



Hospital Employee Health[®]



IN THIS ISSUE

- **Put to the test:** Enforcement begins of rule requiring annual fit-tests for N95s cover
- **PAPRs for poisons:** OSHA recommends PAPRs with gas filters for first receivers . . . 123
- **Chemo quandary:** NIOSH says you should monitor employees who handle chemo, but offers few specifics. 124
- **New JCAHO survey:** Expect the unexpected when surveyors arrive, hospital advises . . . 127
- **Safety is golden:** Sentara Norfolk General wins award for its culture of safety 128
- **Good call:** Peoria, IL, hospital improves efficiency, with call center for WC . . . 129
- **News Brief** 132
- **Inserted in this issue:** Language changes in OSHA fit-testing standards

OCTOBER 2004
VOL. 23, NO. 10 • (pages 121-132)

Beware of the N95s: Fit-testing is fair game for OSHA inspectors

Hospitals find it hard to pare numbers

Is your respiratory program ready for an Occupational Safety and Health Administration (OSHA) inspection? As of July 2, an OSHA inspector can ask about your use of respirators to protect against tuberculosis and when you last fit-tested health care workers who are caring for TB patients.

Some states that operate their own health and safety programs (state-plan states) granted hospitals extra time to comply, but federal enforcement has begun for the requirement to conduct annual fit-testing of filtering face-piece respirators (N95s) to protect against tuberculosis.

And although OSHA announced that all citations will be reviewed by the national office, that isn't an effort to deter citations, says **Craig Moulton**, senior industrial hygienist. "We usually want to have uniform enforcement throughout the country," he says. A similar policy temporarily followed the revision of the bloodborne pathogen standard, Moulton notes.

An OSHA inspector would first look for the basic respirator program, which includes medical evaluations of employees wearing respirators, annual training, and record keeping, he adds.

Annual fit-testing is required for employees who are using the respirators. So an OSHA inspector would be concerned about protections for employees who are currently caring for a TB patient in an isolation room — not employees who might have an exposure at some future date, notes Moulton. **(For more on regulations, see insert.)**

"They should fit-test those who are actually wearing the respirators, as opposed to those who might wear a respirator at some point," he says. "We would be looking to see if those wearing the respirators have been fit-tested in the past year."

The inspector would identify those people using respirators by talking to employees, Moulton explains. "There is no paperwork that says, 'Janet Smith wore a respirator on such-and-such a date.' We don't require them to document the date a respirator is worn."

NOW AVAILABLE ON-LINE! www.hospitalemployeehealth.com

For more information, contact (800) 688-2421.

He notes that hospitals have been required to comply with the respiratory protection rule for TB since Dec. 31, 2003, when the agency revoked its TB-specific respiratory protection standard along with the proposed tuberculosis rule. With that action, OSHA stated that hospitals must follow the General Industry Respiratory Protection Standard for tuberculosis.

A six-month delay in enforcement gave hospitals time to ramp up their programs and bring their fit-testing up to date, Moulton says. When the standard was released in 1998 for general industry, employers only had three months to come into compliance, he adds.

Fit-testing has turned into a major headache

for many hospitals around the country, as they are fit-testing hundreds of employees. According to Moulton, hospitals shouldn't fit-test employees who don't wear respirators. But paring down the list of fit-tested employees has been a challenge for many employee health professionals.

"The smaller the respirator program, the more effectively it will be maintained," he says. "You can always expand that if you need to."

In the past, hospitals often conducted an initial fit-test of virtually all clinical employees during their pre-placement exam. It actually was easier to fit-test everyone than to figure out who would be entering an isolation room. But when employee health professionals asked managers to designate employees who needed annual fit-testing, they often still wanted to include all their clinical staff.

"The consensus is that most of the department managers don't want to worry about the scheduling nightmare of [always] scheduling someone on [a shift] who is fit-tested," says **Deborah A. Spooner**, PA-C, physician assistant for employee occupational health services at North Arundel Hospital in Glen Burnie, MD. "If you only have a few, then you have to [schedule someone who is fit-tested] on every shift."

So Spooner and the hospital's infection control nurse looked at the list by job title. They tried to exclude people who weren't likely to enter an isolation room, but that didn't always work, either. For example, the manager of home health services pointed out that someone might have to visit the home of a TB patient who wasn't yet removed from airborne precautions, she says.

North Arundel Hospital plans to fit-test about 1,600 of 2,500 employees. The respirator vendor trained about 50 fit-test trainers. Managers will be responsible for maintaining the annual fit-tests of their own employees, Spooner says. The hospital treats about five TB patients a year, but has about 30 patients a year who spend time in an isolation room while TB is being ruled out.

At Vassar Brothers Medical Center in Poughkeepsie, NY, staffing issues also make it difficult to limit fit-testing. "The concern of the managers was that because we have negative-pressure rooms in a variety of places in our hospital, there's no guarantee that if we limit the number of people we're testing, that those people will be on [duty] when we get a person in that room," says **Pat Sullivan**, RN, MSN, coordinator of employee health.

For instance, there's an isolation room on the oncology floor. Recently, a TB patient was temporarily placed in that room because it was the

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

Subscriber Information

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

Subscription rates: U.S.A., one year (12 issues), \$449. Outside U.S., add \$30 per year, total prepaid in U.S. funds. Discounts are available for multiple subscriptions. For pricing information, Call Steve Vance at (404) 262-5511. Missing issues will be fulfilled by customer service free of charge when contacted within 1 month of the missing issue date. **Back issues**, when available, are \$75 each. (GST registration number R128870672.)

Photocopying: No part of this newsletter may be reproduced in any form or incorporated into any information retrieval system without the written permission of the copyright owner. For reprint permission, please contact Thomson American Health Consultants. Address: P.O. Box 740056, Atlanta, GA 30374. Telephone: (800) 688-2421.

This continuing education offering is sponsored by Thomson American Health Consultants, which is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation. Provider approved by the California Board of Registered Nursing, provider number CEP 10864, for approximately 18 contact hours per year.

To reveal any potential bias in this publication, and in accordance with Accreditation Council for Continuing Medical Education guidelines, we disclose that Ball (editorial advisory board member) is a consultant and stockholder with the Steris Corp. and is on the speaker's bureau for the Association of periOperative Registered Nurses. Fine, Fisher, Fragala, Garb, Gruden, Jagger, Lantos, Shea, and Strode (board members) report no consultant, stockholder, speaker's bureau, research, or other financial relationships with companies having ties to this field of study.

Opinions expressed are not necessarily those of this publication. Mention of products or services does not constitute endorsement. Clinical, legal, tax, and other comments are offered for general guidance only; professional counsel should be sought for specific situations.

Editor: **Michele Marill**, (404) 636-6021, (marill@mindspring.com).

Vice President/Group Publisher: **Brenda Mooney**, (404) 262-5403, (brenda.mooney@thomson.com).

Editorial Group Head: **Coles McKagen**, (404) 262-5420, (coles.mckagen@thomson.com).

Senior Production Editor: **Ann Duncan**.

Copyright © 2004 by Thomson American Health Consultants. **Hospital Employee Health**® is a trademark of Thomson American Health Consultants. The trademark **Hospital Employee Health**® is used herein under license. All rights reserved.

Editorial Questions

For questions or comments call **Michele Marill** at (404) 636-6021.

THOMSON
★
AMERICAN HEALTH CONSULTANTS

only available negative-pressure room. Vassar Brothers plans to fit-test about 1,000 of 1,600 employees.

For **James Garb**, MD, director of occupational health and safety at Baystate Health System in Springfield, MA, the issue is broader than just TB. Severe acute respiratory syndrome (SARS) redefined the need for fit-testing, he points out. "I wouldn't want to be on the just-in-time [fit-testing plan] for that if it did come back in a serious way."

By hiring a temporary employee just to conduct fit-tests and training 50 staff members to perform the tests in their units, Baystate was able to fit-test about 2,800 employees. Turning another part-time employee into full time will enable him to maintain the program, he says.

Baystate gives employees a wallet-sized card with their respirator brand and size and instructs them not to use a respirator that they weren't fit-tested for. That warning isn't always heeded.

"It's a little disconcerting to me how many people didn't know what size they were fit-tested for before [on their initial fit-test]," Garb says. "They probably grab a 3M medium, which is the most common one we use, and hope for the best."

Melanie Swift, MD, medical director of Vanderbilt Occupational Health Clinic in Nashville, TN, agrees that SARS forever changed her approach to respiratory protection. Vanderbilt will fit-test 5,000 of its 14,000 medical center personnel.

"When you consider that this is the mask we would use for anyone on airborne precautions, not just TB, there's only so much you can do to limit the list [of those fit-tested]," she says. ■

OSHA: PAPRs can be used by first receivers

Multigas cartridges filter varied hazards

The Occupational Safety and Health Administration (OSHA) has another message about respiratory protection in hospitals: Think beyond infectious diseases.

Hospitals need to protect first receivers, employees who care for victims of chemical, biological, and radiological agents. A draft best practices report from OSHA states that hospitals can use powered air-purifying respirators (PAPRs) with multigas cartridges to filter contaminated air. (See box, above right.)

PPE Advice from OSHA's Draft Best Practices

- ✓ **Powered air-purifying respirators (PAPRs):** The combination of high efficiency (HE) particulate filters plus organic vapor (OV) cartridges currently available for PAPRs will protect against many of the airborne hazards that first receivers might encounter (e.g., toxic dusts, biological agents, radioactive particulates, organo-phosphates and other pesticides, and solvents). Acid gas cartridges add an additional level of protection from gases such as chlorine.
- ✓ **Gloves:** Butyl rubber gloves generally provide better protection than nitrile gloves for chemical warfare agents and most toxic industrial chemicals that are more likely to be involved in a terrorist incident, although the converse applies to some industrial chemicals. Foil-based gloves are highly resistant to a wide variety of hazardous substances and also could be considered part of the protective ensemble. . . . A combination of gloves, for example, butyl gloves worn over inner nitrile gloves, often are the best option for use by hospital workers during emergencies and mass casualties involving hazardous substances. Again, the hospital should select the combination that best meets its specific needs.
- ✓ **Garments:** Because first receivers might become contaminated with liquid or solid (dust) contaminants through physical contact with a contaminated victim, the ideal fabric will repel chemicals during incidental contact (protection from gases is less important because gases generally will dissipate before a victim arrives at the hospital). Additionally, the optimal garment will restrict the passage of vapors, both through the suit fabric and through openings in the suit. Finally, optimal clothing also is sufficiently flexible, durable, and lightweight for long-term wear (up to several hours) during physically active work.

Source: Occupational Safety and Health Administration, Washington, DC.

By contrast, first responders, such as firefighters, must use self-contained breathing apparatus (SCBA), which provide an independent air source.

Hospitals also may be able to use terrorism preparedness funds, such as the National Bioterrorism Hospital Preparedness Program of the federal Health Resources and Services Administration (HRSA), to purchase the respirators, notes **Paul Penn**, whose Diamond Springs, CA-based firm, EnMagine, offers consulting, planning, and training in emergency management for health care.

The OSHA document indicates a greater degree of flexibility for hospitals and a recognition of how their risks differ from that of first responders.

“Current provisions in both the Respiratory Protection Standard and the HAZWOPER [Hazardous Waste Operations and Emergency Response] standard direct responders if they are dealing with an unknown and or unquantified substance to use self-contained breathing apparatus,” Penn says.

But the hazards are not the same away from the source of contamination, he adds. “The folks who are contaminated basically bring the event with them. If they arrive alive at the hospital, the level of contamination is most likely not going to warrant the use of a [SCBA] and [its] inherent hazards.”

SCBAs are heavy and cumbersome. Poorly trained employees who are not accustomed to using the respirators actually could be injured by them, Penn says. The air canisters also last only 30 to 60 minutes before they need to be replaced.

The draft OSHA document isn't a regulation. It isn't even a guideline. But nonetheless, it provides some specific information on appropriate protection: “This PPE [personal protective equipment] guidance for first receivers specifies that employees who might come in contact with unknown hazardous substances should wear a [PAPR] with an assigned protection factor of 1,000, a chemical-resistant protective garment, head covering if it is not already included in the respirator, a double layer of protective gloves, and rubber boots. . . . As part of the hazard assessment process, each hospital also should consider the specific hazards first receivers might reasonably be expected to encounter, as identified in the hospital's hazard vulnerability analysis. The hospital should then augment OSHA's PPE selection, as necessary, to include protection against those specific identified hazards.”

The document also notes the PPE advice applies to unknown substances and a limited quantity of the contaminant. Hospitals need to consider their special circumstances, OSHA states. For example, if hospital employees would respond to the contaminated site, they may need a higher level of respiratory protection. Hospitals facing a known hazard should gauge the level of PPE based on the material's properties.

Hospitals also should consider how they would protect workers against a hazardous materials incident within their hospital, such as a significant spill, Penn explains.

“They should look at all the issues they are likely to confront from internal events and external events,” he adds.

Meanwhile, consider all the possible needs when you buy PPE, Penn advises. For example, hospitals may be able to use the same PAPRs for infectious diseases and chemical events. But be aware of what filters the PAPR is designed to use, he says.

“Sometimes, the ones used for infection control purposes are unable to accommodate some of the more robust [filtering] systems,” he says. “If the hospital is looking to use them in both environments, they should make sure they think about that before they purchase.”

Training also is an important component of first receiver preparedness. In the best practices document, OSHA notes that first receivers who will decontaminate patients or handle patients before they are decontaminated must receive at least eight hours of training, as outlined in the HAZWOPER standard. Employees must receive refresher training or competency testing at least annually. The proper use of PPE is a required part of that training.

(Editor's note: A draft version of the OSHA Best Practices for Hospital-Based First Receivers from Mass Casualty Incidents Involving the Release of Hazardous Substances is available at www.osha.gov/dts/osta/bestpractices/html/hospital_firstreceivers.html or from a link on the OSHA home page at www.osha.gov. The document includes examples of hospitals' preparedness plans.) ■

Chemo quandary: No good way to monitor exposure

NIOSH hopes to find markers for health changes

Chemotherapeutic agents are colorless, odorless, and hazardous. How do you know if your employees have been exposed as they prepare or administer the drugs or clean in contaminated areas?

Medical surveillance may be one of the most difficult aspects of protecting employees from exposure to chemical hazards.

The National Institute for Occupational Safety and Health (NIOSH) is encouraging hospitals to use annual questionnaires to check for health

Responding to Acute Exposure to Chemotherapeutic Agents

| Type of Exposure | Immediate Care | Follow Up |
|-------------------------------------|---|---|
| Skin Exposure | Remove contaminated clothing and/or PPE. Wash affected area thoroughly with soap and water (OSHA, 1996). Consult MSDS for drug-specific instructions. | Report to employee health professional. Complete report of employee injury/exposure. Follow organizational policy related to reporting requirements for workers' comp. |
| Eye Exposure | Flush eye(s) with water or isotonic eye wash for 15 minutes (OSHA, 1996). Consult MSDS for drug-specific instructions. | Report to ED. Report to employee health professional. Complete report of employee injury/exposure. Follow organizational policy related to reporting requirements for workers' comp. |
| Exposure by inhalation or ingestion | Acute symptoms may require emergency intervention. Consult MSDS for drug-specific instructions. | Report to employee health professional or ED, based on symptoms. Complete report of employee injury/exposure. Follow organizational policy related to reporting requirements for workers' comp. |

Source: Polovich M. Safe handling of hazardous drugs. *Online Journal of Issues in Nursing* 2004. Web site: www.nursingworld.org/.

changes related to chemotherapeutic agents. Meanwhile, in a research study of health care workers handling the drugs, researchers are seeking biological markers or reports of health changes that could be used for surveillance.

"It's a tough issue. You're dealing with so many different drugs. Right now there are about 80-plus chemotherapy drugs, and the number is increasing all the time," explains **Thomas Connor**, PhD, a research biologist with NIOSH in Cincinnati who focuses on occupational exposure to hazardous drugs.

In March, NIOSH issued an alert, *Preventing Occupational Exposures to Antineoplastic and other Hazardous Drugs in Healthcare Settings*. The agency is sponsoring a conference on the alert, *Converting Theory to Practice*, in October. **(For more information, see editor's note at the end of this article.)**

There are no badges that employees can wear to monitor exposure, and there's no product available in the United States to wipe surfaces and test for hazardous drugs. Wipe kits that can measure cyclophosphamide, ifosfamide, 5-fluorouracil and etoposide, as well as mitomycin C, and the platinum compounds (cisplatin and carboplatin), are available from Exposure Control,

a company in the Netherlands. The company also produces a urine kit to test for cyclophosphamide, ifosfamide and 5-fluorouracil.

The samples must then be frozen and shipped to the Netherlands for analysis. "Unfortunately, there's no one in the U.S. doing it right now," says Connor, an author of the NIOSH alert.

Meanwhile, NIOSH recommends that hospitals monitor employees with medical questionnaires that ask about exposure to hazardous drugs, general health, and reproductive health. **(See questionnaire, p. 126.)** The alert also suggests "baseline and periodic laboratory tests," including a complete blood count and a reticulocyte count to check for bone marrow reserve. "Because several antineoplastic agents are known to cause bladder damage and hematuria in treated patients, the urine of workers who handle these drugs should be monitored by means of a urine dipstick or a microscopic examination of the urine for blood," the alert says.

NIOSH doesn't specify how often employees should receive the questionnaires or the lab tests. More specific recommendations may come from the pending study, Connor says.

The uncertainty makes it difficult for hospitals. "How do you measure and what do you measure

Reproductive History Questionnaire for Hazardous Drug Handlers

1. Have you or your partner ever had a problem conceiving a child? YES NO
If yes, please specify: present partner previous partner
2. Have you or your partner consulted a physician for a fertility or other reproductive problem?
 YES NO
If yes, please specify who consulted the physician: self partner self and partner
If yes, please state the diagnosis that was made: _____
3. Have you or your partner ever conceived a child resulting in a miscarriage, stillbirth, or deformed offspring?
 YES NO
4. If yes to question 3, please specify the type of outcome: miscarriage
 stillbirth
 deformed offspring
5. If the outcome was a deformity, please specify the type or describe _____

6. If yes to question 3, was this outcome a result of a pregnancy with your
 present partner previous partner
7. Did the timing of any abnormal pregnancy outcome coincide with your present employment?
 YES NO
If yes, please list dates of occurrences _____
8. What is the occupation of your spouse or partner? _____
9. For women only: Have you ever had any menstrual irregularities? YES NO
If yes, please specify the type of menstrual irregularity: _____
If yes, what was the date when this irregularity began? _____
What was the date when this irregularity stopped? _____

Source: Polovich M, Blecher CS, Glynn-Tucker EM, et al. *Safe Handling of Hazardous Drugs*. Pittsburgh: Oncology Nursing Society; 2003. Reprinted with permission.

for? If you get an abnormal result, what does it mean?" asks **Bruce E. Cunha**, RN, MS, COHN-S, manager of Employee Health and Safety at the Marshfield (WI) Clinic.

In fact, recent studies have not shown reproductive effects from working with chemotherapeutic agents, says Cunha, which may mean that the protective measures are preventing exposure. "Without the ability to actually monitor if surfaces are being contaminated, it is impossible to truly monitor if safety measures are working," he says.

In oncology units, nurses and pharmacists often

feel anxious about the potential for exposure, says **Martha Polovich**, MN, RN, AOCN, an oncology clinical nurse specialist at Southern Regional Medical Center in Riverdale, GA, and a member of the NIOSH working group on antineoplastic and other hazardous drugs. She was also an author of the Oncology Nursing Society's guidelines, *Safe Handling of Hazardous Drugs*.

"There are a lot of people who are worried because their organizations are not doing any kind of regular monitoring . . . but actually, what are they going to be monitoring other than general

health?" she says. "You don't expect to see health changes. If you do, something's wrong with your safe-handling program."

Hospitals need to monitor employees after an acute exposure to hazardous drugs, stresses Polovich. (See box, p. 125.) And hospitals should focus on engineering controls, worker training, and personal protective equipment, she says.

For example, Baxa Corp. of Englewood, CO, produces the only closed system that allows hazardous drugs to be transferred from a vial to syringe and syringe to an IV system.

Cunha is conducting a trial of the enclosed system. The vendor first conducts wipe samples, brings in the product for six months, then conducts wipes samples again. The initial wipe samples showed some contamination, though not a lot, Cunha explains. "We're going to have to go to administration to say, 'This is really the best thing we can put in place right now to protect the safety of our employees,'" he says.

Hospitals can use a fluorescent dye in training exercises to help pharmacists and nurses test their techniques and observe whether there is leakage or other exposure. And employee health professionals can be alert for symptoms among employees that could indicate a pattern of exposure, Connor adds. "The approach we're aiming toward is similar to radiation. Keep the exposure as low as you possibly can."

Here is some other advice for monitoring exposure to chemotherapeutic agents:

- **Know who's at risk.**

NIOSH recommends that hospitals "identify the work population that has the potential to be exposed to the drugs — from shipping and receiving to waste handling and everyone in between," Connor notes.

"Often, an institution is not aware of who might be exposed. They most commonly think of nurses and pharmacists. But there are other populations who could be exposed," he explains.

- **Be aware of new uses of the drugs.**

Chemotherapeutic drugs now are being used for diseases other than cancer, or even in the operating room. Those health care workers may not have the training and experience of working with the drugs that the oncology staff have.

- **Consider the drugs' usual effects.**

In your health questionnaire, ask about symptoms that would be associated with the drug's use in patients, such as hair loss, skin irritation, mucous membrane irritation, and eye irritation, Connor adds.

[Editor's note: The NIOSH conference will be held Oct. 3-4 in San Antonio. More information is available from the NIOSH web site at www.cdc.gov/niosh/topics/hazdrug/ or from Barbara MacKenzie at (513) 533-8132. A copy of the alert is available at www.cdc.gov/niosh/topics/hazdrug/conference.html. For more information on Exposure Control wipe sampling kits, contact Exposure Control, P.O. Box 467, 6600 Al Wijchen, The Netherlands. Telephone: (+31) 24 6452745. Fax: (+31) 24 6452746. E-mail: exposure.control@wx.nl. Web site: www.exposurecontrol.nl.] ■

JCAHO advice: Be on your toes for survey

Surveyors arrived on a Friday at 11 p.m.

Barb Maxwell, RN, MHA, COHN-S, CCM, BCWCP, and her colleagues had braced themselves for the new survey process of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). They knew they had to be ready for the unexpected. During a recent survey, surveyors arrived at 11 p.m. on a Friday night and asked about security and access to the facility. It was clear this survey was going to differ in style from the past.

Surveyors can show up at any time, any shift. In fact, while last June the HCA hospitals knew about the upcoming surveys, "they no longer have to schedule or announce the visits. They can just pop in any time," says Maxwell, director of company care, occupational health services, for HCA in St. Petersburg, FL. Three HCA hospitals in Florida received JCAHO surveys last summer.

Although the Joint Commission still wants access to your policies and procedures, they have de-emphasized the paperwork portion of the survey. "They don't spend a whole lot of time reading those manuals," says Maxwell. "They will ask medical records to pull 20 or 30 medical records. They will review those medical records, and they will trace the patients step-by-step through the facility."

For example, if the patient came through the emergency department and then went to radiology for X-rays, the surveyors would literally walk through those departments and ask questions.

"They do not talk to any director levels at all. It's now staff," she adds. "Once the surveyors arrive on the nursing unit, they will find the nurse taking

care of the patient and interview them.”

The surveyor will call human resources and ask for the nurse’s file to check for competencies.

In occupational health, the surveyors spoke to the frontline occupational health nurses — not to Maxwell. They asked about the process of responding to an injury, and they asked to see the OSHA log. They asked only basic questions: Who signs the OSHA log? How long is it posted?

But the surveyors were watching the staff and observing their use of personal protective equipment. They also asked some employee health-related questions when they visited infection control.

They wanted to know the following:

- What is the link between infection control and employee health?
- How do you track and trend employee illness?
- What are you doing to prevent needlesticks?
- What is your level of TB skin test compliance?
- What do you do if an employee doesn’t return to have the test read?
- How do you handle positive converters?

Why you should ‘never leave your wing man’

Hospital’s safety culture wins award

Red rules have earned Sentara Norfolk (VA) General Hospital a golden award. The hospital won the American Hospital Quest for Quality Prize from the American Hospital Association for creating an “institutionwide cultural transformation” with a commitment to safety. The prize: \$75,000.

The staff and administrators at Norfolk General have worked hard to build a safety culture focused on both patient and worker safety. They learned a new lingo to go with it. “Red rules” are the two or three most important safety edicts in a department. For example, when maintenance workers are working on a piece of machinery, “lock out/tag out” is a red rule to make sure no one can energize it and inadvertently put them in danger.

“Never leave your wing man” is a slogan taught to employees about behavior-based expectations. Just as Navy pilots don’t abandon their crew, employees are supposed to back up each other, and coach or counsel them when necessary. So a unit secretary can remind a physician about washing his hands before seeing a patient by

- What do you do with employees who have an MRSA infection and wear artificial nails?

In one of the three hospitals surveyed, a surveyor asked what the hospital was doing about annual respirator fit-testing.

“I really thought it was a more thorough survey. There are no stones that are left unturned,” she says.

Based on comments from an infection control coordinator and her experience with the surveyors, Maxwell has some advice:

- Be sure clinical staff know their competencies and they are up to date.
- Designate someone in each area to perform quality checks, including employee health issues such as proper hand hygiene and proper use of personal protective equipment.
- Be ready for a survey at any time, including the night shift.
- Be aware that a surveyor can return. At one hospital, the surveyor had an exit conference, left, then returned to the facility five minutes later. ■

lightly adding, “I’m supposed to be your wing man.”

With four other behavior-based expectations, the hospital has made safety both a job requirement and a badge of honor. “It’s a long-term commitment to make this stick and really change the culture,” says **Joe Savala**, director of construction, engineering, maintenance, and clinical engineering.

Support for the safety culture is top to bottom at Norfolk General — a strong commitment from administration and the buy-in of employees. In fact, the administration encourages employees to speak up about safety, even when it’s not a situation in their department.

For example, the manager of the air-conditioning shop questioned a call from a nurse who wanted a room converted to negative pressure. He knew that the rooms on the floor usually had positive pressure.

He visited the floor and contacted infection control. It turned out that the transplant patient actually needed a positive-pressure room to prevent outside air from entering; he prevented an error that could have jeopardized the patient.

“The [air-conditioning manager] had the courage to speak up and say, ‘This doesn’t look right,’” Savala notes.

Other behavior-based expectations include: Pay attention to detail. Communicate clearly. Have a questioning attitude. Provide an effective

handoff of information and/or patients.

Jeanette D. Rice, SLS, employee safety program specialist in occupational health, used those behavior-based expectations to reduce needlesticks by an additional 3% last year. First, she reviewed needlestick reports to see why they happened.

She used the patient safety coaches, specially trained employees on each floor, to help spread the word about prevention techniques. For example, “pay attention” means focusing before performing a phlebotomy.

“Have a questioning attitude” means checking the sharps containers to see if they are full before using the sharp. If the container is overfilled, “their wing man needs to be there to help them change that out to avoid possible injury,” Rice notes.

Every month, the safety coaches meet to discuss what more they could do to promote safety. Everyone in the hospital — all 4,000 employees — has received four hours of training in the safety culture concept and behavior-based expectations.

The Quest for Quality judges were impressed when they spoke to employees. “They actually saw that we were walking the walk,” says Rice.

How do you keep staff motivated to focus on safety? Well, winning an award helps. The hospital held a recognition party in the auditorium, applauded staff who have shared “safety success stories,” and gave everyone ice cream sundaes on each shift.

The hospital has its own expectations and rewards. “We set a goal in 2003 related to patient safety, having to do with the behavior-based expectations. We did meet that goal,” explains **Jennifer Chiusano**, RN, director of cardiac services and a member of the hospital’s safety team. “The employees were given a bonus.”

Meanwhile, Norfolk General continues to collect safety success stories. In one case, the emergency department (ED) manager noticed an unattended ladder leaning against the outside wall of the ED, leading to the roof. It remained there for several days.

She asked safety officer about it, and he determined that a part-time contractor was leaving the ladder at night rather than taking it down, even though it gave unauthorized people direct access to the roof. The hospital instructed the contractor to remove the ladder nightly.

In another case, a nurse and paramedic landing at an accident scene noticed an unusual change in the sound of the rotors of the Nightingale Helicopter Ambulance.

They told the pilot, and while they worked on

the patient, the pilot climbed up on the helicopter and found a plastic bag wrapped up in the rotor. It could have damaged the mechanism. He removed it, and the helicopter returned safely to Sentara Norfolk General Hospital. ■

Call center rings up WC savings, better reporting

Nurses respond to injuries, input reports

You can’t manage workers’ compensation costs if you can’t track those costs. That basic truth led OSF Saint Francis Medical Center in Peoria to rethink its system, beginning with the first report of a work-related injury.

Instead of filling out a paper form and handing it to a manager, injured employees now dial a call center and talk to a trained nurse. She logs the information about the injury and schedules an appointment for the employee at the most appropriate level of care.

This more efficient method, which directs employees to hospital-based care rather than private physicians, has saved OSF Saint Francis more than \$41,000. It has provided more accurate information about the cost of injuries and enabled the hospital to respond more quickly to unsafe conditions.

Empowering occupational health

The hospital now has a database of workers’ compensation information. Previously, analyzing injury trends meant flipping through stacks of paperwork. Now, managers easily can determine their most frequent injury, whether the injury rate is going up or down, and how much the injuries are costing the hospital.

“Knowledge is power. I really believe that,” says **Christine Abercrombie**, RN, BS, COHN-S, regional manager for occupational health, who will present the new reporting and tracking system at the upcoming conference of the Association of Occupational Health Professionals in Healthcare (AOHP). (For more information, see editor’s note at the end of this article.)

“By using this, we have data in which to make decisions as to where we are going to focus our energies,” she points out.

The old system at OSF Saint Francis led to

nothing but frustration. Sometimes the workers' compensation case manager didn't even know about a work-related injury until she saw an emergency department (ED) bill; and the ED may not even have been an appropriate place of treatment for the injury.

"We surveyed managers; we surveyed injured workers; and we found out no one was happy with the process," says **Denise Strode, RN, COHN-S/CM**, clinical case manager at the OSF Saint Francis Center for Occupational Health and executive president of AOHP.

The hospital used the "Six Sigma" approach to quality improvement — using an interdisciplinary team to "define, measure, analyze, improve, and control" a problem.

Staff discovered that 71% of the accident reports did not comply with reporting requirements either in timeliness or information gathered. Some 70% to 82% of ED visits following work-related injuries did not need that level of treatment. Cases involving private physicians had more lost workdays.

Some of the reporting errors stemmed from the inefficiency of the paper system. For example, employees couldn't always get assistance from their managers to properly complete the paper forms, a survey found. Meanwhile, both managers and employees were dissatisfied with the restricted work program, which was supposed to find meaningful work for employees who couldn't return to their full duties.

The team decided to use the existing call center, which employs trained nurses to triage patient calls and provide advice and referrals. The nurses were retrained to handle work-related injuries and employee health concerns. They take the initial report and input it into a database.

Employees no longer need to fill out paper forms, and they receive an immediate response to their injury.

If an injury is life-threatening, the employee goes to the ED immediately and calls the report into the call center later. But in all other cases, the triage nurse directs the employee.

For example, for priority care, such as someone who smashed his hand in an accident and is experiencing pain and swelling, the call center nurse schedules a same-day appointment with the hospital's occupational medicine clinic.

For someone with a nonurgent problem, such as a worker experiencing recurrent bouts of tingling in her wrists, the call center nurse will schedule an appointment within a day or two.

CE questions

13. According to Craig Moulton, senior industrial hygienist at OSHA, what will an OSHA inspector do if he or she finds a violation of the new rule for annual fit-testing of N95 filtering face-piece respirators used for tuberculosis?
 - A. Immediately issue a citation.
 - B. Provide the citation to the national OSHA office for review.
 - C. Issue a warning because enforcement has been delayed again.
 - D. Advise hospitals to use a different type of respirator that doesn't require fit-testing.
14. According to OSHA, what is a first receiver?
 - A. Hospitals that are designated to receive the first patients from a chemical, biological, or radiological event.
 - B. Hospital employees who are the first to respond to the site of a chemical, biological, or radiological event.
 - C. Hospital employees who receive the first report of a chemical, biological, or radiological event.
 - D. Hospital employees who decontaminate or receive contaminated victims of chemical, biological, or radiological events.
15. Which of the following does NIOSH recommend to monitor employees who work with chemotherapeutic agents?
 - A. Use periodic medical questionnaires to detect health changes.
 - B. Conduct periodic wipe sampling of work surfaces.
 - C. Rely on injury reports and complaints of workers.
 - D. No monitoring is necessary for these employees.
16. According to Barb Maxwell, RN, MHA, COHN-S, CCM, CWCP, director of company care, occupational health services, for HCA in St. Petersburg, FL, what should you expect from the new style of survey from the Joint Commission on Accreditation of Healthcare Organizations?
 - A. Surveyors will focus on documentation.
 - B. Surveyors could arrive at any shift or any time.
 - C. Surveyors will bypass employee health.
 - D. Surveyors will speak to directors and managers.

Answer Key: 13. B; 14. D; 15. A; 16. B

Financial Cost by Total Cost

| CAUSE | # Cases | Avg. Cost | Total Cost |
|--|---------|-----------|--------------|
| Needlestick/blood exposure | 234 | \$685.92 | \$160,504.10 |
| Push/pull | 25 | 6,068.11 | 151,702.67 |
| Patient lift/care | 74 | 1,204.15 | 89,106.99 |
| Trip/fall | 38 | 925.30 | 35,161.45 |
| Item lift | 21 | 873.85 | 18,350.94 |
| Pinch | 10 | 1,797.79 | 17,977.94 |
| Strike blow — stationary object | 19 | 643.62 | 12,228.84 |
| Trip/fall on equipment | 7 | 1,444.96 | 10,114.74 |
| Bend/squat/reach — nonpatient occurrence | 7 | 1,237.87 | 8,665.06 |
| Push/pull patients | 4 | 1,829.29 | 7,317.17 |
| Cut/squeeze/hit on with equipment | 17 | 804.04 | 6,623.15 |
| Laceration | 12 | 545.30 | 6,543.57 |

Source: OSF Saint Francis Medical Center, Peoria, IL.

This triage and scheduling reduces inappropriate ED utilization and saves the hospital about \$16,000 a year, Abercrombie explains.

Better use of case management

The call center also strengthened the hospital's workers' compensation case management. When employees went to a private physician for a work-related injury, there often was a time lag before the case manager even became aware of the injury.

The hospital, which is self-insured, paid the medical bills outright instead of handling the costs internally through the hospital-based occupational medicine program.

With better management of the internal cases, employees returned to work after 2.3 days instead of 8.1 days, for a savings of \$25,000 a year, says Abercrombie. Employees still can choose to go to a private physician, but they are satisfied with the convenience of the call center and its scheduling, she says.

"Not nearly as many [injured employees] treat with their primary care physicians now because they get taken care of so quickly with

the call center," Abercrombie says.

Employees are also more satisfied with a revamped restricted work program, which requires managers to find appropriate modified duty tasks, allowing employees to return to their department.

Further savings will come from injury prevention, as the hospital targets high-cost and high-frequency injuries, she says. For example, by analyzing a year's worth of data, the hospital found that needlesticks and blood exposures were by far the most common injury, with 234 cases that cost a total of \$160,504. But the greatest cost per case came from pushing and pulling — anything from heavy equipment to laundry carts — with an average cost of \$6,068 per workers' compensation claim. **(See box, above.)**

The hospital now is working to reduce those injuries. "We're trying to get smarter and do things better," says Abercrombie.

[Editor's note: AOHP's 2004 annual conference, Tampa: Your Ticket to Tomorrow, will be held Oct. 6-9 in Tampa, FL. For more information, contact AOHP, 109 VIP Drive, Suite 200, Wexford PA 15090. Phone: (800) 362-4347. Web site: www.aohp.org.] ■

COMING IN FUTURE MONTHS

■ How JCAHO standards can help you boost ergonomics

■ Focus on the OR to reduce sharps injuries

■ How to make the most of your occ health role

■ EH services change to address aging work force

■ Update on TB: Fit-testing controversy continues

NEWS BRIEF

CDC: Mismatched flu vaccine still effective

Study shows '03 vaccine prevented illness

Although last year's influenza vaccine was not a good match with the circulating viruses, the vaccine still was somewhat effective, according to new studies reported by the Centers for Disease Control and Prevention (CDC).

A well-matched vaccine usually is 70% to 90% effective in preventing illness. The 2003-04 vaccine was 38% to 52% effective in preventing illness, according to a report in the Aug. 13 *Morbidity and Mortality Weekly Report*.

A previous study of the vaccine in health care workers did not show effectiveness against influenzalike illness. The focus on laboratory-confirmed influenza in the more recent study among patients ages 50 to 64 was able to demonstrate a clearer benefit, the study authors said.

CDC expects 90 million to 100 million doses of vaccine to be available this year, an increase over last year, when a strong demand led to shortages in some areas. The vaccine will contain A(H3N2), A(H1N1), and B viruses. ■

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. ■

EDITORIAL ADVISORY BOARD

Kay Ball, RN, MSA, CNOR, FAAN
Perioperative Consultant/
Educator, K&D Medical
Lewis Center, OH

Cynthia Fine, RN, MSN, CIC
Infection Control/
Employee Health
John Muir Medical Center
Walnut Creek, CA

June Fisher, MD
Director
Training for Development of
Innovative Control Technology
The Trauma Foundation
San Francisco General Hospital

Guy Fragala, PhD, PE, CSP
Consultant/
Health Care Safety
Environmental Health
and Engineering
Newton, MA

James R. Garb, MD
Director
Occupational Health & Safety
Baystate Health System
Springfield, MA

MaryAnn Gruden
MSN, CRNP, NP-C, COHN-S/CM
President Emeritus
Association Community Liaison
Association of Occupational
Health Professionals
in Healthcare
Manager
Employee Health Services
West Penn Allegheny
Health System
Western Pennsylvania Hospital
Pittsburgh

Janine Jagger, PhD, MPH
Director
International Health Care Worker
Safety Center
Becton Dickinson Professor of
Health Care Worker Safety
University of Virginia
Health Sciences Center
Charlottesville

Gabor Lantos
MD, PEng, MBA
President, Occupational Health
Management Services
Toronto

JoAnn Shea
MSN, ARNP
Director
Employee Health & Wellness
Tampa (FL) General Hospital

Denise Strode
RN, BSN, COHN-S/CM
Executive President
Association of Occupational
Health Professionals
Clinical Case Manager
OSF Saint Francis Center
for Occupational Health
Peoria, IL



Sign up for free infection control weekly e-mail alert today

Subscribers to *Hospital Employee Health* can join the *Hospital Infection Control Weekly Alert* e-mail list now. This new alert is designed to update you weekly on current infection control issues that you may deal with on a daily basis. To sign up for the free weekly update, go to www.HIConline.com and click on "Announcements and Events" for information and a sample. Then click on "Join," send the e-mail that appears, and your e-mail address will be added to the list. If you have any questions, please contact customer service at (800) 688-2421. ■

New vs. Old: OSHA Details Changes in Standard

| Old .139 | Old Language | New .134 | New Language |
|---------------|---|--|---|
| — | <p>The old standard did not address fit-testing in detail, but paragraph (e)(5)(i)-(iii) did require that training provide the opportunity to respirator wearers to have respirators properly fitted; that workers receive fitting instructions including demonstrations and practice; the face piece be fit checked each time it is donned; qualified individuals fit face piece and lenses to ensure good vision, comfort, and a gas-tight seal when a worker must wear corrective lenses as part of the face piece; and when corrective spectacles or goggles are worn, prior to initial use of the respirator, whenever a different respirator face piece (size, style, model) or they do not affect the fit of the face piece.</p> | <p>(f)</p> <p>(f)(1)</p> <p>(f)(2)</p> <p>(f)(3)</p> <p>(f)(4)</p> <p>(f)(5)</p> <p>(f)(6)</p> <p>(f)(7)</p> | <p>Fit-testing. This paragraph requires that, before an employee may be required to use any respirator with a negative- or positive-pressure tight-fitting face piece, the employee must be fit-tested with the same make, model, style, and size of respirator that will be used. This paragraph specifies the kinds of fit-tests allowed, the procedures for conducting them, and how the results of the fit-tests must be used.</p> <p>The employer shall ensure that employees using a tight-fitting face-piece respirator pass an appropriate qualitative fit-test (QLFT) or quantitative fit-test (QNFT) as stated in this paragraph.</p> <p>The employer shall ensure that an employee using a tight-fitting face-piece respirator is fit-tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model, or make) is used, and at least annually thereafter.</p> <p>The employer shall conduct an additional fit-test whenever the employee reports, or the employer, PLHCP, supervisor, or program administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.</p> <p>If after passing a QLFT or QNFT, the employee subsequently notifies the employer, program administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator face piece and to be retested.</p> <p>The fit-test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in Appendix A of this section.</p> <p>QLFT may only be used to fit-test negative-pressure air-purifying respirators that must achieve a fit factor of 100 or less.</p> <p>If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half face pieces, or equal to or greater than 500 for tight-fitting full face pieces, the QNFT has been passed with that respirator.</p> |
| Old .139 — | <p>Old Language 15 Nothing comparable</p> | <p>(f)(8)(i)-(iii)</p> | <p>(8) Fit-testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit-testing in the negative-pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.</p> <p>(i) Qualitative fit-testing of these respirators shall be accomplished by temporarily converting the respirator user's actual face piece into a negative-pressure respirator with appropriate filters, or by using an identical negative-pressure air-purifying respirator face piece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator face piece.</p> <p>(ii) Quantitative fit testing of these respirators shall be accomplished by modifying the face piece to allow sampling inside the face piece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate face piece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the face piece.</p> <p>(iii) Any modifications to the respirator face piece for fit-testing shall be completely removed, and the face piece restored to NIOSH-approved configuration, before that face piece can be used in the workplace.</p> |

[See Appendix A]

Source: Occupational Safety and Health Administration, Washington, DC.