While the national unemployment rate hovered at 9% in the fall of 2011, the unemployment rate for registered nurses was just above 3%, according to the U.S. Bureau of Labor Statistics (BLS). Health care overall will add more jobs between 2008 and 2018 than any other industry, and wages are projected to rise by 22% in that timeframe — twice as fast as the national average, BLS says.

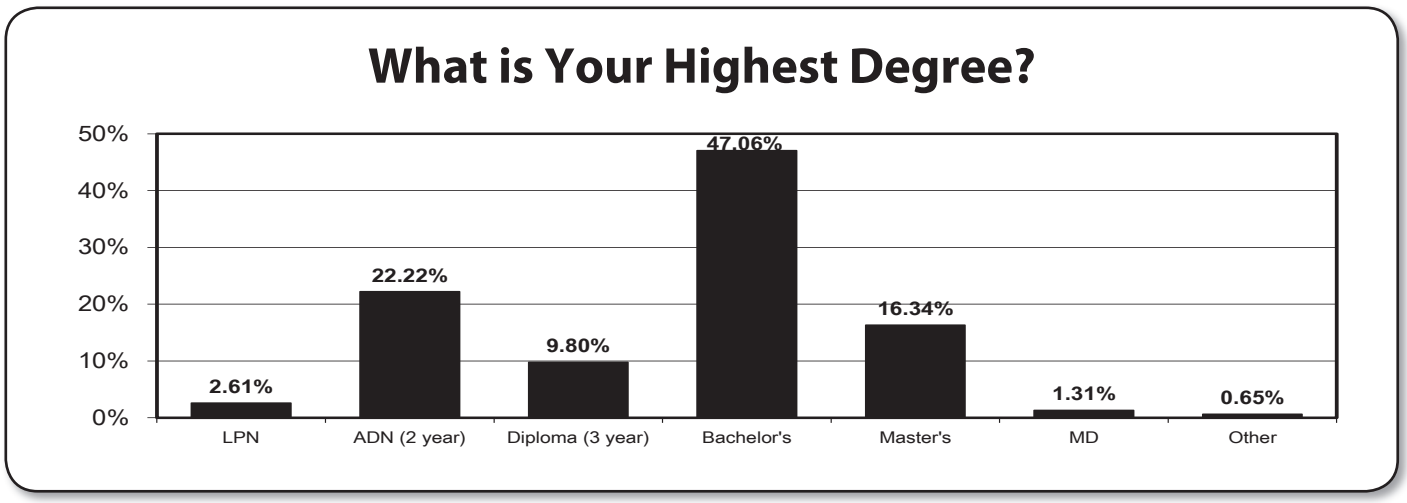
Nurses with specialized training in occupational health are likely to be even more valuable to employers. The annual *HEH* salary survey found that two-thirds of respondents are over the age of 50 and 19% are over 60. While many nurses may be delaying retirement for financial reasons, "if and when [the economy] turns around, there may be an exodus that will be very difficult [for hospitals] to deal with," says **Charlene M. Gliniecki**, RN, MS, chief human resources officer at El Camino Hospital in Mountainview, CA.

Hospitals are tightly focused on the bottom line, but they also want to retain good employees. Slightly more respondents said they received a salary increase in 2011 (68% compared to 64% in 2010) and about one in 10 received a raise of 4% or more. *(See charts on p.2 & 3.)* In the *HEH* survey, 29% of 153 respondents said they earn $60,000 to $69,999, and 16% said they earn $70,000 to $79,999.

"Right now, because of the economy, we're in a holding pattern," says Gliniecki. But there are new challenges ahead for occupational health nurses, she says, as the health care workforce ages and new recruits need to learn safe practices and injury prevention.

What is Your Current Title?





You still need to prove EH value

Why do hospitals need employee health nurses? The simple answer, of course, is to comply with federal and state worker safety regulations, perform pre-placement exams and give vaccinations and TB tests. But hospital administrators who view employee health as a series of tasks are missing a much bigger picture. It's up to employee health professionals to show them the value of their service, says Gliniecki.

Employee health plays a role in reducing injury and absenteeism, improving productivity, reducing workers' compensation claims and premiums, and boosting the hospital's overall safety culture. The service doesn't produce revenue, but it impacts the bottom line. "We will be challenged to demonstrate the return on investment for what we do," says Gliniecki.

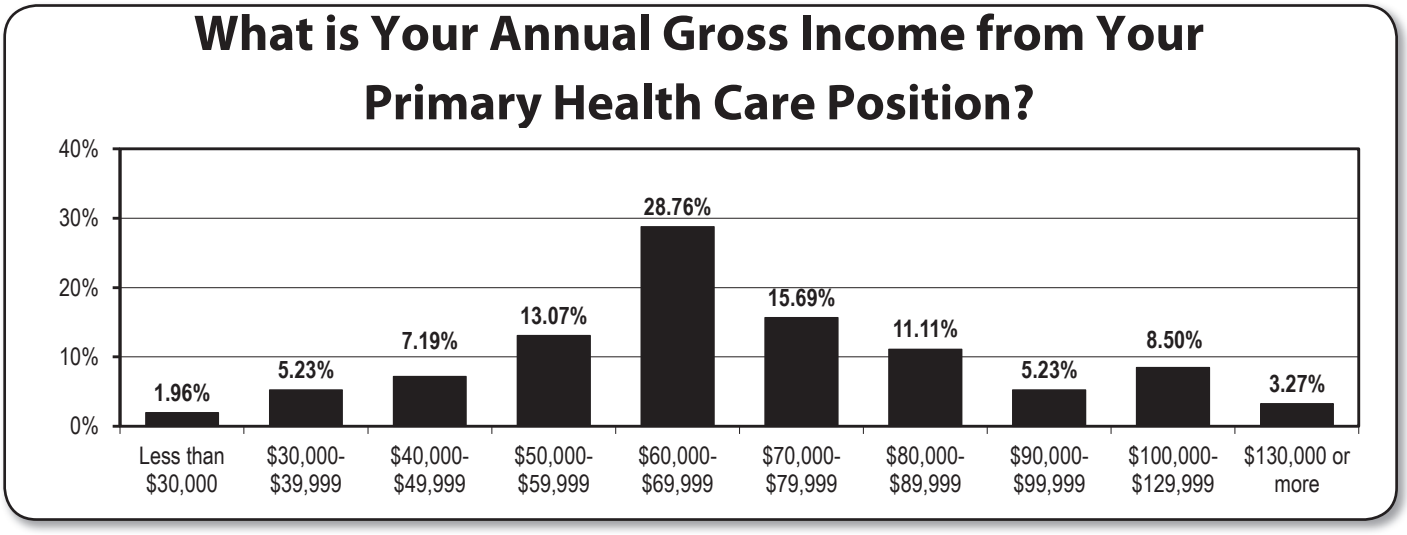
Employee health professionals should emphasize the connection between worker safety and patient safety, she says. For example, safe patient handling programs should be integrated with the hospital's fall prevention programs, she says.

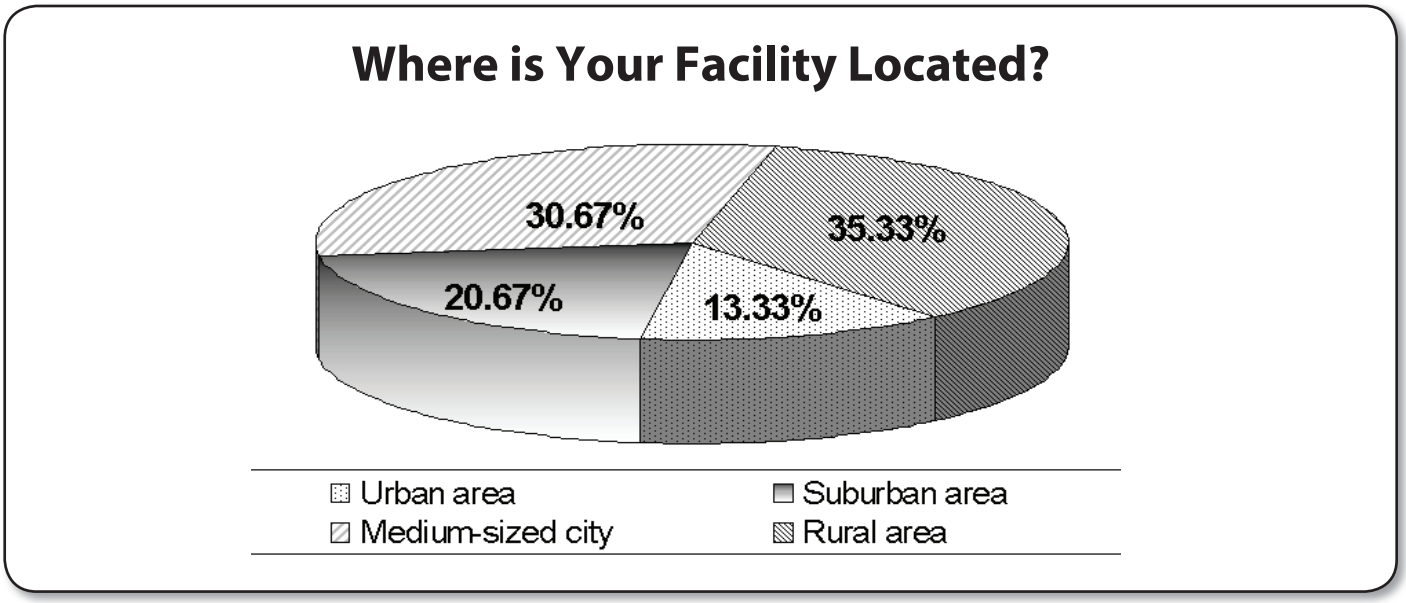
Employers also want employee health professional to take on a bigger role in the organization. In a survey sponsored by the National Institute for Occupational Safety and Health (NIOSH), employers (including health care employers) said they wanted to hire occupational health nurses with skills in case management and transitional work programs and conducting health and injury assessments. They valued communication and leadership skills. *(See box on p. 4.)*

It's important for occupational health nurses to take a multidisciplinary approach, says **M. Chris Langub**, PhD, scientific review officer with NIOSH for the report, "National Assessment of the Occupational Safety and Health Workforce." *(The report is available at www.cdc.gov/niosh/oshworkforce/.)*

"Employers would like occupational health nursing to have cross-disciplinary training with occupational safety," he says.

As hospitals and other health care employers come under increased scrutiny by the U.S. Occupational





Safety and Health Administration, they may turn to professionals with expertise in hazard identification and injury prevention. *(See cover story of this issue for more on OSHA's focus on health care.)*

Employers overall expect to hire 1,373 occupational health nurses in the next five years, according to the NIOSH-sponsored study, which was conducted by Westat, a research corporation based in Rockville, MD. But the projected supply from specialized academic programs is only about 24% of the expected demand for occupational health nurses, the researchers found. That gap is greater than for all other occupational health and safety professions, the researchers said.

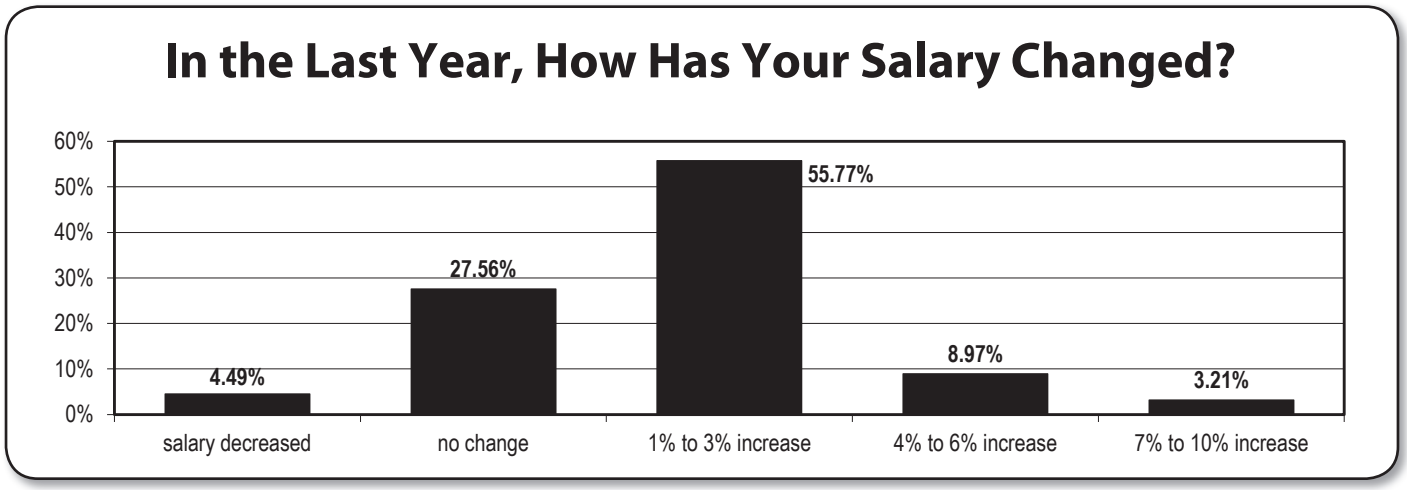
Benefit of advanced ed

Meanwhile, the job of an employee health professional grows ever more complex, with additional responsibilities and new regulations. Employers often want employee health to be involved in health promotion as well as injury prevention to help reduce medical claims.

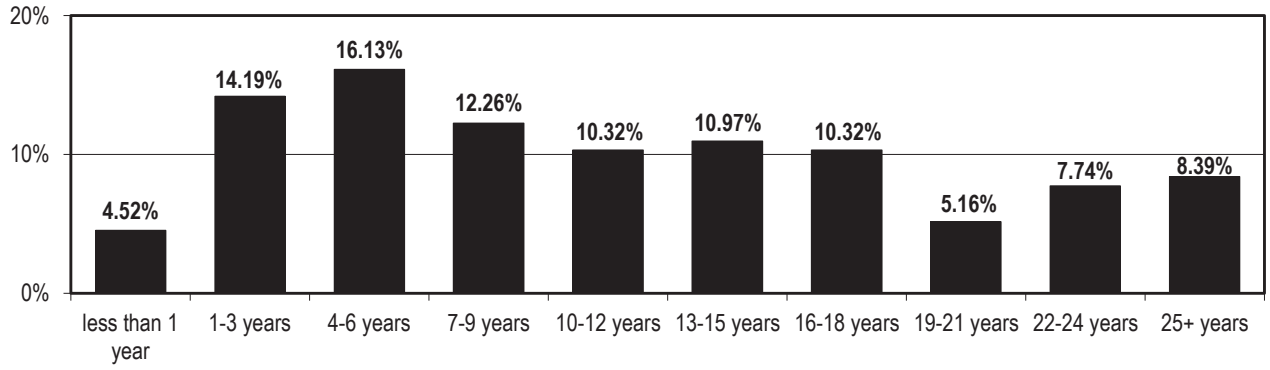
"We need to focus on keeping workers healthy, educating them about exposure avoidance and safe work habits. It's a combination of prevention and promotion," says **Sheila Fitzgerald**, RN, PhD, associate professor at the Johns Hopkins Bloomberg School of Public Health, Division of Occupational and Environmental Health, in Baltimore, MD.

NIOSH supports 17 university-based Education and Research Centers around the country, which provide both continuing education and advanced degree programs *(www.cdc.gov/niosh/oep/centers.html)*. NIOSH funds can help nurses finance their work toward an advanced degree, says Fitzgerald.

However, federal budget cuts threaten that support — and the future of the NIOSH centers — even as employers need more occupational health professionals, she says. The advanced education provides nurses with skills they wouldn't pick up on the job, such as toxicology, epidemiology, and exposure assessment,



How Long Have You Worked in Employee Health?



she says.

In fact, two-thirds of employers in the NIOSH-sponsored survey said they would require professional certification when hiring occupational health nurses. Certification is provided by the American Board for Occupational Health Nurses (www.abohn.org) and requires either 3,000 hours of experience or completion of an academic certification program.

"Education is so valuable," says Fitzgerald. "It's just not an intuitive discipline." ■

What employers want from health nurses

A survey sponsored by the National Institute for Occupational Safety and Health asked employers about their priorities in hiring occupational health professionals. Respondents could select multiple answers. Here are some of the key findings:

What are the most important specialties or technical skills that you will be looking for when hiring occupational health nurses over the next 5 years?

- Case management and transitional work programs 47%
- Conducting health and injury assessments 45%
- Managing and evaluating substance abuse programs 7%
- Wellness and health promotion initiatives 32%
- Analyzing workplace hazards 11%
- Prevention of workplace accidents 28%
- Managing and evaluating travel health programs 6%
- Managing and evaluating workplace violence programs 1%
- Health Quality Improvement initiatives 13%
- Managing and evaluating safety programs 5%

What are the most important additional skills or knowledge areas that you will be looking for when hiring occupational health nurses over the next 5 years?

- Communicating with workers/training skills 31%
- Communicating with upper management 35%
- Organizational science 9%
- Technical writing 15%
- Leadership skills 30%
- Understanding of workers' jobs 25%
- Understanding of our industry (e.g., products, markets, practices) 12%
- Local, state, or Federal regulations 6%
- Workers' Compensation 26%
- Environmental regulations 1%
- Other skills 6%

In what specialties or technical aspects of their jobs do you believe that at least some of your occupational health nursing professionals could benefit from additional training?

- Case management and transitional work programs 33%
- Conducting health and injury assessments 31%
- Managing and evaluating substance abuse programs 16%
- Wellness and health promotion initiatives 50%
- Analyzing workplace hazards 37%
- Prevention of workplace accidents 34%
- Managing and evaluating travel health programs 14%
- Managing and evaluating workplace violence programs 17%
- Health Quality Improvement initiatives 28%
- Managing and evaluating safety programs 28
- Other needs 7% ■/