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OSHA plan may target health care facilities for 'wall-to-wall' inspections

High injury and illness rates will flag high-hazard hospitals

You could be getting an OSHA inspection for Christmas if your hospital has high injury and illness rates, thanks to a new data collection system that identifies and targets high-hazard employers, *Hospital Employee Health* has learned.

For about the past 10 years, the U.S. Occupational Safety and Health Administration (OSHA) has inspected hospitals mainly in response to complaints from employees or union representatives, but a new method of data collection could change all that, says **Rich Fairfax**, CIH, director of compliance for OSHA.

OSHA's new system is based on data collected from 80,000 U.S. employers, including hospitals, to which OSHA sent letters requesting injury and illness information. The agency is using that information to establish what it calls a "high-hazard target system," which will identify individual employers with the highest injury/illness rates.

Scheduled inspections could occur every two years

Targeted employers could receive generally scheduled comprehensive inspections as frequently as every two years, Fairfax says, although a regular interval will not be established. A new list of targeted high-hazard employers will be developed every year. Any employer that has received a comprehensive inspection within the past two years will be dropped from the current list.

Traditionally, OSHA has conducted two types of inspections: complaint inspections and generally scheduled or programmed inspections. Industries receiving the latter type were those OSHA considered "high-hazard" according to Bureau of Labor Statistics injury and illness data. Employers within those industry categories were chosen for inspections randomly from computer-generated lists. However, Fairfax points out that under that system, individual employers with low injury/illness rates at their work sites were sometimes inspected simply because they were part of a high-hazard industry.

"The problem was that a particular establishment might have a good

record, but we still had to do the inspection. Within an industry, some employers have good records and some don't, but the problem with the old system was that we never knew. We wasted our time and the employer's," he explains.

Fairfax notes that in the late 1980s, when bloodborne pathogens became a hot issue in hospitals, OSHA did conduct programmed inspections and found many violations at first, including "very significant cases" involving penalties of more than $100,000. However, within a few years, violations "dropped off," he says, and the program of generally scheduled inspections in hospitals was scrapped in favor of complaint inspections.

OSHA's 'mindset is slowly changing'

Nevertheless, with the new targeting system, some hospitals may be in line for "wall-to-wall" inspections, depending upon where OSHA draws the cutoff line for high injury and illness rates based upon collected data, Fairfax says.

While OSHA has not considered hospitals a high-hazard industry despite high injury/illness rates **(see *Hospital Employee Health*, March 1998, pp. 36-37)**, "that mindset at OSHA is slowly changing," he says. Although OSHA violations may have decreased in the early 1990s, "now data are coming back to us, and we're hearing information that there are other problems, so we're going to go out and revisit the industry."

OSHA began collecting data this spring. After several months of analysis, the agency should be ready to begin comprehensive inspections of "site-specific targets" by the end of this year, Fairfax says.

Comprehensive general hospital inspections will "start at the beginning and go all through the facility," he adds, including safety and health programs, respirator programs, chemical exposures, ergonomics, hazard communications, tuberculosis control programs, and bloodborne pathogens — "anything that could expose or harm workers."

Occupational health experts generally favor the new plan. The Washington, DC-based Service Employees International Union (SEIU), which represents some 650,000 HCWs, has long advocated stricter oversight of working conditions in the nation's health care facilities. **William K. Borwegen**, MPH, SEIU's occupational safety and health director, sees the move as "an incredibly positive development."

However, he takes issue with OSHA classifying hospitals as anything less than high-hazard workplaces.

"The number of people who work in hospitals is astronomical compared to the number of people who work in, for example, chemical plants that have been inspected by OSHA so many umpteen times that they provide a coffee mug with the inspectors' name on it. It's inconceivable to me what other type of workplace has a greater range of potentially hazardous conditions than a health care environment, with chemicals, radiation, infectious diseases, ergonomic problems, and workplace violence," he says.

Part of the problem is that OSHA doesn't have specific standards that apply to many of those exposures, "but you can't find a more diverse range of hazards than those that health care workers face," Borwegen says. "Any type of entree into the health care sector that this initiative would provide would help hospitals take occupational safety and health more seriously," he adds.

JCAHO may set employee health standards

Kathleen Van Doren, RN, BSN, COHN-S, executive president of the Association of Occupational Health Professionals in Healthcare (AOHP) in Reston, VA, agrees that increased OSHA scrutiny would have a positive effect on worker safety.

"I regard OSHA as an advocate for occupational health. Any time we can work with them for improved worker health and safety in our health care facility, it's a win-win all the way around," she says. "Some [hospital occupational health] programs out there are not up to grade-A standards because they're not doing all they should. This will wake them up."

Besides welcoming OSHA, Van Doren would like to see the Joint Commission for Accreditation of Health Care Organizations (JCAHO) include employee health departments in its periodic hospital surveys.

In a letter earlier this year, the AOHP asked JCAHO to consider "stand-alone standards" specific to employee health in the areas of health assessments; recognition, evaluation, and control of occupational health and safety hazards; evaluation, treatment, and case management of occupational injury and illness; surveillance, prevention, and control of infection; management of occupational health information; education; and health promotion and wellness.

"Implementation of employee health functions would be enhanced by comprehensive and coherent employee health standards," the letter states. "Some employee health areas of responsibility are addressed in Joint Commission environment of care; management of human resources; or surveillance, prevention, and control of infection chapters. Others are not. Successful implementation of employee health functions requires specific clinical and technical expertise and competencies that are unique to that specialty area. Separate JCAHO employee health standards would facilitate compliance with federal and state OSHA requirements."

JCAHO began considering additional employee health standards as early as last year when its Committee on Health Care Safety began discussing tuberculosis protection in health care facilities, says **Susie McBeth**, associate director of JCAHO's department of standards.

"We began to think then that maybe we need to look more closely at employee health overall," she says.

JCAHO's Standards and Surveys Procedures Committee of the board of directors will consider this spring whether to recommend that the organization develop more definitive standards applying to employee health programs, or whether to suggest only that additional examples be provided for existing standards in the accreditation manual. Those standards, which mainly are included in the manual's infection control and environment of care chapters, mention that health care facilities should include employees in protection programs. However, they don't provide detailed examples or specifications.

"If the decision is made to establish standards, we would have to do some investigation about what to include," McBeth says. "The committee has several options to choose from. We could just add examples applying specifically to employee health services."

Van Doren sees more OSHA and JCAHO oversight as a boon to employee health practitioners in hospitals that haven't given them adequate administrative support. And most importantly, increased federal attention could save employee health departments from extinction, she says.

"Unless Joint Commission and OSHA really start paying attention to employee health, it's going to be phased out or outsourced, and nurses are going to find themselves out of a job," she warns. "It's time we stood up and fought for this instead of crawling off into a corner. There's no reason to fear Joint Commission or OSHA if we're doing what we're supposed to be doing. If we have our own [JCAHO] standards and OSHA starts doing general inspections and talking with employee health staff, we'll be able to get a lot of recognition from that. It will educate everyone to what employee health does." ■

APIC joins chorus against unsafe needle devices

'Concerted effort' required to protect HCWs

Needlestick prevention efforts must be focused on replacing unsafe needle device designs with new safer technology, according to guidelines released by the Washington, DC-based Association for Professionals in Infection Control and Epidemiology (APIC).[1]

APIC joins such organizations as the Service Employees International Union in Washington, DC, and the Charlottesville, VA-based Healthcare Worker Safety Center at the University of Virginia in urging hospitals to use safer needle device technology.

In addition, several federal agencies have accelerated efforts to seek ways of minimizing needlestick injuries among the nation's health care workers in response to a congressional directive. **(See *Hospital Employee Health*, March 1999, pp. 25-28.)** For example, the Food and Drug Administration recently delivered a list of suggested sharps injury prevention device characteristics to the U.S. Occupational Safety and Health Administration. **(See related story, p. 52.)**

Past prevention efforts have focused on changing behaviors such as recapping needles and on improving sharps container designs but have been effective in reducing only those injuries associated with recapping or disposal. However, as many of 85% of sharps injuries could be eliminated by using safer devices for non-skin-puncturing procedures, APIC says.

Although data show injury reductions when safer devices are used, many hospitals cite higher cost as the reason for not using them. However, the recommendations point out that "the cost of postexposure testing, counseling, and treatment also must be considered when determining cost-effectiveness. . . . The use of safer medical devices may appear to increase costs, but institutions

FDA suggests safer needle device criteria

In response to the U.S. Occupational Safety and Health Administration's (OSHA) recent request for information on needlestick injuries among the nation's health care workers, the Food and Drug Administration (FDA) has submitted a list of design features and related performance characteristics for sharps injury prevention devices.

The FDA recommends its suggestions be considered in evaluations of equipment such as syringes, intravenous catheters, and blood collection sets having anti-needlestick protective mechanisms.

"Incorporating these design features and performance characteristics in the design of sharps injury prevention devices is likely to assist in reducing percutaneous injury rates," says **Lireka P. Joseph**, DrPH, director of the Office of Health and Industry Programs of the FDA's Center for Devices and Radiological Health in a recent letter to OSHA.

Protective device features are designed to protect both HCWs and patients from needlesticks, the FDA notes, and usually can be identified by visual inspection of the device or by simple manipulation of the mechanism. These include:

- a protective covering into which the needle can be easily retracted and that provides a barrier between the hand and needle;
- an integral shield that moves forward or swings on a hinge over the needle, providing a protective barrier;
- an integral blunt needle / stylet that effectively blunts the sharps;
- a needleless device.

In evaluating performance characteristics, the FDA suggests that evaluators at health care facilities try out devices and ask targeted questions of practitioners who have used the devices. The following performance characteristics are considered important:

- HCWs are shielded from the needle during and after use and after disposal.
- The protective mechanism can be engaged by either hand.
- Few, if any, additional steps to the usual procedure are needed to activate the protective mechanism.
- If additional steps are required, they do not interfere with the usual procedure.
- The device user does not need to place either hand near the needle during a procedure.
- The protective shield or retracted needle locks securely into place with little effort.
- The protective mechanism provides visual or tactile feedback so the user is aware whether it is or is not in place.
- The design allows appropriate visualization during device preparation and use (e.g., cc / ml marks and fluid levels are clear).
- Disassembly does not expose the user to the needle.
- The mechanism is compatible with the facility's sharps disposal system (e.g., device size does not impose inordinate requirements for waste disposal units). ■

must consider the ethical, legal, and regulatory compliance implications of sharps injuries when calculating the overall financial impact."

APIC suggests that institutions with limited funds assess injury rates associated with certain high-risk devices as a means of deciding which safer devices to purchase.

For example, many institutions have purchased needleless intravenous systems to reduce IV therapy-related sharps injuries, "but those injuries are unlikely to transmit bloodborne pathogens to health care workers because there usually is no blood involved," says **Robert J. Sharbaugh**, PhD, CIC, chairman of the APIC Guidelines Committee. "Instead, the vast majority of exposures and subsequent infections involve phlebotomy."

The guidelines advise hospitals to form multidisciplinary teams to select new products, including representatives from employee health, infection control, administration, materials management, risk management, finance, and end users. Team members should know the institution's sharps injury epidemiology, perform a literature review, analyze product efficacy, and determine product cost-effectiveness. Staff education and clinical trials are essential for each product selected.

Replacing unsafe devices requires "a concerted effort by individual institutions, researchers, manufacturers, government agencies, and professional organizations," the guidelines state.

Specifically, APIC recommends "collaborative efforts" focusing on:

• encouraging Food and Drug Administration safety alerts to facilitate removal of unsafe conventional devices;

• institutional development of device-related sharps injury surveillance and risk reduction strategies;

• urging manufacturers to standardize device design allowing for universal usage;

• more epidemiologic studies of the effect of safety devices on risk reduction;

• accelerating the transfer of new technology into workplaces through research funding, consortia study, professional publication of clinical evaluations, and presentations at meetings;

• forming coalitions or joint task forces of industry, government, and health care.

• establishing a central clearinghouse to develop device-specific criteria and eliminate unsafe products;

• creating a national repository for device information, evaluation, and compatibility;

• developing cost-effective strategies for implementing safer technologies.

Reference

1. APIC 1997 and 1998 Guidelines Committees. APIC position paper: Prevention of device-mediated bloodborne infections to health care workers. *Am J Infect Control* 1998; 26:578-80. ■

Feds warn against glass capillary tubes

New safety alert to protect health care workers

Glass capillary tubes used to collect blood in health care settings can break during sealing and centrifugation, potentially exposing health care workers to risk of infection with bloodborne pathogens, several federal agencies warn.[1]

A joint safety alert issued by the Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), and the National Institute for Occupational Safety and Health (NIOSH) notes that glass capillary tubes are used in various health care settings, including hospitals. **(See a copy of the safety advisory, pp. 54-55.)**

Accidental breakage of the slender, fragile tubes has been reported both during centrifugation and when the tubes are inserted into putty to be sealed. Tubes that break during centrifugation can expose workers via blood spatters and penetrating glass fragments. In one case when a tube broke during putty insertion, a physician was cut by broken glass and exposed to HIV-infected blood. He subsequently seroconverted from the injury and died of AIDS.[2]

The safety alert marks the second warning about sharps that could transmit bloodborne pathogens to HCWs. The first, issued in 1992, warned against the practice of using needles to access intravenous lines. The FDA has been under fire in the intervening years to issue additional alerts. All three federal agencies signing onto the joint advisory are taking action this year to comply with a federal directive to reduce potentially deadly sharps injuries among HCWs. **(See *Hospital Employee Health*, March 1999, pp. 25-28.)**

In one case when a tube broke during putty insertion, a physician was cut by broken glass and exposed to HIV-infected blood. He subsequently seroconverted from the injury and died of AIDS.

"At one acute-care facility, the injury rate associated with glass capillary tubes was 2.6 per 100,000 tubes purchased in 1992. Approximately 108 million glass capillary tubes are sold each year in the United States, suggesting that approximately 2,800 injuries may occur nationwide if a similar injury rate occurs at other health care facilities," the warning states.

Some injuries from the tubes have caused blood exposures requiring prophylactic postexposure antiretroviral therapy, the advisory adds.

To reduce injury risks, the agencies recommend that hospitals use blood collection devices "less prone to accidental breakage," including:

• capillary tubes not made of glass;

• glass capillary tubes wrapped in puncture-resistant film;

• products that use a sealing method that does not require manually pushing one end of the tube into putty to form a plug;

(Continued on page 55)

Joint FDA/NIOSH/OSHA Advisory on: Glass Capillary Tubes: Joint Safety Advisory About Potential Risks February 1999

Dear Colleague:

The Food and Drug Administration (FDA), the National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC), and the Occupational Safety and Health Administration (OSHA) want to alert you to the potential risk of injury and/or infection from bloodborne pathogens, including human immunodeficiency virus (HIV), hepatitis B and hepatitis C viruses, due to accidental breakage of glass capillary tubes, and to recommend certain steps that can minimize the risk.

Background

Glass capillary tubes are used for the collection of blood in a variety of healthcare settings, including hospitals, ambulatory care facilities, physicians' offices, blood donation facilities, and blood testing centers. Accidental breakage of these slender, fragile tubes has been reported when the tubes are inserted into putty to be sealed and during centrifugation.[1] Breakage of the tubes during putty insertion may result in a penetrating wound and blood inoculation to the user. One such injury resulted in the transmission of human immunodeficiency virus (HIV) to a physician who has since died of acquired immunodeficiency syndrome (AIDS).[2] Glass capillary tubes can break during centrifugation and cause blood to splatter, potentially exposing personnel to bloodborne pathogens. The broken glass fragments can injure the user, resulting in a percutaneous exposure to blood.

At one acute care facility, the injury rate associated with glass capillary tubes was 2.6 per 100,000 tubes purchased in 1992.[3] Approximately 108 million glass capillary tubes are sold each year in the United States, suggesting that approximately 2,800 injuries may occur nationwide if a similar injury rate occurs at other healthcare facilities.[3] Two systems for surveillance of hospital-based healthcare worker injuries have reported injuries from glass capillary tubes, some of which caused blood exposure and resulted in the need for antiretroviral post-exposure prophylactic therapy.[4]

Recommendations

To reduce the risk of injury due to breakage of capillary tubes, FDA, NIOSH, and OSHA recommend that users consider blood collection devices less prone to accidental breakage, including:

1. Capillary tubes that are not made of glass,[5]
2. Glass capillary tubes wrapped in puncture-resistant film,
3. Products that use a method of sealing that does not require manually pushing one end of the tube into putty to form a plug, or
4. Products that allow the blood hematocrit to be measured without centrifugation.

Although FDA, NIOSH, and OSHA cannot recommend specific products, blood-collection devices with these characteristics are currently available, and their use may reduce the risk of injury and blood exposure.

Reporting and Recordkeeping

The Safe Medical Devices Act (SMDA) of 1990 requires hospitals and other user facilities to report deaths, serious illnesses, and injuries associated with the use of medical devices, including capillary tubes. Readers should follow procedures established by their own facilities for such mandatory reporting of adverse events. Practitioners who become aware of any medical device-related adverse event or product problem/malfunction should report to their designated Medical Device User Facility Reporting contact person. Even if a medical device-related incident or product quality problem is not required to be reported under the SMDA, health professionals are encouraged to report any medical device related concerns to MedWatch, the FDA's voluntary reporting program. Submit reports to MedWatch by phone at 1-800-FDA-1088, by FAX at 1-800-FDA-0178, via the MedWatch website at www.fda.gov/medwatch, or mail to MedWatch, FDA, HF-2, 5600 Fishers Lane, Rockville, Maryland 20852-9787.

Occupational illnesses and injuries sustained from capillary tubes may be recordable under OSHA's recordkeeping requirements (see 29 CFR Part 1904: Recording and Reporting Occupational Injuries and Illnesses). Additionally, post-exposure follow-up for employees may be indicated [see OSHA's Instruction CPL 2-2.44C (March 6, 1992): Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens Standard, 29 CFR 1910.1030].

Getting More Information

If you have any questions on this Advisory, please contact:

- FDA: Office of Surveillance and Biometrics, FAX at (301) 594-2968 (attn: Carol L. Herman, Public Health Analyst, by e-mail at czh@cdrh.fda.gov;
- CDC: National Institute for Occupational Safety and Health, at 1 (800) 35-NIOSH (1-800-356-4674); or
- OSHA: Directorate of Technical Support, Office of Occupational Health Nursing, at (202) 693-2120 (attn: Elise Handelman).

Copies of this Safety Advisory and additional relevant information can be found on the following web pages:

- www.fda.gov/cdrh/safety.html
- www.cdc.gov/niosh/homepage.html
- www.osha-slc.gov/SLTC/needlestick/

Signed:

Charles N. Jeffress, Assistant Secretary, OSHA
Linda Rosenstock, MD, Director, NIOSH
D. Bruce Burlington, MD, Director, CDRH, FDA

References

1. Jagger, J., Hunt, E.H., and Pearson, R.D.: Sharp object injuries in the hospital; causes and strategies for prevention. *Am J Infec Control* 18(4):227-231, 1990.
2. Aoun, H.: When a house officer gets AIDS. *N Eng J Med* 321(10):693-696, 1989.
3. Jagger, J., Bentley, M., and Perry, J.: Glass capillary tubes: eliminating an unnecessary risk to healthcare workers. *Adv Exp Prev* 3(5):49-55, 1998.
4. Jagger, J. and Deitchman, S.: Hazards of glass capillary tubes to healthcare workers. *JAMA* 280(1):31, 1998.
5. Hudson, M., Morgan-Capner, P., and Wilson, M.: Potential hazards with fine bore capillary tubes used by non-pathology staff. *J Hosp Infec* 28(4):323-324, 1994.

• products that allow the blood hematocrit to be measured without centrifugation.

While the agencies do not recommend specific products, they state that devices with those characteristics are currently available on the market.

Occupational illnesses and injuries from capillary tubes may be recordable under OSHA's record-keeping requirements. In a recent notice to field compliance officers, OSHA states that employers using capillary tubes may be cited under the bloodborne pathogens standard in certain circumstances, such as improper housekeeping (i.e., picking up broken, contaminated capillary tubes with the hands), improper handling of regulated waste (i.e., improperly disposing of contaminated tubes), or lack of personal protective equipment (i.e., not using gloves when handling contaminated capillary tubes).

References

1. Food and Drug Administration, Occupational Safety and Health Administration, National Institute for Occupational Safety and Health. "Glass Capillary Tubes: Joint Safety Advisory about Potential Risks." Washington, DC; February 1999.

2. Aoun H. When a house officer gets AIDS. *N Engl J Med* 1989; 321:693-696. ■

Allergy symptoms continue despite powder-free gloves

Education and nonlatex are ultimate solutions

Restricting the use of powdered latex gloves is only the first step in solving the problem of latex sensitivity among health care workers, say occupational health researchers. Additional steps, such as a strong education component and avoidance of all latex products, are necessary.

Researchers at the University of Connecticut Health Center in Farmington used a Centers for Disease Control and Prevention HCW glove use survey form to which they added five questions on latex glove-related symptoms. The scannable questionnaires were mailed to all 3,116 health center employees, and 1,073 responded (34% response rate). Data were collected between February and April 1998.

Findings were presented at recent conferences of the Association of Occupational Health Professionals in Healthcare[1] and the American College of Allergy, Asthma and Immunology.[2]

Hospital Employee Categories
(Shaded categories represent high latex glove use)

Surgical Medical Staff
Non-Surgical Medical Staff
Clinical Dental Staff
Phlebotomist/IV Team
Maintenance/Engineering
Nursing Staff
Clinical Lab Technician
Housekeeper
Security
Other Staff
Clerical/Administrative
Transport/Service
Laundry Staff

Source: Marcia Trapé, MD, University of Connecticut Health Center, Division of Occupational and Environmental Medicine, Farmington, CT.

Objectives of the cross-sectional survey were threefold: to determine the prevalence of glove-related symptoms, to measure the effectiveness of a one-year-old policy limiting powdered latex glove use, and to increase HCWs' awareness about latex allergy, says **Marcia Trapé**, MD, medical director of the employee health service and an assistant professor of clinical medicine with the Department of Medicine's Division of Occupational and Environmental Medicine.

The glove policy in place for a year prior to the survey recommends use of latex-free or powder-free latex exam gloves for nonsterile procedures.

"We wanted to see how people were doing in utilizing the recommended gloves, or if they were still using powdered latex gloves, and also to see the prevalence of self-reported symptoms associated with latex glove use," Trapé tells *Hospital Employee Health.*

Survey questions asked workers about skin symptoms, including redness, chapping, rash, and itching on hands while wearing latex gloves; hives or urticaria; respiratory or mucous membrane irritation such as tearing eyes, sneezing, runny nose, wheezing, shortness of breath, and chest tightening; and how many pairs of latex gloves were worn per day.

Employee categories indicating the greatest percentage of latex glove use were surgical medical staff, nonsurgical medical staff, clinical dental staff, phlebotomist/IV team, nursing staff, clinical lab technicians, and housekeepers. **(See table, at left.)**

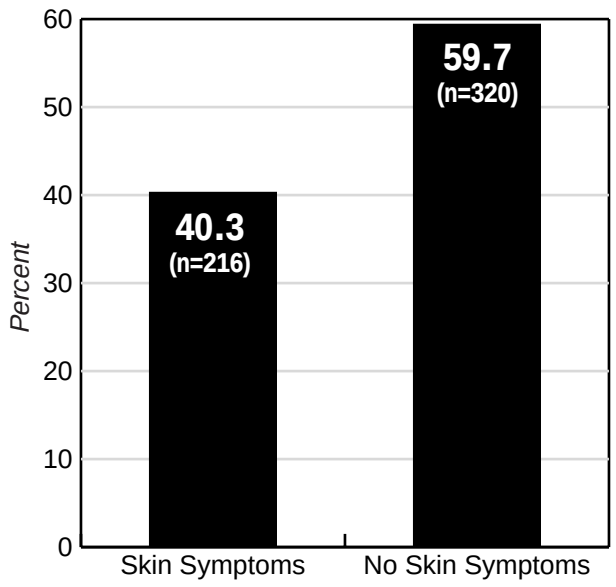
On analyzing the data, Trapé found that employees in the high-exposure categories were more than 12 times as likely to develop skin symptoms as the low-exposure groups (laundry, transport, clerical, security, researchers, maintenance, and engineering).

Data showed that 24% of all respondents (1,073) reported skin symptoms. However, 40.3% of all respondents wearing latex gloves reported skin problems. **(See graph, below.)** Urticaria was reported by 3.2% of the general survey population, but the rate for those wearing latex gloves was nearly three times higher, at 9.2%.

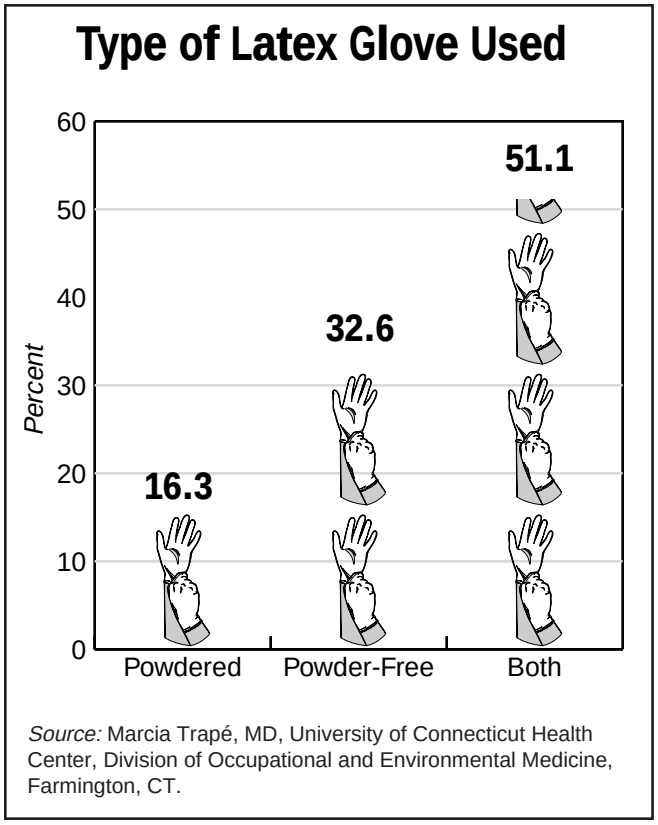
Respiratory or mucous membrane symptoms were reported by 7% of the general population, but the rate among latex glove users was 23.6%, more than three times higher.

Fifty-one percent of respondents were still wearing latex gloves, either powdered or powder-free. **(See graph, p. 57.)**

Skin Symptoms Among Latex Glove Users (n=536)



Source: Marcia Trapé, MD, University of Connecticut Health Center, Division of Occupational and Environmental Medicine, Farmington, CT.



Source: Marcia Trapé, MD, University of Connecticut Health Center, Division of Occupational and Environmental Medicine, Farmington, CT.

Two of the most revealing findings were that more than 16% of latex users were still wearing powdered latex despite the institution's policy, and that 84% of workers who reported skin problems were still using latex gloves even though nonlatex gloves were readily available.

"We recommended that workers not use powdered [latex gloves], but those gloves were not eliminated from the health center," Trapé says. "Even though we had the policy for one year, people still were not changing behavior. Behavior is very hard to change. The majority of people who were still using powdered gloves were doing so out of habit."

Getting workers to "think twice" instead of continuing accustomed behaviors requires additional education, she says. "We really had to invest more in the educational component of the policy. We added more training in latex allergies, how to avoid latex and use other options."

Even so, emphasizing education and the use of powder-free latex gloves are just the first steps toward preventing latex allergies among HCWs, Trapé says.

"Once you go powder-free, you decrease sensitization through aerosolized particles, but still so many people have broken skin. If they continue to use powder-free latex, latex particles are going to sensitize the broken skin, so eventually even those individuals can become sensitized to latex," she explains.

The ultimate solution is to use nonlatex gloves, "but it's an area in which we have to respect the professionals because most were trained in an era of latex as the ideal glove," she notes. "It can be very difficult for surgeons or other people doing delicate procedures to adapt to a different feeling and texture of a different type of glove. Those considerations should be kept in mind as well."

Meanwhile, latex gloves should be used as little as possible, Trapé says. Higher rates of latex exposure mean higher rates of symptoms and sensitization. In her study, HCWs with more symptoms were wearing powdered latex more frequently. Workers wearing any type of latex gloves more frequently had a chance of developing skin problems three times greater than that of workers who avoided latex gloves.

Longer tenure linked with more symptoms

The survey also found that HCWs in their profession for five or more years were more likely to report skin symptoms than workers with fewer years in the profession. In addition, employees with more than three years at the institution were twice as likely to report skin symptoms as employees with less tenure. Trapé says both findings probably indicate that those workers have had more latex exposure and therefore a greater chance to become sensitized. She also notes that the reported skin symptoms may or may not have been caused by latex exposure.

The overall rate of latex allergy at her health center is low, she adds.

"All of our [allergic] workers have been able to stay at work. They are latex-free and [working] in environments that are powder-free, and they are doing well with those measures. They take all the precautions — carry an epinephrine pen at all times, wear a medical ID bracelet, and they're told to call me immediately if they have any reactions."

References

1. Association of Occupational Health Professionals in Healthcare. 18th annual national conference. Poster session. Orlando; Oct. 21-24, 1998.

2. American College of Allergy, Asthma and Immunology. 1998 annual meeting. Poster session. Philadelphia; Nov. 6-11, 1998. ■

Internships give nurses inside look at OSHA

Occupational health program offers opportunities

Occupational health nurses can get the inside track on the workings of the U.S. Occupational Safety and Health Administration (OSHA) through spring and summer internships with the agency in Washington, DC.

The Occupational Health Nursing Internship program accepts six nurses per year, two in each of three eight-week sessions. Applicants must be enrolled in a graduate school occupational health program, but an internship can begin during the graduate program or immediately afterward, says **Elaine Papp**, RN, COHN-S, a health scientist in OSHA's Office of Occupational Health Nursing, located in the Directorate of Technical Support. Previous interns have varied widely in age and experience, from those starting their careers to others having worked in the field, raised a family, and then gone back to school.

Whatever the case, "it's a tremendously eye-opening experience," says Papp. "For those working in occupational health, OSHA plays a very big role in their practice. Being inside the agency, you get a completely different perspective than you do from being in the regulated community."

Program objectives are:

• to synthesize the student's learning needs with specific, contemporary OSHA activities;

• to analyze and construct an innovative nursing approach to an occupational health and/or safety concern in collaboration with OSHA's allied professionals;

• to explore the occupational health nurse's role in OSHA's complex regulatory activities at the federal level.

Internship activities teach nurses about the pressures and influences that affect OSHA, Papp adds. Those activities typically include attendance at congressional, public, and budgetary hearings; meetings with labor union and management groups; and introductions to OSHA office directors.

In addition, each intern is assigned a project and must develop a product, such as a report or outreach document. Previous products have included publications such as *Framework for a Comprehensive Occupational Safety and Health Program in a Hospital Environment*; *A Model Exposure Control Plan for Home Care*; and *Qualifications of Licensed Health Care Professionals: Questions and Answers.*

"The agency gets the benefit of their freshness, knowledge, and ability to develop materials, and they get the benefit of seeing how the agency operates from the inside," Papp explains. "They also develop contacts, so when they're in the work world, they know people in the agency and how the agency works. Most have a change of view and attitude after they come here; they're not so afraid of OSHA anymore."

To be eligible, applicants must:

• be a registered nurse with current licensure;

• be a student in good standing majoring in a university-sponsored graduate-level occupational health program or public health program with a focus in occupational health;

• have an academic background in occupational health with pending completion of no less than half the required credit hours in courses relevant to occupational health nursing (epidemiology, toxicology, industrial hygiene principles, etc.);

• have at least six months' experience in occupational health or a related field;

• present clearly defined educational and personal objectives compatible with contemporary OSHA activities.

Office of Occupational Health Nursing staff review all applications and rank candidates against documented selection criteria. Recommended candidates are referred to the director of OSHA's Directorate of Technical Support. Final selection is made based upon agency need and funding.

Interns receive a stipend. The amount varies, with the maximum at $6,500. Applications are available from university graduate programs in the spring and must be submitted by Nov. 30. For information about the program or obtaining an application, call Papp at (202) 693-1991. ■

COMING IN FUTURE MONTHS

■ What should you include in preplacement assessments?

■ Study shows flu shots keep HCWs on the job

■ Update on HIV postexposure prophylaxis

■ Managing employees exposed to pertussis

■ Who should — and should not — interpret PPD skin tests?

WEB ALERT

Web sites a good resource for chemical information

By **Geoff Kelafant**, MD, MSPH, FACOEM

As health care systems grow in size and complexity, the number of possible hazards encountered by workers increases as well. Unfortunately, material safety data sheet (MSDS) information often is unreadable, inadequate, or inaccurate.

MSDS material was intended for workers and was never intended for use by health care professionals in diagnosing and treating exposures. Professionals who rely solely on MSDS material do so at their own and their patients' peril.

Because chemical nomenclature often is imprecise, the most useful piece of information on the MSDS may be the Chemical Abstracts Service (CAS) registry number. Although a single substance may have several (or even dozens) of names, there is only one CAS number for each unique structure. Most of the search services below allow searching by CAS number, greatly simplifying the search process.

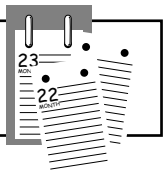
The premier resource is the TOXNET search site at the National Library of Medicine, at **http://toxnet.nlm.nih.gov/servlets/simple-search**. Files available include Hazardous Substances Data Bank (HSDB) and Integrated Risk Information System (IRIS). HSDB contains detailed information, including extensive references and medical evaluation/surveillance data.

ChemFinder, at **http://www.chemfinder.com/**, is a metasearch engine specifically for chemical substances. It searches databases from around the world, providing information on structure, adverse effects, and physical properties. A list of links to chemistry resources is offered.

The North American Emergency Response Guidebook (1996 edition) at **http://www.tc.gc.ca/canutec/english/guide/menug_e.htm** contains a wealth of practical information regarding spills and first responder actions when hazardous materials are involved. Although primarily intended for the transportation industry, it can be helpful both in emergencies and in formulating policy.

NIOSH, at **http://www.cdc.gov/niosh**, provides several useful databases, including an index of specific medical tests for regulated substances, extensive criteria documents regarding exposure to specific chemicals, and the Pocket Guide to Chemical Hazards.

CALENDAR



Association for Professionals in Infection Control and Epidemiology (APIC) Annual Educational Conference and International Meeting — June 20-24, 1999, Baltimore. Educational opportunities include pre-conferences, post-conference, general sessions, concurrent sessions with tracks, symposium, point/counterpoint, and oral and poster abstracts. For information, call APIC in Washington, DC, at (202) 296-2742, or send e-mail to apicinfo@apic.org.

Hazard Control Technologies in Healthcare: Collaborative Strategies for the Next Millennium — Aug. 2-4, 1999, Colorado Springs, CO. Topics

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CE 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 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. ■

include TB control and OSHA standard update, back injuries and ergonomics, latex allergy, bloodborne pathogens, chemical exposures, operating room hazards, and more. Sponsored by the American Conference of Governmental Industrial Hygienists, American Association of Occupational Health Nurses, Association of Occupational Health Professionals in Healthcare, and Association for Professionals in Infection Control and Epidemiology. Call (513) 742-2020, fax (513) 742-3355, or e-mail mail@acgih.org.

Fourth International Conference on Occupational Health for Health Care Workers — Sept. 28-Oct. 1, 1999, Montreal, Canada. Sponsored by the International Commission on Occupational Health. Contact Pierre Robillard, MD, Montreal Public Health Department, Occupational and Environmental Health Unit, 75 Port-Royal East Room 240, Montreal, Quebec, Canada H3L 3T1. Call (514) 858-7510, ext. 245; fax (514) 858-5993; e-mail: probilla@santepub-mtl.qc.ca.

National Conference on Workplace Safety and Health Training — Oct. 24-26, 1999, St. Louis. Co-sponsored by the National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration, and the National Institute of Environmental Health Sciences. Assisted by the Society for Public Health Education. Contact Greg Loos, EID / NIOSH, 4676 Columbia Parkway, MS-C10, Cincinnati, OH 45226. Phone: (513) 533-8565; fax: (513) 533-8560.

[Editor's note: To submit calendar items of interest to hospital employee health professionals in the United States or Canada, send the information to: Calendar Editor, *Hospital Employee Health*, P.O. Box 740056, Atlanta, GA 30374. Items must be submitted at least *three months prior* to the event date or event registration deadline. Please include a contact person's telephone number.] ■