



# HOSPITAL EMPLOYEE HEALTH



THE PRACTICAL GUIDE TO KEEPING HEALTH CARE WORKERS HEALTHY

AUGUST 2015

Vol. 34, No. 8; p. 85-96

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## OSHA: Patient handling injuries, other top worker hazards targeted

*Previous focus on nursing homes led to \$4 million in fines*

All inspections of hospitals and nursing homes will include a focus on musculoskeletal disorders (MSDs) and injuries related to safe patient handling and four other top hazards in healthcare: workplace violence, bloodborne pathogens, tuberculosis, and slips, trips and falls, the Occupational Safety and Health Administration

recently announced.

Inspectors also may look for other known hazards, such as exposure to multi-drug-resistant organisms or hazardous chemicals, according to an OSHA memo to regional administrators. When an employee files an OSHA complaint, the resulting inspection is usually confined to just the issue raised in the complaint, but

this action opens all inspections to a wide review.

The rationale for the tough, new policy: Hospitals have an injury rate that is almost twice as high as that of private industry as a whole, OSHA

noted. U.S. hospitals recorded nearly 58,000 work-related injuries and illnesses in 2013, amounting to 6.4 work-related injuries and illnesses for every 100 full-time employees — almost twice as high as the overall rate for private industry, OSHA said in announcing the new enforcement

**HOSPITALS HAVE AN INJURY RATE THAT IS ALMOST TWICE AS HIGH AS THAT OF PRIVATE INDUSTRY AS A WHOLE, OSHA NOTED.**

program. While the other issues are critical areas of occupational safety, an epidemic of patient-handling injuries is likely the primary driver of the OSHA action. Scathing reports of nurses with chronic back pain and permanent disabilities caused by patient handling

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**Financial Disclosure:** Editors Michele Marill and Melinda Young, Executive Editor Gary Evans, and Consulting Editors/Nurse Planners Kay Ball and MaryAnn Gruden report no consultant, stockholder, speaker's bureau, research, or other financial relationships with companies having ties to this field of study.



## HOSPITAL EMPLOYEE HEALTH

### Hospital Employee Health®

ISSN 0744-6470, is published monthly by AHC Media, LLC  
One Atlanta Plaza  
950 East Paces Ferry Road NE, Suite 2850  
Atlanta, GA 30326.  
Periodicals Postage Paid at Atlanta, GA 30304 and at additional mailing offices.

**POSTMASTER:** Send address changes to: Hospital Employee Health®  
P.O. Box 550669  
Atlanta, GA 30355.

**SUBSCRIBER INFORMATION:**  
Customer Service: (800) 688-2421.  
customerservice@ahcmedia.com  
www.ahcmedia.com  
Hours of operation: 8:30 a.m.-6 p.m. Monday-Thursday;  
8:30 a.m.-4:30 p.m. Friday, EST.

**SUBSCRIPTION PRICES:**  
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This activity has been approved for 15 nursing contact hours using a 60-minute contact hour.

Provider approved by the California Board of Registered Nursing, Provider #CEP14749, for 15 Contact Hours. This activity is intended for employee health nurse managers. It is in effect for 36 months from the date of publication.

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incidents have continued to raise the inevitable question: Why doesn't OSHA do something about this?

For example, patient handling hazards in hospitals received national attention earlier this year when National Public Radio aired a series on MSD injuries of nurses. Meanwhile, OSHA observers had predicted increased scrutiny of hospitals after the agency created a new, detailed website ([www.osha.gov/dsg/hospitals](http://www.osha.gov/dsg/hospitals)) that emphasizes MSD injuries and other hazards in hospitals. (See HEH, *March 2014*, page 25.)

The American Nurses Association released voluntary national standards in 2013, outlining the components of a comprehensive safe patient handling program.

"It's pathetic that so many healthcare workers have been lost to preventable injuries all these years. The progress to this point is littered with their bodies," says Anne Hudson, RN, of Coos Bay, OR, who formed the Work Injured Nurses' Group USA (WING USA) after she was injured and was unable to return to bedside nursing.

"It's very gratifying to see this come about. It's an important step forward," says Hudson, who has pushed for national legislation to require hospitals to adopt safe patient handling. She recently retired from nursing and from WING USA, but she hopes younger nurses will carry on her work.

In an era of heavier patients, safe patient handling equipment is still not used in many hospitals. For example, the federal Occupational Health Safety Network recently reported that of

all patient handling injury reports collected, 62% included data on the use of lifting equipment. Of those, 82% of the injuries occurred when lifting equipment was not used.<sup>1</sup>

"Body mechanics are no longer going to save the day," says Lori Severson, CSP, vice president and senior loss control consultant at Lockton Companies, a Kansas City-based risk management consulting firm. "Even if you have lifts, you have to prove that they really do get used."

Severson has worked with nursing home clients who were cited by OSHA for failing to have an adequate program to prevent musculoskeletal disorder injuries. The take-away message: Employers need to make sure they are training workers and maintaining an injury prevention program, she says.

## 'Simply not right'

"Workers who take care of us when we are sick or hurt should not be at such high risk for injuries — that simply is not right. Workers in hospitals, nursing homes and long-term care facilities have work injury and illness rates that are among the highest in the country, and virtually all of these injuries and illnesses are preventable," David Michaels, PhD, MPH, assistant secretary of labor for occupational safety and health, said in a statement.

"OSHA has provided employers with education, training, and resource materials, and it's time for hospitals and the healthcare industry to make the changes necessary to protect their workers," he said.

The OSHA action does not

by itself trigger an increased number of hospital inspections, but regional or local OSHA offices may decide to focus additional inspection resources on hospitals. For example, emphasis programs currently target healthcare facilities in Philadelphia and Arkansas, Louisiana, Oklahoma, and Texas. While those are due to expire on September 15, they could be extended.

States with their own occupational safety and health programs also must widen the scope of inspections of hospitals and nursing homes.

With this action, OSHA concludes its three-year national emphasis program on nursing homes. OSHA simply doesn't have the resources to continue it, says **Dionne Williams**, MPH, director of OSHA's Office of Health Enforcement. But they also will be subject to the broader inspections.

The Nursing Home National Emphasis Program lasted from April 2012 to April 2015, and its results are revealing. OSHA conducted 1,100 inspections, issued 1,755 citations and assessed \$3.9 million in proposed fines.

While the Bloodborne Pathogen Standard was the top-cited rule, the agency cited 11 facilities for ergonomic hazards related to patient/resident handling and issued 192 hazard alert letters. Those citations were under the "general duty clause" of the Occupational Safety and Health Act, which requires employers to maintain workplaces free of recognized, serious hazards.

Although OSHA is not launching an emphasis program that involves additional enforcement, "our hope is that hospitals and nursing homes will

take action on their own just knowing there's a potential for them to get inspected and each inspection will involve us looking into these hazards," Williams says.

**Tressi Cordaro**, JD, an occupational safety and health attorney with Jackson Lewis in Washington, DC, says she will advise healthcare employers to review their injury prevention programs and employee training. "[They have] automatically expanded the scope of inspections, even on an employee complaint, even before OSHA walks in the door," she says.

## Guidance or 'back-door' rulemaking?

Cordaro also cautions employers to look carefully at the ergonomic section of the OSHA memo. (*See related story, page 88.*) It states that facilities should have "a minimum of one sling per resident that needs the device and some extras to account for laundering and repair."

The memo suggests that facilities should have "appropriate" types and quantities of devices, slings, batteries, and other supplies. "Manual pump or crank devices may create additional hazards," it states.

OSHA does not have an ergonomics standard; Congress voted to rescind the agency's newly drafted ergonomics rule in 2001 and prohibited the agency from developing one that is "substantially" the same. OSHA has successfully used the general duty clause to cite employers for ergonomic hazards that led to serious injuries, but those citations must meet a higher standard than for hazards covered by a rule, the

agency has said.

Yet with this memo, OSHA is essentially conducting "backdoor rule-making," Cordaro says. "[They're] putting out requirements for employers in the guise of guidance."

OSHA says its goal is "to significantly reduce overexposures to these hazards through a combination of enforcement, compliance assistance, and outreach."

Hazard alert letters provide information to employers about what steps they can take to reduce the hazards. Yet OSHA expects employers to take corrective action in response to the letters, says Williams. "We follow up on each and every one of those hazard alert letters," she says.

Union leaders expect to work with employers to address the hazards mentioned in the memo, says **Mark Catlin**, health and safety director of Service Employees International Union in Washington, DC. Hospital administrators also are becoming more aware of costly worker injuries, he says. "Just the discussion created by this announcement is going to be helpful," he says.

*Editor's note: OSHA's "Inspection Guidance for Inpatient Healthcare Settings," released on June 25, is available at [www.osha.gov/depl/enforcement/inpatient\\_insp\\_06252015.html](http://www.osha.gov/depl/enforcement/inpatient_insp_06252015.html).*

## REFERENCE

1. Centers for Disease Control and Prevention. Occupational Traumatic Injuries Among Workers in Health Care Facilities — United States, 2012–2014. *MMWR* 2015;64(15):405-410. ■

# OSHA inspector: 'What is the decision logic for use of lift, transfer, or repositioning devices?'

The Occupational Safety and Health Administration's new instructions to inspectors includes the following section on musculoskeletal disorders (MSDs).

## **Ergonomics: MSD Risk Factors Relating to Patient/Resident Handling**

This section provides guidance for conducting inspections in workplaces in NAICS Codes 622 and 623 as they relate to risk factors for MSDs associated with patient/resident handling. These inspections shall be conducted in accordance with the Field Operations Manual and other relevant OSHA reference documents.

**Establishment Evaluation.** Inspections of MSD risk factors will begin with an initial determination of the extent of patient/resident handling hazards and the manner in which they are or are not addressed. This will be accomplished by an assessment of establishment incidence and severity rates and whether the establishment has implemented a process to address these hazards in an effective [program].

Certified Safety and Health Officials (CSHOs) should ask for the maximum census of patients/residents permitted and the current census during the inspection. Additionally, CSHOs should inquire about the degree of ambulation of the patients/residents, as this information may provide some indication of the level of assistance given to patients/residents or the degree of hazards that may be present.

Note: If there is indication from

injury records, or from employer or employee interviews that other sources of ergonomics-related injuries exist (e.g., MSDs related to office work, laundry, kitchen, or maintenance duties), the compliance officer must include the identified work area and affected employees in the assessment.

**Program Evaluation.** Compliance officers should evaluate program elements, such as the following:

### **Program Management:**

- Is there a system for hazard identification and analysis?
- Is there a system for development of strategies to address identified hazards?
- Who has the responsibility and authority for administering this system?
- What are the credentials or experience of the individual responsible for administering the program?
- What input have employees provided in the development of the establishment's lifting, transferring, or repositioning procedures?
- Is there a system for monitoring compliance with the establishment's policies and procedures and following up on deficiencies?
- Are there records of recent changes in policies/procedures and an evaluation of the effect they have had (positive or negative) on resident handling injuries and illnesses?

### **Program Implementation:**

- How is patient/resident mobility determined and how is the mobility determination communicated to staff?

• What is the decision logic for selection and use of lift, transfer, or repositioning devices?

- When and under what circumstances may manual lift, transfer, or repositioning occur?
- Who decides how to lift, transfer, or reposition patients/residents.
- Is there an adequate quantity and variety of appropriate lift, transfer, or reposition assistive devices available and operational? Note that no single lift assist device is appropriate in all circumstances. Manual pump or crank devices may create additional hazards.
- Are there adequate numbers of supplies such as: slings, batteries, and charging stations for lifting devices? (Note: There should be a minimum of 1 sling per resident that needs the device and some extras to account for laundering and repair. There should be adequate numbers of batteries to accomplish all necessary lifts during a shift). There should be appropriate types and sizes of slings specific for all patients/residents.
- Are there appropriate quantities and types of the assistive devices (such as, but not limited to slip sheets, mechanical lifts, sit-to-stand assists, walk assists, or air-hover transfer pads) available within close proximity and maintained in a usable and sanitary condition?
- Are their policies and procedures appropriate to eliminate or reduce exposure to the manual lifting, transferring, or repositioning hazards at the establishment?

### **Employee Training:**

- Have employees (nursing and therapy) been trained in the recognition of ergonomic hazards associated with manual patient/resident lifting, transferring, or repositioning, the early reporting of injuries, and the establishment's process for abating those hazards.

- Have the employees (nursing and therapy) been trained in proper techniques and procedures to avoid exposure to ergonomic risk factors and can they demonstrate competency in performing the lift, transfer, or repositioning task using the assistive device.

## SOURCE

- U.S. Occupational Safety and Health Administration, Inspection Guidance for Inpatient Healthcare Settings, June 25, 2015, [www.osha.gov/dep/enforcement/inpatient\\_insp\\_06252015.html](http://www.osha.gov/dep/enforcement/inpatient_insp_06252015.html). ■

# AOHP national survey finds 'disturbing' increase in sharps injuries, blood exposures to HCWs

*'When off the radar it is easy to assume they have gone away. They haven't.'*

Needlesticks and blood exposures appear to be increasing, threatening healthcare workers with bloodborne infections and the attendant mental anguish of awaiting test results for themselves or source patients, researchers report.

After years of incremental gains, hard-fought adoption of needle safety devices and passage of federal regulations requiring their use in 2001, a survey of members of the Association of Occupational Health Professionals in Healthcare (AOHP) reveals a troubling trend.<sup>1</sup>

AOHP members from 157 hospitals in 32 states participated in EXPO-S.T.O.P. 2012, a survey to determine the incidence of sharps injuries and mucocutaneous blood exposures among healthcare workers in U.S. hospitals. The survey shows a sharps injury (SI) rate of 28.2 per 100 occupied beds, or 2.2 per 100 full-time equivalent staff. That incidence of SI is significantly higher than the prior AOHP survey, which found an overall SI incidence rate of 24 per 100 beds. In addition, the incidence of 28.2 exposures per 100 occupied beds is higher than the 22.2 rate found among 58 hospitals in the EPINet surveillance system in 2001. The disappointing conclusion is that little

reduction in SI rates has occurred in the last decade, the researchers report. The results indicate that mandating the use of safety engineered devices through the Needlestick Safety and Prevention Act of 2001 has not — as many apparently assumed — eliminated a longstanding problem.

"It is disturbing to find that our assumption that we are increasing safety and decreasing injuries is wrong," says **Linda Good**, PhD, RN, COHN-S, co-author of the study and director of employee occupational services at Scripps Health in San Diego. "The assumption that recognizing a danger will automatically result in changes in behavior is not proving to be true. It's also disturbing that there still seems to be an acceptance among some that a certain number of [sharps] injuries are to be expected [and are in] the nature of the work."

Extrapolation of the survey results indicates that healthcare workers are suffering some 322,000 SIs and 119,000 mucosal blood exposures annually. While the aggregate data are of concern, the survey did identify hospitals with highly successful programs that have reduced sharps injuries dramatically.

"Hospitals with low exposure

injuries take a very proactive approach," Good says. "They make 'zero' their only acceptable rate. They hold everyone accountable."

These hospitals have established safety cultures that include such traits as:

- Data-driven communication
- Immediate root cause investigation of all exposures
- Adoption of safer safety engineered devices
- Engagement of staff on all levels
- Acceptance by staff that safety is their responsibility
- Prevention through education

## A host of variables

The AOHP survey results are subject to a host of variables, but the authors noted some possible explanations for the higher rates. For example, the findings may reflect a surveillance artifact caused by respondents reporting more of their injuries and exposures. Likewise, previous comparative data may have reflected region-specific low incidence in states with early adopters of safety engineered devices. In addition, databases and surveys from hospitals not collecting non-employee exposure data will always show incidence

rates below the true incidence for the facility, the authors reported. In addition, some 40% of respondents were teaching hospitals, which typically have higher sharps injury rates due to procedure intensity and the trainee “learning curve.”

Among the specific findings, AOHP found that 44% of sharps injuries are occurring during surgical procedures.

“It is not surprising that the OR has the highest incidence — with procedures done with very sharp objects in close quarters — and most procedures have no clinically acceptable, safety-engineered option available,” Good says. “Blunt suture needles do not seem to have caught on. Some progress has been noted with use of ‘neutral zones’ to eliminate direct passing of sharps.”

Clinicians comfortable with established methods may be reluctant to change practices and adopt a differently designed safety device. For example, Good recalls a situation years ago when a facility adopted safety-engineered IV start devices.

“The change was met with resistance from the anesthesiologists,” she says. “They wanted to stay with devices with which they

were comfortable, confident — recognizing that they were often called upon in emergency situations where it was crucial that they get the line in immediately. They did not want to go through the inevitable learning curve — and the initial possibility of failure — associated with a new device.”

The assumption is that as next-generation surgeons, anesthesiologists, and other practitioners learn with next-generation devices, the comfort level and acceptance of safety devices will improve, she adds.

It would certainly seem that a lot of the exposures could be to blood containing HCV, particularly from baby boomer patients who have collectively been advised they are a risk group and need to be tested for the virus. There are treatments for HCV now that carry an exorbitant price tag, raising the possibility that hospitals may be more motivated to fund sharps safety programs rather than pay out expensive occupational infection claims.

However, though there are likely HCV occupational infections that are not reported, those that are identified suggest HCV seroconversion after a

needlestick is certainly possible but exceedingly rare. With post-exposure prophylaxis for HIV and an available vaccine for HBV, the risk for bloodborne infections of any stripe is real but rare.

“Though bloodborne pathogen exposures are potentially devastating, they rarely even rise above a ‘first aid’ designation on injury reports,” Good says. “This keeps them off the radar — and when off the radar it is easy to assume they have gone away. They haven’t.”

The 15-item AOHP electronic survey pertaining to 2012 calendar-year will be conducted annually, with information for EXPO-S.T.O.P. 2013 & 2014 currently being analyzed after being collected in the spring of 2015. The findings should continue to shed light on the nature of exposures and injuries while identifying best practices in hospitals with low incidence rates.

## REFERENCE

1. Grimmond T, Good L. EXPO-S.T.O.P.: A national survey and estimate of sharps injuries and mucocutaneous blood exposures among healthcare workers in USA. *J Assoc Occ Health Prof* 2013;33(4):31-36. ■

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# Are you prepared for the next airborne disease?

*OSHA, NIOSH and Joint Commission join forces on HC tools*

**E**bola. H1N1. MERS. SARS. The stakes are high when health care workers care for patients with an emerging infectious disease, and gaps in respiratory protection can have deadly consequences. Yet studies show those gaps persist.<sup>1</sup>

Three leading safety agencies have released comprehensive resources to address longstanding weaknesses in respiratory protection programs

in hospitals. They provide a kind of primer, an effort to improve training, compliance, awareness, and coordination.

In May, the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) jointly issued a Hospital Respiratory Protection Program Toolkit that focuses on aerosol

transmissible diseases. The Joint Commission produced a companion monograph with best-practice case studies called “Implementing Hospital Respiratory Protection Programs: Strategies from the Field.” Previously, the American Association of Occupational Health Nurses (AAOHN) released free educational modules on respiratory protection. (See editor’s note below for more

*information on accessing resources.)*

The OSHA/NIOSH toolkit covers respirator use, existing public health guidance on respirator use during exposure to infectious diseases, hazard assessment, the development of a hospital respiratory protection program, and additional resources and references on hospital respiratory protection programs. The document also includes an editable respiratory tool that hospitals can customize to reflect their program.

“If you use your best practices every day, when there’s an outbreak you’re ready. The best preparedness is good day-to-day practice,” says **Debra Novak**, RN, DSN, senior service fellow with NIOSH’s National Personal Protective Technology Laboratory (NPPTL), who was the project officer for the toolkit and monograph.

Respiratory protection is often a responsibility of employee health professionals, yet many learned about it on the job rather than through formal education, says **MaryAnn Gruden**, MSN, CRNP, NP-C, COHN-S/CM, manager of employee health services at Allegheny Health Network in western Pennsylvania and association community liaison for the Association of Occupational Health Professionals in Healthcare (AOHP). A 2012 survey by AOHP found that half of the members managed their hospital’s respiratory protection program.

“We want to make sure accurate information is out there for them to use to help build their program and protect their workers,” she says.

Respiratory protection has often been a source of confusion — and concern. When two Dallas nurses became infected with Ebola while caring for a patient, attention soon turned to their respiratory protection, or lack of it. The nurses

reported that they initially wore surgical masks, per guidance from the Centers for Disease Control and Prevention. CDC later revised the guidance and recommended respirators.<sup>2</sup>

In Toronto, transmission of SARS to healthcare workers raised critical questions about the use of surgical masks versus respirators.<sup>3</sup> And a recent survey by AAOHN found that one-quarter of occupational health nurses are uncomfortable describing the difference between surgical masks and respirators.<sup>4</sup> To complicate matters further, a new meta-analysis from Canada concludes that when strictly looking at clinical studies, there is no discernable difference between respirators and masks in preventing healthcare worker respiratory infections. (*See related story, page 94.*)

The OSHA/NIOSH toolkit attempts to clarify that surgical masks are not respirators. Yet the guidance still reflects the conflict between the occupational safety and infection control perspectives. It defines “droplet precautions,” an infection control precaution in which healthcare workers wear a surgical mask to protect their mouth and nose from large droplets produced when a patient talks or coughs.

But the toolkit also notes that the mode of disease transmission is not always clear, and that symptoms of an airborne disease, such as tuberculosis, may be mistaken for other respiratory viruses.

“A prudent approach is to implement the use of respirators early on based on suspected diagnosis, for example in the emergency department, and discontinue it later if the patient is subsequently diagnosed with a disease that does not require

respiratory protection,” the toolkit states.

Still, respiratory protection expert **Lisa Brosseau** is concerned about the implication that surgical masks are a form of personal protective equipment. She notes that they were created to prevent infection of wound sites during surgery.

“[The toolkit’s recommendations] continue to confuse people about what a surgical mask or respirator is,” says Brosseau, ScD, CIH, professor and director of the Industrial Hygiene Program at the University of Illinois at Chicago, and a member of the technical expert panel for the monograph. “They continue to indicate that surgical masks offer protection for inhalation and they do not. They were never meant to and they were not designed for that.”

She points to a chart that shows surgical mask use is appropriate for “viral hemorrhagic fevers.” Footnotes state, “A surgical mask is not a respirator but can be effective in blocking large particles” and “5 October 2014 CDC guidance for Ebola virus disease recommends at least an N95 respirator.”

Novak notes that the toolkit reflects current CDC guidance, and that surgical masks can be used as barrier protection from droplet spray. However, hospitals should conduct a hazard evaluation before making a decision about respirator use, and healthcare workers should be able to consult an infectious disease expert with any questions, she says.

“It depends upon the type of hazard that you’re trying to eliminate or minimize. The infection control paradigm really drives that,” she says.

In other respects, the toolkit and monograph offer a clearer pathway to better training and coordination of a respiratory protection program.

The Respirator Use Evaluation

in Acute Care Hospitals (REACH) project, sponsored by NIOSH, revealed that healthcare workers often lack adequate training and fail to use respirators properly. For example, in a 2009-2010 survey, California nurses reported their instruction during annual fit-testing lasted from one minute to 15 minutes.<sup>1</sup> A follow-up REACH study in six states in 2011 and 2012 found widespread lack of understanding among healthcare workers about when and how to wear respirators.

Too often, hospital respiratory protection programs existed on paper, but weren't implemented in day-to-day use, Novak says.

"The toolkit takes the essential [OSHA-]mandated elements for a respiratory protection program and gives you a very organized, orderly, and comprehensive manual for how to develop the program properly," she says. It was modeled after a similar toolkit published in 2012 by the California Department of Public Health.

Respiratory protection programs should have a single administrator with overall responsibility, even if

duties are delegated, the toolkit advises. OSHA's Respiratory Protection Standard also requires employers to conduct a hazard evaluation to determine which employees could be exposed. In hospitals, the hazards include infectious diseases, aerosolized hazardous drugs, disinfecting agents, surgical smoke and waste anesthetic gases. Aerosol-generating procedures may require a higher level of protection, the toolkit notes.

Each required aspect of a respiratory protection program is explained in the toolkit, from creating a written program and fit-testing to recordkeeping and evaluation. (*For a list of training requirements, see box below.*)

In a companion document, The Joint Commission solicited strategies for respiratory protection programs from hospitals around the country.

Even hospitals with established respiratory protection programs reported challenges in implementing and maintaining respiratory protection amid so many hospital priorities, says **Barbara Braun**, PhD, associate

director of the Department of Health Services Research in The Joint Commission's Division of Healthcare Quality Evaluation and principal investigator of the monograph project.

Hallmarks of good programs include the following:

- Leaders who value safety for workers as well as for patients.
- Collaborative efforts through multidisciplinary teams.
- A broad approach to respiratory hazards.
- Integration of respiratory protection with emergency preparedness.
- Measures to raise awareness about respiratory protection.

Education needs to be an ongoing process, says Braun. This is particularly important in healthcare, where staff might not necessarily use a respirator every day, Braun said.

Hospitals reported many ways to educate and remind staff when a respirator might be needed and how to use it properly. For example, some hospitals placed signs outside airborne isolation rooms

## Required elements in respirator training

The Occupational Safety and Health Administration requires the following elements in training of employees in respiratory protection:

- Why the respirator is necessary (including when it must be worn),
- Why proper fit, usage, and maintenance is crucial to its effectiveness,
- What the limitations and capabilities of the respirator are,
- Hands-on demonstration of how to inspect, put on, remove, use, and check the seal of the respirator,
- What the procedures are for storage and maintenance,
- How to recognize medical signs or symptoms that limit or prevent the safe, effective use of respirators,
- The general requirements of the OSHA Respiratory Protection standard,
- How to identify and react to respirator malfunctions, and
- How to use the respirator in emergencies (e.g., chemical release) if appropriate.

### SOURCE

- OSHA/NIOSH, The Hospital Respiratory Protection Program Toolkit, May 2015: [www.osha.gov/Publications/OSHA3767.pdf](http://www.osha.gov/Publications/OSHA3767.pdf). ■

reminding healthcare workers to don a respirator before entering. Some hospitals required employees to demonstrate competency with respirators prior to their use. Other hospitals tailored education strategies according to different staff needs, such as offering training in multiple languages.

“Anecdotally, hospitals reported better buy-in when staff understood why they were wearing a respirator,” Braun says.

*Editor’s note: The Hospital Respiratory Protection Program Toolkit is available at [www.osha.gov/Publications/OSHA3767.pdf](http://www.osha.gov/Publications/OSHA3767.pdf), and “Implementing Hospital Respiratory Protection Programs: Strategies from the Field” is available at [www.jointcommission.org/assets/1/18/Implementing\\_Hospital\\_RPP\\_2-19-15.pdf](http://www.jointcommission.org/assets/1/18/Implementing_Hospital_RPP_2-19-15.pdf). The AAOHN educational modules are available at <http://aaohnacademy.org/rpp/rpp-program.php>.*

## REFERENCES

1. Beckman S, Materna B, Goldmacher S, et al. Evaluation of respiratory protection programs and practices in California hospitals during the 2009–2010 H1N1 influenza pandemic. *Am J Infect Control* 2013; 41:1024–1031.
2. Centers for Disease Control and Prevention. “CDC tightened guidance for U.S. health care workers on guidance for personal protective equipment with Ebola.” October 20, 2014. Available at [www.cdc.gov/media/releases/2014/fs1020-ebola-personal-protective-equipment.html](http://www.cdc.gov/media/releases/2014/fs1020-ebola-personal-protective-equipment.html).
3. Campbell A. The SARS commission executive summary, volume 1, Spring of Fear. Toronto, Ontario, Canada: Commission to Investigate the Introduction and Spread of SARS in Ontario; 2006. Available at [www.archives.gov.on.ca/en/e\\_records/sars/report/v1-pdf/Volume1.pdf](http://www.archives.gov.on.ca/en/e_records/sars/report/v1-pdf/Volume1.pdf).
4. Burgel BJ, Novak D, Burns CM, et al. Perceived competence and comfort in respiratory protection: Results of a nationwide survey of occupational health nurses. *Workplace Health & Safety* 2013;61:103-115. ■

# Vanderbilt makes it easy to complete fit-testing

*Compliance with respiratory protection is required though*

**A**t Vanderbilt University Medical Center in Nashville, complying with respiratory protection is convenient, education-based — and mandatory.

Employees who have potential exposure to airborne diseases or other respiratory hazards must complete their annual fit-testing before they can receive their annual performance evaluation and raise. But Vanderbilt also works to make the training and fit-testing accessible, says **Susan Johnson**, MS, MT(ASCP), CSP assistant director of Vanderbilt Environmental Health and Safety and the university’s Medical Center Safety Officer.

“It’s a service that we provide. We approach it in that respect,” she says. “We try to make it as easy for the employee to be compliant as

possible.”

Vanderbilt identifies employees who need to be a part of the respiratory protection program based on job descriptions and the units in which they work. The medical center takes a cautious approach; more than 8,300 of the 19,300 employees are included in the program.

Occupational health conducts the medical surveillance, while safety provides the annual fit-testing and training. Fit-testing is available as a part of competency days when nurses are completing other annual requirements, but safety also sometimes brings a fit-testing station to high-risk units.

Employees then have color-coded stickers on the back of their ID badge with information about the respirator brand and size and the

date they were fit-tested.

When safety officers conduct rounds, they observe whether employees are wearing respirators when appropriate and whether they are donning and doffing them properly, says Johnson. They also check on supplies. Having easy access to the respirators is important for compliance, she says.

“Materials management, infection control, occupational health and safety — we’re all working toward the same goal,” she says. “Having that collaboration helps get the job done.”

The respiratory protection program requirements are evaluated by a Vanderbilt working group, with input from infection control and prevention staff to determine employees who may need respiratory

protection for biological infectious pathogens. Job tasks are evaluated to determine if there is work-related employee exposure to infectious agents either from lab processes or patient care, exposure to chemicals or hazardous aerosolized pharmaceuticals, or exposure to animal allergens. Standard industrial hygiene practices are applied to

minimize employee exposures and minimize the number of individuals in the program.

The largest group of respirator users in the medical center program includes staff whose job duties include:

- Enter rooms where patients are on airborne precautions isolation or provide care for patients on

airborne precautions in outpatient or procedural units that require the patient to remove his/her surgical face mask.

- Perform certain high-risk procedures for patients on airborne precautions.
- Service air-handling equipment for negative-pressure isolation rooms. ■

## Study: In actual clinical practice, N95 respirators no more protective to HCWs than surgical masks

*Canadian researchers report counterintuitive findings*

In a study certain to stir controversy, researchers in Canada report that N95 respirators were no better than surgical masks in preventing respiratory infections in healthcare workers in clinical settings.

“Although N95 respirators compared to surgical masks may have a protective advantage in laboratory evaluations, our meta-analysis identified that data from clinical settings does not provide evidence that N95 respirators offer superior protection for healthcare workers against transmissible acute respiratory infections in a clinical setting,” the authors reported recently in Victoria, British Columbia, at the Infection Prevention and Control (IPAC) Canada 2015 National Education Conference.<sup>1</sup>

### No real difference in associated risk

Saying the paper had been submitted for publication, lead author **Jeffrey Smith**, MSc, of Public Health Ontario declined a

request for comment on the study by *Hospital Employee Health*.

The authors synthesized the available clinical and surrogate exposure data comparing N95 respirators to surgical masks for the prevention of transmissible acute respiratory infections. They searched the peer reviewed literature between January 1990 and December 2014. For clinical studies, they included English-language randomized controlled trials (RCTs), cohort studies, and case-control studies that included data on N95 respirators or equivalent and surgical masks used to prevent acute respiratory infections. The primary outcome for the meta-analysis was laboratory-confirmed respiratory infection. Secondary outcomes for the meta-analysis included influenza-like illness and workplace absenteeism.

Surrogate exposure studies were examined and summarized, but not included in meta-analyses. Outcomes related to surrogate exposure studies were filter penetration, face-seal leakage, and total inward leakage.

Overall, six studies were included in the meta-analysis, which found no significant

difference in associated risk of laboratory-confirmed respiratory infection when N95 respirators and surgical masks were compared in RCTs.

Similarly, there was no significant difference in associated risk of influenza-like illness or workplace absenteeism when N95 respirators and surgical masks were compared in clinical trials, they concluded.

“Twenty-three additional surrogate exposure studies were included,” they note. “These studies in general demonstrated that N95 respirators have less filter penetration, face-seal leakage, and total inward leakage than surgical masks.”

### REFERENCE

1. Smith J, MacDougall C, Johnstone J, et al. Respirators versus surgical masks to protect health care workers from acute respiratory infections: A systemic review and meta-analysis. Infection Prevention and Control (IPAC) Canada 2015 National Education Conference. Victoria, B.C. June 15-16, 2015. ■

# Fired whistleblower awarded \$85k for reporting unsafe needle disposal practices

OSHA: 'Employers must pay attention to this verdict's legal and financial consequences'

**D**id you know that an employee with an occupational safety concern in your health care facility could trigger an OSHA visit by blowing the proverbial whistle? OSHA takes these “whistleblower” calls seriously and protects workers who make them. Though the worker may be mistaken about the risk factor cited, employee health nurses can head off such incidents by trying to understand and address the problem, or if warranted, take it to hospital leadership. Consider the following case a textbook example of how not to handle such situations.

## Employees concerned about potential injuries

The incident began when Massachusetts dentist **N. Terry Fayad**, DMD, PC, changed his practice's procedure for disposing of contaminated needles, OSHA reported.<sup>1</sup> The dentist told office staff to first remove the protective caps before dropping the needles into sharps disposal containers. According to OSHA, the practice was allegedly to fill the containers with more used needles and reduce the frequency and cost of their disposal.

Concerned that she and her co-workers could be exposed to needlestick injuries and the risk of infection from bloodborne pathogens such as hepatitis and HIV, a dental assistant raised the issue with the dentist. When he dismissed her concern she filed a

complaint with OSHA, the agency reported. After an OSHA inspector visited on Nov. 23, 2010, Fayad fired her later that day.

A whistleblower investigation followed and, in September 2011, the Department of Labor sued Fayad in the U.S. District Court for the District of Massachusetts. In its complaint, the department charged that the dentist violated the anti-retaliation provisions of the Occupational Safety and Health Act. The suit eventually went to trial before U.S. District Judge George A. O'Toole.

## Financial, legal consequences

Judge O'Toole has ruled in favor of the department and ordered Fayad's practice to pay the worker \$51,644.80 in back wages and \$33,450.26 in compensatory damages. The judge found that the employee's firing by Fayad shortly after OSHA began its inspection was retaliatory and a violation of section 11(c) of the OSH Act.

“This worker suffered needless

financial and emotional distress because Dr. Fayad chose to disregard a clear and important principle: Employees have the right to contact OSHA and raise workplace health and safety concerns with their employer without fear of termination or retaliation,” said **Greg Baxter**, OSHA's acting regional administrator for New England. “Employers must pay attention to this verdict. It makes it clear that there will be legal and financial consequences if you retaliate against your employees in this manner.”

And the OSHA inspection that led to the firing? Violations of OSHA's bloodborne pathogen and hazard communication standards resulted in finds of \$11,000, which the dentist paid in 2012.

More information on employee whistleblower rights, including fact sheets, is available at <http://www.whistleblowers.gov/>.

## REFERENCE

1. OSHA. Court orders dentist to pay \$85K to employee fired for safety complaint. April 8, 2015: <http://1.usa.gov/1G2Lldf>. ■

## COMING IN FUTURE MONTHS

- A single measles case causes costly, total chaos
- William Schaffner, MD: Expert overview of vaccine issues and healthcare workers
- International Safety Center restructures, looks to expand role
- Getting safe patient handling training started in nursing schools



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## CNE QUESTIONS

- 1. U.S. hospitals recorded nearly 58,000 work-related injuries and illnesses in 2013, which breaks down to how many work-related injuries and illnesses for every 100 full-time employees?**
  - A. 6.4
  - B. 4.9
  - C. 3.5
  - D. 5.4
- 2. In an AOHP survey, hospitals with low exposures and sharps injury rates had which of the following characteristics?**
  - A. Data-driven communication
  - B. Immediate root cause investigation of all exposures
  - C. Engagement of staff on all levels
  - D. All of the above
- 3. The largest group of respirator users in the medical center program includes staff whose job duties include servicing air-handling equipment for negative-pressure isolation rooms.**
  - A. True
  - B. False
- 4. In a CDC Ebola training program, which of the following was the most difficult to do without breaches and exposures?**
  - A. Handling dead patients
  - B. Collecting and disposing of contaminated materials
  - C. Remaining in the treatment area for more than 20 minutes
  - D. Removing PPE after treating a patient

## CNE OBJECTIVES

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

1. Identify particular clinical, administrative, or regulatory issues related to the care of hospital employees;
2. Describe how the clinical, administrative and regulatory issues particular to the care of hospital employees affect health care workers, hospitals, or the healthcare industry at large;
3. Cite solutions to the problems faced in the care of hospital employees based on expert guidelines from relevant regulatory bodies, or the independent recommendations of other employee health professionals.