Occupational Health Management™

A monthly advisory for occupational health programs

AHC Media LLC

INSIDE

Statement of Financial Disclosure: Stacey Kusterbeck (Editor), Coles McKagen (Associate Publisher), Joy Dickinson (Senior Managing Editor), and Deborah V. DiBenedetto (Nurse Planner) report no consultant, stockholder, speaker's bureau, research, or other financial relationships with companies having ties to this field of study.

NOVEMBER 2007
VOL. 17, NO. 11 • (pages 121-132)

Your back pain programs may *not* be effective: Use these strategies

Stretching and exercise are proven solutions

Back injuries are the most frequent source of workers' compensation claims nationally, accounting for one of every five claims, according to the National Council on Compensation Insurance. The average cost of each claim is about $13,300.

"As the workforce ages, companies may find an increase in the number of workers experiencing back pain," says **Clete Lewis**, corporate director of environmental, health and safety for Madison, NJ-based Quest Diagnostics.

Your employer probably spends a significant amount of money and resources to prevent work-related back pain, such as training programs to teach specific lifting methods.

However, a new review of 11 studies involving more than 18,000 employees suggests that these methods may not be effective in reducing disability claims or sick leave.[1] According to the researchers, a possible explanation for the findings could be that "safer" lifting techniques don't really exist or that back pain might not be caused by lifting or moving heavy objects.

"Undoubtedly, companies are wasting money on ineffective approaches to low back pain prevention," says **Christopher Maher**, associate professor of physiotherapy at the University of Sydney in Australia. "It is important that people look long and hard at this review."

EXECUTIVE SUMMARY

Disability claims and sick leave for work-related back pain are not being reduced with education on lifting methods or safer handling devices, says a new study. Experts in physiotherapy recommend work-site exercise programs. Other approaches include:

- Giving annual training on back injury prevention.
- Screening newly hired workers to make sure they can safely perform essential functions.
- Having employees stretch before work.

Work-related low back pain is a "public health disaster," says Maher. "The solution to this health problem will only come about if government and industry fund research to address it. At the moment, low back pain is not a high priority for research, and that is a key reason why we are in the mess we are in," he says.

There are "many unknowns" about low back pain, adds Maher. "For many people, we cannot identify the incident that caused their low back pain, and for 90% of people, we cannot identify the structure in their back that is causing the pain," he says.[2] Until more is known about back pain prevention, occupational health professionals should "do the only thing that has been shown to be effective," advises Maher: Provide a work-site exercise program. "Every trial that has tested this intervention has shown that it is effective," he says.[3]

Collene Van Mol, an occupational health nurse at RoyOMartin in Alexandria, LA, says, "Prevention of low back pain is indeed a challenge for us, as it is for employers of all sizes." RoyOMartin is a wood products company with approximately 1,200 employees at eight sites. RoyOMartin has seen a 46% decrease in low back injuries since 2002, reports Van Mol. "I believe providing a safe work environment, continually raising the level of awareness, and promoting personal responsibility for coming to work healthy and fit have made a tremendous difference in employees' working safely," says Van Mol. To reduce work-related back pain, use these strategies:

• **Screen newly hired employees**.

RoyOMartin's employees are given annual training on back injury prevention, safe lifting techniques, and the importance of proper body mechanics, says Van Mol. "Actually, we begin training employees on back health and safety before their first day at work," she says.

New hires at RoyOMartin go through a "post-hire, pre-placement functional test" before the first day of work. Employees are asked to perform various physical tasks in a simulated work atmosphere to determine if they can safely perform the essential functions of their position, says Van Mol.

Occupational and physical therapists perform the screenings at local physical therapy centers and at the same time, teach employees proper lifting, pushing, and pulling techniques, says Van Mol. "Employees often refer to what they learned in these sessions," she says.

At Waterbury, VT-based Green Mountain Coffee Roasters, all new hires attend ergonomics classes during their first week of employment, says spokeswoman **Sandy Yusen**. "After that, the physical therapist and ergonomics expert set up one-on-one sessions with employees to evaluate specific workstations," she says.

• **Offer programs specifically for back pain**.

Cisco, a San Jose, CA-based provider of Internet solutions, is developing a disease management program specifically for musculoskeletal pain, according to **Pam Hymel**, MD, the company's corporate medical programs director. An occupational health nurse helps employees manage their condition with healthier eating, exercising, taking medications properly, and managing stress, says Hymel.

In addition, a telephone health coaching program is being implemented for employees who identify on a personal health assessment that

Occupational Health Management™ (ISSN# 1082-5339) is published monthly by AHC Media LLC, 3525 Piedmont Road, Building Six, Piedmont Center, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodical postage paid at Atlanta, GA 30304. POSTMASTER: Send address changes to **Occupational Health Management**™, P.O. Box 740059, Atlanta, GA 30374.

AHC Media LLC is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

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 #14749, for 15 Contact Hours.

This activity is intended for occupational nurses, occupational health managers and directors. It is in effect for 36 months from the date of publication.

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.

Subscriber Information

Customer Service: (800) 688-2421 or fax (800) 284-3291, (customer service@ahcmedia.com). Hours: 8:30-6:00 M-Th; 8:30-4:30 F.

Subscription rates: U.S.A., one year (12 issues), $489. Add $12.95 for shipping & handling. Outside U.S., add $30 per year, total prepaid in U.S. funds. Discounts are available for group subscriptions. For pricing information, call Tria Kreutzer at (404) 262-5482. Missing issues will be fulfilled by customer service free of charge when contacted within one month of the missing issue date. **Back issues**, when available, are $82 each. (GST registration number R128870672.)

Editor: **Stacey Kusterbeck.**
Senior Vice President/Group Publisher: **Brenda Mooney**, (404) 262-5403, (brenda.mooney@ahcmedia.com).
Associate Publisher: **Coles McKagen**, (404) 262-5420, (coles.mckagen@ahcmedia.com).
Senior Managing Editor: **Joy Dickinson**, (229) 551-9195, (joy.dickinson@ahcmedia.com).
Production Editor: **Ami Sutaria**.

Editorial Questions

For questions or comments, call **Joy Dickinson** at (229) 551-9166.

they have back pain. Nurses, registered dieticians, and exercise physiologists contact employees at their convenience via phone or e-mail, says Hymel. "While in general our employees don't report significant problems with back pain, our second highest medical claim cost is musculoskeletal pain," adds Hymel.

• **Ask employees to stretch before work.**

Exercise programs that emphasize strengthening and stretching can help reduce back pain and perhaps prevent the conditions that cause it, says Lewis. "Many of our facilities have on-site walking clubs whose members walk daily or near daily," she notes. "While we have not studied the issue, we believe promoting fitness among our employees will help them to be healthier and more productive."

Before every shift, employees at Green Mountain's plant and distribution center take part in a five-minute "industrial athlete" stretching program. "The program was created by a yoga instructor, a physical therapist, and a cross-functional team of employees," says Yusen. "This is done with the goal of reducing the risk of on-the-job injury."

RoyOMartin is piloting a workstation stretching program, says Van Mol. An occupational therapist analyzed each job position and developed warm-up stretching exercises for employees in all departments, she says. "We will soon begin training all employees on the stretching exercises specific to their workstation. Supervisors will lead daily stretches and keep employees motivated," says Van Mol. "It will be interesting to see the impact this will have on the incidence of low back pain experienced at work."

• **Observe employees doing physical tasks**.

At Golden, CO-based Coors Brewing Co., physical therapists observe employees working in production areas and offer advice on how to prevent injury, says **Christine McCallum**, MPT, physical therapist at the company's wellness center. "Employees can request this or safety might look at some numbers and tell us that musculoskeletal injuries have been a problem for a certain area," she says. "We look at the job and find the risk factors to that particular job." For example, McCallum recently advised workers to front-load a drying machine instead of side loading.

After each training session, McCallum says she sees increased numbers of employees exercising in the wellness center. "The biggest thing to overcome is the attitude of 'My job is already hard work. I don't need to work out,'" she says. "I explain that they need to be stronger to avoid injury or strain, and if they do get injured, it's much more quickly healed."

SOURCES

For more information on prevention of work-related back pain, contact:

• **Clete Lewis**, Director, Environmental, Health and Safety, Quest Diagnostics, 7814 Carolyn Drive, Castle Rock, CO 80108. Phone: (303) 779-1597. E-mail: clete.e.lewis@questdiagnostics.com.
• **Christopher Maher**, Associate Professor, Discipline of Physiotherapy, Faculty of Health Sciences, The University of Sydney, PO Box 170, Lidcombe, NSW 2141 Australia. E-mail: C.Maher@usyd.edu.au.
• **Christine McCallum,** MPT, Physical Therapist, Coors Physical Therapy, 1109 Ford Street, Golden, CO 80401. Phone: (303) 277-3305. Fax: (303) 277-5008. E-mail: christine.mccallum@coors.com.
• **Collene Van Mol**, RoyOMartin, 2189 Memorial Drive, Alexandria, LA 71301. Phone: (318) 445-7574. E-mail: collene.vanmol@martco.com.

References

1. Martimo KP, Verbeek J, Karppinen J, et al. Manual material handling advice and assistive devices for preventing and treating back pain in workers. (Review). *Cochrane Database of Systematic Reviews 2007*, Issue 3. DOI: 10.1002/14651858.CD005958.pub2.
2. Koes BW, Van Tulder MW, Thomas S. Diagnosis and treatment of low back pain. *BMJ* 2006; 332:1,430-1,434.
3. Maher CG (2000): A systematic review of workplace interventions to prevent low back pain. *Austr J Physio* 2000; 46:259-269. ■

Make safety changes with employee's input

Correct reported concerns immediately

You may be overlooking a simple, no-cost way to dramatically improve workplace safety: employee input.

"If an institution takes an adversarial approach to safety-related concerns by employees, then employees may not feel comfortable coming forward with information about workplace safety,"

EXECUTIVE SUMMARY

Serious workplace injuries can be prevented by asking employees to report safety concerns. Some ways of doing this include:

- Using a checklist to assess safety problems during surveys.
- Asking employees directly about concerns during committee meetings.
- Giving employees a financial incentive to report safety problems.

says **Scott Patlovich**, safety manager of environmental health and safety at The University of Texas Health Science Center at Houston.

Employees may be unaware of the channels in which to relay their safety concerns, such as a phone number, web site, or designated contact person, adds Patlovich. "We encourage all employees to come forward with any and all safety concerns, at any time, with no consequences or repercussions," he says. "We provide an easy way for them to contact us to relay this information, and we make all attempts to address the safety concerns in a timely and efficient manner."

Office phone numbers, e-mail addresses, and office locations for safety staff members are listed on the company's web site and on emergency postings that are on display throughout the university, says Patlovich. In addition, a main contact phone line is answered by a live person on business days from 8 a.m. to 5 p.m., and an emergency phone line pages an on-call staff member if it is at night or during a weekend or a holiday. "Although I do not readily advertise it on the web site or on our postings, many of the folks here even have my cell phone number," says Patlovich.

All employees need to accept responsibility for working safely by pointing out hazards to other employees and managers and coming up with ideas for continuous improvements in safety, says **Robert D. Johnson**, CIH, CSP, senior manager of environment health and safety operations for Pitney Bowes, a Stamford, CT-based provider of mailstream solutions. "It is difficult to definitively state that any single change prevented an injury. How do you know what didn't happen? However, we can say that addressing employee safety concerns in a timely manner most certainly has a positive effect upon overall injury statistics," says Johnson.

To encourage employees to report safety concerns, do the following:

- **Ask about concerns during safety surveys**.

To identify unsafe conditions before an injury occurs, safety specialists at the University of Texas Health Science Center conduct safety surveys at least once a year for every area, with higher hazard areas surveyed monthly, reports **Bruce J. Brown**, MPH, CBSP, CHMM, ARM, director of environmental health & safety.

Surveyors ask employees about safety concerns and use a checklist to determine if any deficiencies exist in a work setting, such as trip hazards, ergonomic conditions, lighting conditions, electrical safety, fire safety, and indoor air quality. **(See a list of steps that occur during a safety survey and information on how to access a sample checklist on p. 125.)** "If possible, the safety concern is corrected on site at the time of the survey," says Brown. "Otherwise, we facilitate correction by relaying the issue to an appropriate party for resolution."

Employees have reported poorly marked stair treads, freshly mopped bathroom floors without a warning sign, high noise areas, lack of knowledge about the proper type of protective gloves to use for a specific chemical, improper use of extension cords, and use of office space heaters

SOURCES

For more information on improving safety with employee input, contact:

- **Bruce J. Brown**, MPH, CBSP, CHMM, ARM, Director, Environmental Health & Safety, The University of Texas Health Science Center at Houston, 7000 Fannin, Suite 1200, Houston, TX 77030. Phone: (713) 500-8100. E-mail: bruce.j.brown@uth.tmc.edu.
- **Andrew Jacobs**, President and Owner, Ideal Jacobs, 515 Valley St., Maplewood, NJ 07040. Phone: (973) 275-5100. Fax: (973) 275-5161. E-mail: acj@idealjacobs.com.
- **Robert D. Johnson**, CIH, CSP, Pitney Bowes, Senior Manager, Environment Health and Safety Operations, One Elmcroft Road, Stamford, CT 06926. Phone: (203)-536-5000. E-mail: robert.johnson1@pb.com.
- **Scott Patlovich**, Safety Manager, Environmental Health & Safety, The University of Texas Health Science Center at Houston, 7000 Fannin, Suite 1200, Houston, TX 77030. Phone: (713) 500-4193. E-mail: scott.j.patlovich@uth.tmc.edu.

as potential fire hazards, say Brown.

Employee safety concerns have prevented serious injury many times, says Patlovich. For example, a new guard was installed on a piece of machinery after an employee reported that the old guard had broken off, which exposed a hazardous moving part.

Employees also reported that the laboratory was storing combustible materials too close to fire suppression sprinkler heads, so these were relocated. Another report from animal care personnel involved several cages with old castor rollers that were becoming difficult to roll. "Since ergonomic injuries such as back and shoulder strains are prevalent amongst this group from moving the heavy equipment, we quickly acted to purchase new castors to replace the old ones," says Patlovich.

- **Include employees in safety committees.**

At Pitney Bowes, employees at all levels voice concerns at safety committees, says Johnson. In addition, "daily huddle" meetings are held in small groups within several of the company's organizations, he says. "During these huddles, safety is often one of the primary topics for discussion," he says.

Recently, employees proposed changing a process that required workers to bend over a wire container and lift objects from the bottom of the container more than 1,000 times per shift, which resulted in possible overexertion injury. "Our employees proposed eliminating the wire containers and replacing them with a chute at waist level, which eliminated the bending from the process," says Johnson. "This was an effective elimination of a safety hazard and an improvement in efficiency."

- **Pay employees for safety ideas.**

Safety Survey Steps

The frequency of inspection for each area is determined based on the work performed in each location. For example, a basic lab using chemicals and non-infectious bacteria will be surveyed once per year, whereas labs that work with radioactive materials will be surveyed twice per year to comply with regulatory license requirements. Safety specialists then are assigned to survey the areas.

Specific areas are identified that need to be surveyed. For example, office areas are identified and then segregated from laboratory areas for the purpose of performing the appropriate survey.

Prior to performing the survey, the safety specialist prints a survey report history with previous deficiencies, a list of laboratory personnel including the person in charge, lab personnel training history, and a checklist of safety-related questions. [**A sample *Laboratory Safety Evaluation Record* is available with the online issue of *Occupational Health Management*. If you're accessing your on-line account for the first time, go to www.ahcmedia.com. Click on the "Activate Your Subscription" tab in the left-hand column. Then follow the easy steps under "Account Activation." If you already have an on-line subscription, go to www.ahcmedia.com. Select the tab labeled "Subscriber Direct Connect to On-line Newsletters. Please select an archive." Choose "Occupational Health Management," and then click "Sign on" from the left-hand column to log in. Once you're signed in, select "2007" and then select the November 2007 issue. For assistance, call Customer Service at (800) 688-2421.**]

The safety specialist then will perform the survey, which is often an unannounced visit.

During the survey, the safety specialist goes through the checklist of safety-related items looking for items of non-compliance. Any deficiencies are noted and recorded, with findings verbally communicated to laboratory personnel. Safety concerns are solicited from laboratory personnel.

An attempt is made to correct safety deficiencies on site at the time of the survey when possible, or at least assist the lab with compliance. If deficiencies cannot be corrected, the responsible parties are notified, such as Facilities Operations for facilities-related issues.

The safety specialist records the findings of the survey in the database. The deficiencies recorded that are not resolved at the time of survey are assigned a time period for follow-up so they can be revisited, to ensure corrective actions have been accomplished. A deficiency letter is then generated and sent to the principal investigator who notes the deficiencies found and the corrective actions taken or to be taken by the lab or other responsible party. The laboratory then has 30 days to respond with corrective actions for which it is are responsible. Safety specialists follow up within 60 days to determine status of corrective actions if there is no response within this time period.

Source: The University of Texas Health Science Center at Houston.

At Ideal Jacobs, a Maplewood, NJ, printing company, employees are motivated to report safety concerns because they see that when something is reported, it gets fixed immediately, says President and owner **Andrew Jacobs**. For instance, a worker noticed that boxes storing metal strips were vibrating during the die-making process, so that the sharp pieces could potentially become loose and injure someone, and a wall was constructed to prevent this.

However, possibly a bigger incentive to report safety problems is that employees who come up with a good idea are paid $50, says Jacobs. The company has 27 employees on site and will probably give out about seven awards this year, he adds.

"The better we are in health and safety, the more efficient we are and the more money we make," he says. "We spend a great deal of money making sure everything here is healthy and safe. If our people see anything unsafe, we want them to tell us immediately." ■

Don't overlook unique health needs of veterans

Ask about hazardous exposure concerns

Veterans returning from Iraq and Afghanistan have a wide range of occupational health concerns including a 55% prevalence of mental health issues, most commonly post-traumatic stress disorder, according to a new study.[1]

When researchers analyzed the health concerns of 56 veterans, many issues were identified, with an average of four physical health concerns per veteran. Musculoskeletal problems were the most common. These were followed by ear, nose, and throat problems and gastrointestinal issues. Concerns about the long-term effects of potentially hazardous exposures during deployment also were common.

When assessing the health of employees who are returning veterans, proactively ask about these concerns, says **Drew A. Helmer**, MD, MS, the study's author and physician/researcher at the VA — New Jersey Health Care System. "Occupational health clinicians are experienced with regard to environmental and occupational exposure assessments, but will likely need to partner with primary care providers to ensure veterans have access to knowledgeable evaluations," says Helmer.

Veterans may have concerns that are not addressed because they are not sure who to ask or may not be able to find and access an occupational health clinician, says Helmer. "Veterans discharged from military service who rely on private practitioners may not be aware of the occupational health clinician or how to be evaluated by one," he says. "I suspect that some primary care providers may not know much about these deployment-related exposure concerns and may, therefore, be inclined to minimize or ignore them."

Since occupational and environmental exposure concerns are common in veterans, anything occupational health clinicians can do to increase awareness and evidence-based assessment and treatment would be beneficial, says Helmer. At each VA Medical Center, at least one environmental health clinician is designated to serve as a resource for patients and providers regarding deployment-related exposure concerns, says Helmer. (**A variety of brochures and fact sheets about environmental agents are available at no charge at the Department of Veterans Affairs web site www1.va.gov/environagents.)**

Occupational health clinicians interested in seeing returning veterans should consider reaching out to primary care providers and veterans groups, suggests Helmer. "At the very least, you may gain broader 'name recognition' for the occupational health specialty and build goodwill in your community," he says.

Reference

1. Helmer, DA, Rossignol M, Blatt M. Health and exposure concerns of veterans deployed to Iraq and Afghanistan. *J Occ Environ Med* 2007; 49:475-480. ■

SOURCE

For more information about occupational health needs of veterans, contact:

• **Drew A. Helmer**, MD, MS, Physician/Researcher, VA — New Jersey Health Care System. Phone: (973) 676-1000 Ext. 2714. E-mail: Drew.Helmer@va.gov.

OSHA can enforce annual fit-testing

As of Sept. 30, 2007, the Occupational Safety and Health Administration (OSHA) is enforcing the provision that requires health care facilities to adopt annual respirator fit-testing for employees who treat TB patients.

For programs that have not been doing annual fit-testing, the level of labor intensity required to meet the provision will depend on such factors as the number of airborne isolation rooms at the facility and how many employees are going to be designated to enter them when they house TB patients.

"Facilities should stratify who they fit-test according to how they have structured assignments for their nursing staff," says **Shannon Oriola**, RN, CIC, COHN, a member of the Association for Professionals in Infection Control and Epidemiology (APIC) board and infection control director at Sharp Metropolitan Medical Campus in San Diego.

"If you have a small hospital and one airborne isolation room, but the nurses float around, you might have to fit-test more people. If you dedicate personnel to a certain unit that has airborne infection isolation containment," you may have to fit-test less, Oriola says. "Then there is the cost of supporting a program if [you do it in-house] or whether you hire someone specifically to do the fit-testing," Oriola says. "It depends on the size of the facility, really."

Of course workers should be fit-tested on hire and thereafter if they have significant weight loss, surgery, or other changes to facial features.

TB is at record lows in the United States, which should generally translate to reduced occupational risk for health care workers. "Since most hospitals have adopted CDC TB guidelines, we don't see the occupational risk like we did in the 1980s and early 1990s," Oriola says.

Making the case for fit-testing

Proponents of annual fit-testing argue that vigorous respiratory protection programs are critical in the aftermath of severe acute respiratory syndrome (SARS), the ongoing threat of airborne bioterrorism, the emergence of XDR-TB, and the future threat of pandemic flu.

"It's just common sense," says **Mark Nicas**, PhD, professor of environmental health sciences at University of California at Berkeley. "If you are going to worry about these [airborne] infectious disease outbreaks and you want to contain them, you better have a health care work force that is prepared to deal with this. Quite honestly, just issuing N95 respirators — which don't fit all that well to begin with — and then arguing that annual fit-testing [is not necessary] is really a bad approach to being prepared."

Nicas joined other occupational health scientists in submitting letters and arguments requesting that the annual fit-test provision be restored. In his letter, Nicas warned that "the current situation is that the frontline personnel trying to contain an outbreak would be health care workers equipped with poorly-fitting N95 filtering face piece respirators [due to the lack of adequate fit-testing]. We can anticipate that numerous health care workers would be infected, and perhaps serve as unknown vectors of infection before becoming too clinically ill to continue working. We can also anticipate that their co-workers might show up for work due to the realization that they were not being adequately protected."

In addition, Nicas and other proponents of annual fit-testing reject the position that the prime risk is the undiagnosed case. "I am not saying that it is not important to correctly diagnose people, but I don't buy that argument without proof," he says. "I know that when federal OSHA originally promulgated their [TB] standard, they submitted data on what happened when you fit-test people over time. I'm not claiming that there is going to be a lot of good data there, but they showed in the little data that was submitted that there was a decrease in successful fit-tests as time went by." **(See information on how to conduct a successful fit test, p. 128.)**

Training key to avoid another SARS

The Centers for Disease Control and Prevention (CDC) emphasizes the importance of training workers participating in respiratory protection programs. **Paul A. Jensen**, PhD, engineering director in the CDC Division of TB Elimination, says, "Some people jump to the fit-testing issue, but if we train people properly, then fit-testing can be used as a part of the training program."

Such training should include the types of respirators used in the hospital and, for example, whether a basic N95 mask is appropriate for TB patient care or if a powered air-purifying respira-

tor should be worn when doing a procedure on a TB patient that may generate aerosols, he explains. Though health care workers certainly were exposed to undiagnosed cases of SARS during the 2003 outbreak in Toronto, a contributing factor to the occupational infections may have been their lack of training and familiarity with respirators.

"That's one of the theories in Toronto," Jensen says. "They had the equivalent of N95s but they

Fit-testing 101: Basics from NIOSH, OSHA

Conduct a risk assessment and determine who must wear a respirator and be included in the program. A fit-test must be conducted to determine which brand, model, and size of respirator fits the user adequately and to ensure that the user knows when the respirator fits properly. Such knowledge is important because TB aerosol can leak around the face piece into the respirator and be inhaled if the respirator does not fit the user's face.

Determining face piece fit involves qualitative fit-testing (QLFT) or quantitative fit-testing (QNFT). A QLFT test relies on the wearer's subjective response to taste, odor, or irritation. A QNFT uses another means of detecting face piece leakage and does not require the wearer's subjective response. Respirator models and brands have inherently different fitting characteristics. Therefore, more than one brand or model and various sizes of a given type of respirator should be purchased to take advantage of the different fitting characteristics of each and to increase the chances of properly fitting all workers.

Procedures for fit-testing:

OSHA requires employers to conduct fit-testing using the following procedures:

1. Employees choose the most acceptable respirator from a selection of various sizes and models.
2. Prior to selection, employees are shown how to put on a respirator and determine an acceptable fit. This is a review, not formal training.
3. Employees are informed that they are being asked to select the respirator that provides the most acceptable fit for protection.
4. Employees must hold each face piece up to the face and eliminate those that do not provide an acceptable fit.
5. The most acceptable mask is worn at least five minutes to assess acceptability.
6. Assessment of acceptability includes reviewing the following points with each employee:
   - position of the mask on the nose;
   - room for eye protection;
   - room to talk;
   - position of mask on face and cheeks.
7. Adequacy of fit includes the following criteria:
   - chin properly placed;
   - adequate strap tension;
   - fit across nose bridge;
   - proper size for distance between nose and chin;
   - tendency of respirator to slip;
   - self-observation in mirror to evaluate fit and position.
8. Employees conduct negative- and positive-pressure fit checks, after being told to seat the mask on the face by moving the head from side to side and up and down slowly while taking slow, deep breaths.
9. The test shall not be conducted if there is stubble beard growth, beard, mustache, or sideburns that cross the respirator sealing surface.
10. Employees who have difficulty breathing during tests shall be referred to health care professionals for assessment of their ability to wear a respirator.
11. Employees who find the respirator fit unacceptable are allowed to select a different respirator and be retested.
12. Before the fit-test, employees are given a description of the test procedure and their responsibilities during it.
13. Employees shall perform exercises during the test while wearing applicable safety equipment that may be worn during respirator use that could interfere with fit, in the following order:
    - breathing normally in a standing position;
    - breathing slowly and deeply in a standing position;
    - slowly turning the head from side to side, inhaling at each extreme position;
    - slowly moving the head up and down, inhaling at the up position;
    - talking slowly and loudly enough to be heard by the test conductor;
    - grimacing by smiling or frowning;
    - bending over at the waist;
    - breathing normally again.

Each test exercise should be performed for one minute, except for the grimace, which is performed for 15 seconds. The employee should be asked about the acceptability of the respirator upon completion of the protocol. If unacceptable, the process should be repeated with another respirator before proceeding to the specific qualitative or quantitative test protocols.

Sources: National Institute for Occupational Safety and Health (NIOSH) and Occupational Safety and Health Administration (OSHA).

didn't really have the training and they did not ensure that people were initially assigned the proper respirator."

Such cautionary tales were sufficiently motivating for some occupational health professionals to adopt annual fit-testing even when the OSHA enforcement exemption was in place. "We went ahead and did it, so now this will have no impact on us," says **Susan Johnson**, assistant director and medical center safety officer at Vanderbilt University Medical Center in Nashville, TN. "From our perspective it's not just TB, it's any kind of airborne-type disease."

Indeed, Tennessee OSHA state plan officials advised them that the annual fit-testing exclusion would not apply if respirators were being used to protect health care workers against airborne pathogens other than TB, Johnson says. "So we just said, 'We are just going to come to the table and do what we need to do.'"

Going to an annual fit-testing program will be labor-intensive for those hospitals that have not been doing so, says Johnson, emphasizing that limiting the number of employees designated for testing is a common approach to controlling costs.

"We have over 800 beds, and unfortunately we don't cohort TB patients," Johnson says. "Some hospitals get to cohort and so therefore they can limit the staff that are fit-tested. We have not done that, so we fit-test about 4,000 people a year. We had to hire a tech just to do that. It will have an impact. It's one more thing that you have to do."

Johnson's program uses the qualitative test, which indicates fit-test failure if the worker can taste exposure to a sweet or bitter agent. "We've been doing this for three years. It is a big program, but we just kind of chipped away it," she reports. "When we first implemented it, we had a committee that included safety, infection control nurses, and occupational health. I won't say it has been a seamless process, but we have tried to make it that way."

The program ensures that hospital staff are familiar with their respirators, and are well trained in donning and removing them should another airborne infection such as SARS emerge. "We have seen that the training is worth it; to get everyone on staff on an annual basis is worth it," Johnson says. ■

Occ health scientists lobby on fit-testing

In what may have had a critical influence on a recent decision to restore enforcement of annual fit-testing in health care settings, more than 50 occupational and environmental health researchers and professors signed a letter to David Obey, chairman of the Committee on Appropriations in the U.S. House of Representatives. The letter is summarized as follows:

Dear Mr. Chairman: The signers of this letter, scientists and experts in the field of occupational safety and health, are writing to express our strong opposition to the Wicker amendment that would prohibit OSHA from enforcing the annual fit-testing requirement of its respirator standard as it applies to exposure to tuberculosis (TB). This amendment would place health care workers and first responders at increased risk of developing TB. Respirators can only offer adequate protection to the wearer if they fit well on the wearer's face. To determine if a respirator fits properly and does not leak, it is essential that an initial fit-test be performed. The scientific evidence establishing the need and requirement for fit-testing is substantial. The evidence clearly shows that fit-testing is essential in order to identify respirators that fit well on the worker's face and that passing a fit-test increases the likelihood of receiving the expected level of protection that is assigned to the respirator. Research has also shown that in the absence of fit-testing, many respirators fail to provide adequate protection.

In order to maintain continuing adequate protection of the respirator, it is essential that follow-up fit-testing be conducted. The scientific evidence also supports the OSHA regulatory requirement to conduct fit-testing on an annual basis. Performing annual fit-tests will ensure that workers maintain the level of protection the respirator is designed to provide.

Our government's scientific expert agency on respiratory protection, the National Institute for Occupational Safety and Health (NIOSH), strongly supports the necessity of conducting initial and annual fit-testing for workers who must wear respirators on the job. That would include health care workers and first responders exposed to TB. We believe that Congress should rely and act on the expertise and advice by NIOSH and support annual fit-testing for workers exposed to TB and oppose the Wicker amendment.

As TB declines, what is risk to health care workers?

426 infected in 2005, but data inconclusive

For reported tuberculosis cases in the United Sates in 2005 in which the occupation was known, 3.4% were health workers. Though the data were provided by the Centers for Disease Control and Prevention (CDC) upon request, meaningful interpretation of the numbers is another matter entirely.

Unanswered questions include whether the TB cases represent true occupational infections or whether they reflect community acquisition or late onset disease among the foreign-born. According to the CDC data for 2005, the most recent year available, there were 14,097 total TB cases in the United States. Of those, 13,234 TB patients were ages 15 and older. Of those 15 and older, 12,712 had known occupations. Of those with known occupations, 426 (3.4%) were health care workers. The data reflect active infections and skin-test conversions, which signal latent infection that has a 5-10% chance to progress to disease over an immune-competent person's lifetime.

In contrast, the rate of TB in the general population is only 0.2%. "The foreign-born rate last year was just 2.2%, so [the health care worker rate] is similar to rates among the foreign-born," says **Paul A. Jensen**, PhD, engineering director in the CDC Division of TB Elimination. "Can we say that they are at higher risk? They obviously are if they have TB in their facility, but we can't say all of that TB was acquired in the facility."

While the CDC data are too limited to draw any definitive conclusions, Jenson says the numbers may reflect socioeconomic factors, foreign-born workers, and those of minority status. TB continues to exact its most severe toll among racial and ethnic minorities and foreign-born individuals in the United States, according to the CDC. In 2006, TB rates among blacks and Hispanics (10.1 and 9.2 per 100,000 people, respectively) were approximately eight times the rate among whites (1.2). Asians had the highest rate of any racial/ethnic group (25.6) — more than 21 times the rate for whites. The TB rate among foreign-born people living in the United States was nearly 10 times the rate for those born in the United States (2.3 and 21.9, respectively).

That said, some portion of the numbers likely represent true occupational infections based on analysis of data when TB resurged in hospitals in the early 1990s. "Some of the data from the 1990s show that the people with a lot of patient contact time and then the lesser-skilled people are at higher risk," Jensen says. "Some of those lesser-skilled people are minorities and foreign born. In the subset of health care workers, some of those are at higher risk and some of those [are in at-risk] socioeconomic groups. I agree that [3.4%] is higher than the [national] average but we can't say what proportion of it was occupationally acquired."

A total of 13,767 TB cases were reported in the United States in 2006, down from 14,085 cases in 2005. The 2006 national TB case rate, 4.6 cases per 100,000 people, was the lowest since reporting began in 1953. However, the decline of 3.2% in the national TB case rate from 2005 to 2006 was one of the smallest in more than a decade. "The decrease by year is getting smaller and smaller percentage-wise," Jensen says. "I won't say we've 'bottomed out,' but it's difficult to get much lower levels of TB."

Anecdotally, one would think declining prevalence would translate to less occupational risk for health care workers, but Jensen notes, "There aren't any recent studies to document that. Neither does the CDC have comparative occupational data to assess whether, for example, other job sectors with minority and foreign-born workers have comparable TB rates. TB is a reportable disease, but we don't always get the occupation with it, so that is a limiting factor," he says. The take-home point, however, is once the full cadre of CDC TB controls is in place in a hospital, skin-test conversions among health care workers drop dramatically. As an example, Jensen cites Grady Memorial Hospital in Atlanta, which was hit hard in the 1990s but now has virtually eliminated TB transmission within its doors. "They have more TB [patients] in their hospital than some states have, but they have relatively low rates among their staff," he says. ■

Initiative raises awareness of recommendations

A multi-pronged approach to improving immunization rates has earned recognition for Independence Blue Cross from the Pennsylvania Immunization Coalition (PAIC).

The Philadelphia-based health plan was honored with the PAIC Immunization Champion

Award for its collaborative work with the Pennsylvania Department of Health to reduce the rising instance of pertussis.

The health plan has promoted immunizations for many years, updates the recommendations each year, and provides coverage for recommended immunizations across all managed lines of business, says Esther J. Nash, MD, senior medical director of population health and wellness at Independence Blue Cross. "In recent years, there have been changes in the recommendations as well as new recommended vaccines that mean more visits to health care providers. The key issue is to assist the patients and doctors in keeping up with the increasing number and changing recommendations for vaccinations," she says.

Most recently, the health plan has partnered with the Philadelphia Department of Health to create awareness of the expanded recommendations for administering the Tdap vaccine (tetanus, diphtheria, and acellular pertussis). The health plan's educational efforts focused on pregnant women, adolescents and their parents, and health care providers. The health plan informed all three groups about new recommendations for the Tdap immunization. The health plan sent updates to providers through its *Clinical Update* magazine and alerted them to the national Advisory Committee on Immunization Practices (ACIP) recommendations for expanding the use of the Tdap vaccine. ■

CE Instructions

Nurses and other professionals participate in this continuing education program by reading the issue, using the provided references for further research, and studying the questions at the end of the issue. Participants should select what they believe to be the correct answers, then refer to the list of correct answers to test their knowledge. To clarify confusion surrounding any questions answered incorrectly, please consult the source material. After completing this semester's activity with the December issue, you must complete the evaluation form provided in that issue and return it in the reply envelope provided in order to receive a letter of credit. When your evaluation is received, a letter of credit will be mailed to you.

COMING IN FUTURE MONTHS

- Proven benefits of paying workers to lose weight
- Avoid lawsuits related to the Family and Medical Leave Act
- Low-cost interventions for depressed workers
- Boost productivity by linking behavioral and medical care

United States Postal Service

Statement of Ownership, Management, and Circulation

1. Publication Title	2. Publication No.	3. Filing Date
Occupational Health Management	1 0 8 2 - 5 3 3 9	10/1/07
4. Issue Frequency	5. Number of Issues Published Annually	6. Annual Subscription Price
Monthly	12	$489.00
7. Complete Mailing Address of Known Office of Publication *(Not Printer) (Street, city, county, state, and ZIP+4)*		Contact Person: Robin Salet Telephone: 404/262-5489
3525 Piedmont Road, Bldg. 6, Ste. 400, Atlanta, Fulton County, GA 30305		

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

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

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

Editor *(Name and Complete Mailing Address)*
Joy Dickinson, same as above

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

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

Full Name	Complete Mailing Address
AHC Media LLC	3525 Piedmont Road, Bldg. 6, Ste 400 Atlanta, GA 30305

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

Full Name	Complete Mailing Address
Thompson Publishing Group Inc.	1725 K Street NW, Suite 700 Washington, D.C. 20006

12. Tax Status *(For completion by nonprofit organizations authorized to mail at nonprofit rates.) (Check one)*
The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:
☐ Has Not Changed During Preceding 12 Months
☐ Has Changed During Preceding 12 Months *(Publisher must submit explanation of change with this statement)*

13. Publication Name: Occupational Health Management

14. Issue Date for Circulation Data Below: September 2007

15. Extent and Nature of Circulation			Average No. of Copies Each Issue During Preceding 12 Months	Actual No. Copies of Single Issue Published Nearest to Filing Date
a. Total No. Copies *(Net Press Run)*			400	300
b. Paid and/or Requested Circulation	(1)	Paid/Requested Outside-County Mail Subscriptions Stated on Form 3541. *(Include advertiser's proof and exchange copies)*	143	162
	(2)	Paid In-County Subscriptions *(Include advertiser's proof and exchange copies)*	1	1
	(3)	Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution	1	3
	(4)	Other Classes Mailed Through the USPS	12	6
c. Total Paid and/or Requested Circulation *(Sum of 15b(1) and 15b(2)*			157	172
d. Free Distribution by Mail *(Samples, Complimentary and Other Free)*	(1)	Outside-County as Stated on Form 3541	15	17
	(2)	In-County as Stated on Form 3541	2	2
	(3)	Other Classes Mailed Through the USPS	0	0
e. Free Distribution Outside the Mail *(Carriers or Other Means)*			20	20
f. Total Free Distribution *(Sum of 15d and 15e)*			37	39
g. Total Distribution *(Sum of 15c and 15f)*			194	211
h. Copies Not Distributed			206	89
i. Total *(Sum of 15g, and h.*			400	300
Percent Paid and/or Requested Circulation *(15c divided by 15g times 100)*			81%	82%

16. Publication of Statement of Ownership
Publication required. Will be printed in the November 2007 issue of this publication. ☐ Publication not required.

17. Signature and Title of Editor, Publisher, Business Manager, or Owner: Brenda Mooney, Publisher — Date: 9/27/07

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including multiple damages and civil penalties).

Instructions to Publishers

1. Complete and file one copy of this form with your postmaster annually on or before October 1. Keep a copy of the completed form for your records.
2. In cases where the stockholder or security holder is a trustee, include in items 10 and 11 the name of the person or corporation for whom the trustee is acting. Also include the names and addresses of individuals who are stockholders who own or hold 1 percent or more of the total amount of bonds, mortgages, or other securities of the publishing corporation. In item 11, if none, check the box. Use blank sheets if more space is required.
3. Be sure to furnish all circulation information called for in item 15. Free circulation must be shown in items 15d, e, and f.
4. Item 15h., Copies not Distributed, must include (1) newsstand copies originally stated on Form 3541, and returned to the publisher, (2) estimated returns from news agents, and (3), copies for office use, leftovers, spoiled, and all other copies not distributed.
5. If the publication had Periodicals authorization as a general or requester publication, this Statement of Ownership, Management, and Circulation must be published; it must be printed in any issue in October or if the publication is not published during October, the first issue printed after October.
5. In item 16, indicate date of the issue in which this Statement of Ownership will be published.
6. Item 17 must be signed.

Failure to file or publish a statement of ownership may lead to suspension of second-class authorization.

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

CE Objectives

The CE objectives for *Occupational Health Management* are to help nurses and other occupational health professionals to:

- Develop employee wellness and prevention programs to improve employee health and productivity.
- Identify employee health trends and issues.
- Comply with OSHA and other federal regulations regarding employee health and safety.

CE *questions*

17. Which is the only proven approach for prevention of work-related back pain, according to **Christopher Maher**, associate professor of physiotherapy at the University of Sydney in Australia?
    A. Training programs.
    B. Teaching safer lifting methods.
    C. Stretches.
    D. Work-site exercise programs.

18. Which is recommended to improve safety using employee input?
    A. Don't approach employees directly.
    B. Ask employees about concerns during safety surveys.
    C. Address only major safety concerns reported by employees.
    D. Avoid paying employees for ideas.

19. Which is true regarding health assessment of returning veterans, according to **Drew A. Helmer**, MD, MS, physician/researcher at the VA — New Jersey Health Care System?
    A. Post traumatic stress disorder and musculoskeletal problems were uncommon.
    B. Many veterans were concerned about potentially hazardous exposures during deployment.
    C. Almost all of the veterans' health concerns already were adequately addressed.
    D. Most veterans did not report any health concerns.

20. Which of the following threats were cited in arguments that annual fit-testing and vigorous respiratory protection programs are critical?
    A. Extensively drug-resistant tuberculosis
    B. Airborne bioterrorism
    C. Pandemic flu
    D. All of the above

Answers: 17. D; 18. B; 19. B; 20. D.

Occupational Health Management™

A monthly advisory for occupational health programs

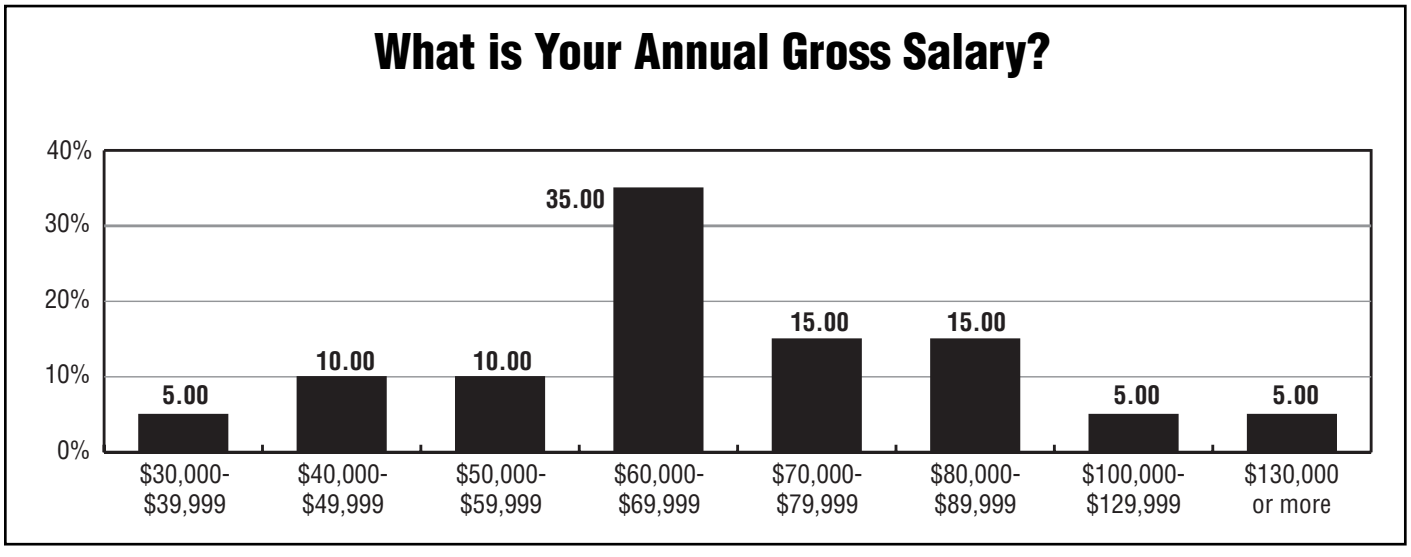
Occupational health nurses must prove their worth by measuring and demonstrating outcomes

Long hours are common in occupational health; more than half of respondents (55%) to the 2007 *Occupational Health Management* Salary Survey work more than 45 hours a week, with only 20% putting in 40 hours or less. **(See chart on p. 4.)**

The survey, which was administered in August and tallied, analyzed, and reported by AHC Media, publisher of *Occupational Health Management*, identifies some of the factors impacting salaries and benefits in occupational health. For the 2007 report, 170 surveys were disseminated. There were 20 responses, for a response rate of 12%.

But putting in long hours isn't enough if occupational health nurses (OHNs) really want to get ahead, according to **Susan A. Randolph**, MSN, RN, COHN-S, FAAOHN, clinical instructor in the Occupational Health Nursing Program at the University of North Carolina at Chapel Hill. "You will need to show outcomes from your work goals and objectives," says Randolph. "This could be done annually or quarterly — whatever is the norm for your industry."

There has been "meaningful upward pressure" on occupational health salaries in the last couple of years, says **William Patterson**, MD, MPH, assistant vice president of medical operations for Concentra



Health Services' Northeast Zone. "Physician's assistants and nurse practitioners have seen the greatest increase in the community-based setting, but physicians are earning more as well," he says.

According to the survey, 35% of respondents fell into the $60,000 to $69,000 range, with 25% earning less than that amount. Another 30% earn between $70,000 and $89,000, and just 10% make more than $100,000. More than half of respondents (55%) reported a 1-3% increase in salary in the last year, and 25% received a 4-6% increase. **(See charts on annual salaries and salary increases on p. 3.)**

Some OHNs are able to use return on investment to show their value, and this action can result in increased clout, says **Monika Fischer**, MN, RN, APRN BC, CCM, COHN-S, FAAOHN, health services administrator for the city of Glendale, CA, and president of the California State Association of Occupational Health Nurses. Also, many companies are paying more for OHNs with certifications such as COHN or COHN-S, she adds.

Other key findings of the survey:

• Although the field is still predominantly female (80% of respondents), more males are emerging (20% of respondents).

• Half of respondents said they had no changes in the size of their staff in the past year, while 35% had gained positions.

Show your impact

There is a trend toward tying salary increases to the productivity of the occupational health division, says Randolph. When designing new programs or services, or evaluating existing services, you need to build in some type of way to measure the outcome or impact, she advises.

For example, to determine if a health promotion program was successful, you'll need to identify measures. These may include the number of employees who attended, the number of referrals, whether there was a change in behavior, whether there was sustained risk reduction or cost containment, or how much was saved in workers' compensation settlements, says Randolph. She points to the American Association of Occupational Health Nurses (AAOHN) Standard of Practice, which states that the responses to interventions and progress toward achievement of desired outcomes be systematically and continuously evaluated, through immediate and long-term outcomes, quality of the intervention, and cost-benefit analysis.

Here are other ways to increase clout and demonstrate worth, advises Randolph:

• Volunteer for special projects to demonstrate willingness to go "over and beyond." For example, do a cost-benefit analysis of offering different services in-house vs using community resources, or give the health and safety perspective on pandemic flu planning, suggests Randolph.

• Attend key meetings, and don't wait to be asked to attend. "The occupational health nurse should give the health perspective at management meetings and relate that to business goals," says Randolph. At the meetings, underscore the fact that you need healthy and productive employees to be able to produce quality product, she adds.

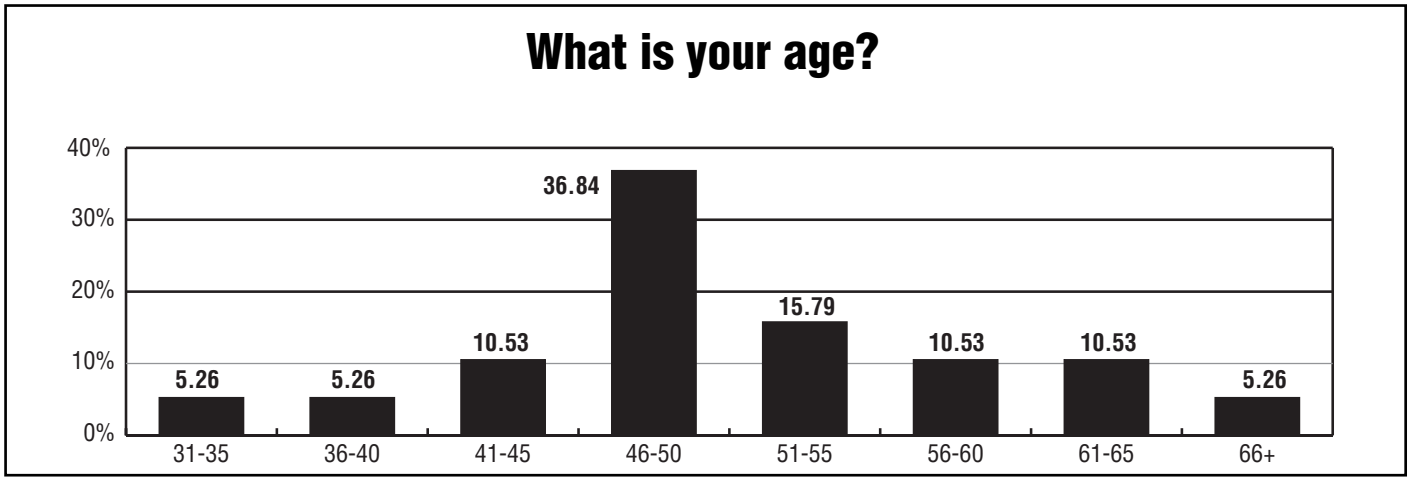
• Integrate health protection with health promotion activities.

• Anticipate areas of focus, such as healthy aging workers, globalism, benchmarking, or cost-effectiveness of programs.

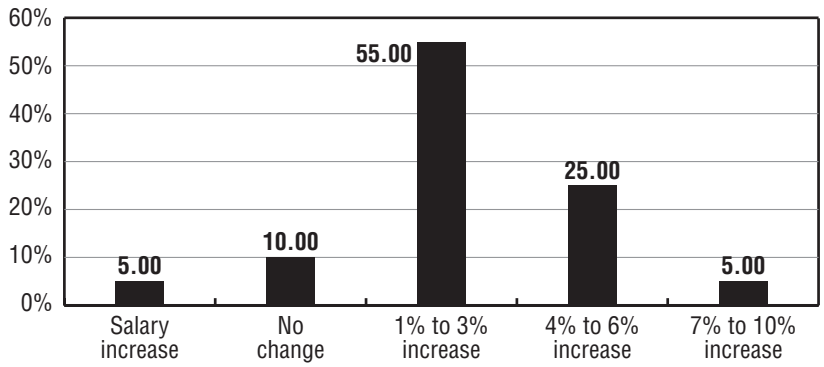
• Examine areas to reduce health care costs and relate these to occupational health services.

New roles emerging

One significant new role is case management, for



In the last year, how has your salary changed?



small and large companies, says **Richard Kowalski**, RN, MSA, COHN-S, current AAOHN president and an occupational health professional at Northern Michigan Occupational Health Consultants.

"A lot of businesses and hospitals want case managers, because they have a lot of workers comp injuries. They want to get those people back to work because it's a lot of lost dollars," says Kowalski.

Going into case management is a "great transition" for OHNs, adds Kowalski. "You are dealing with workplace injuries, which is what occupational health nurses have always done," he says. "It's a natural move."

Another emerging role is nurse practitioners, which are being hired by companies because it's more cost-effective than to hire a physician, says Kowalski. "Nurse practitioners are very competitive with physician's assistants in regard to salary and job roles," he adds.

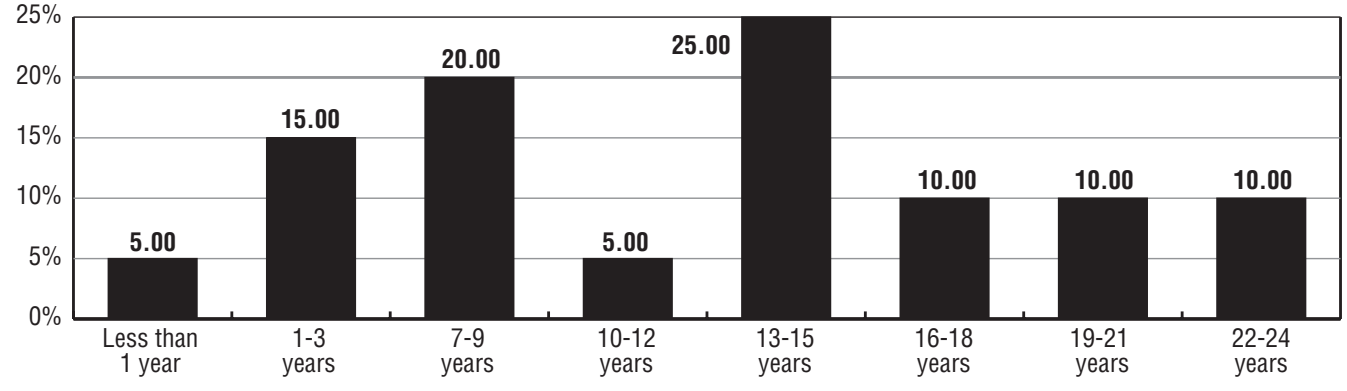
Employee wellness programs continue to be a significant area of opportunity in occupational health, says Kowalski. "There is documented return on investment on wellness, so that is another thing they are doing to demonstrate their value and worth," he says.

More larger companies are switching to outsourcing and shutting down their internal occupational health departments, Kowalski says. They are choosing instead to buy services from another company or a local hospital, he says. This switch cuts down on the OHN's salary and benefits as they are working for a hospital instead of a major corporation, he says.

"Unfortunately, companies are making business decisions based on what they think is a reduction in cost," he says. "But you get what you pay for. I don't believe that the nurses have as much buy-in for that company, because they are not employees. They might not do all the other extra things that a full-time employee working for that company would."

Many OHNs are moving away from direct care of employees to case management and safety roles or they have a variety of extra human resources duties included with their job such as the

How long have you worked in occupational health?



Americans with Disabilities Act interactive process and the Family and Medical Leave Act, says Fischer. "Increasingly, we are seeing integration of health protection with health promotion programs," says Randolph. "We are also seeing a focus on healthy work being accepted as mainstream, and a focus on stress and mental health of workers."

Gain business skills

Occupational medical units will need to be run like businesses within a company or management won't respect their value, says Fischer. "There will also be an increased need for computerization and knowledge as to what is available on the Internet concerning medicine," she says.

You will need to be able to apply research findings to practice and develop understanding of how conclusions from research can inform responsible decision making, says Randolph. You also will need to show that you can integrate and communicate with the business and financial teams with the shared goal of producing quality product with healthy and productive employees, says Randolph.

Occupational health professionals must acquire more business skills, emphasizes **Annette B. Haag**, RN, BA, COHN, a Simi Valley, CA-based consultant specializing in education for occupational health nurses. "They need to understand the importance of gaining the necessary business skills to talk management's language," she says.

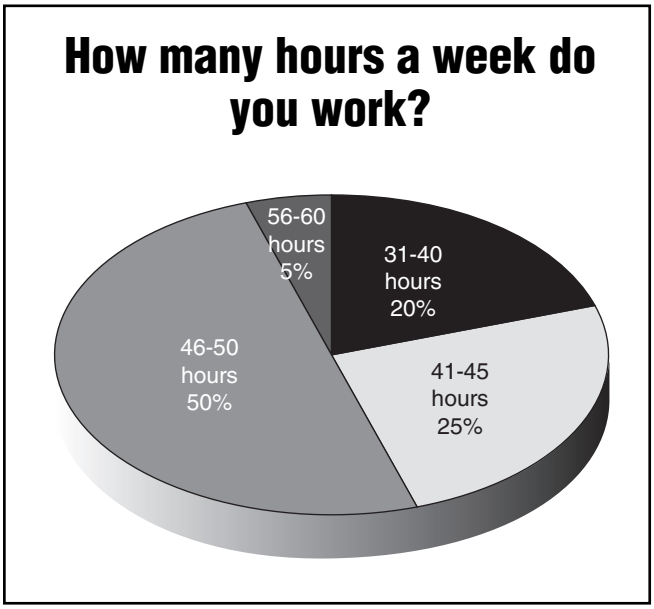
These skills include writing strategic and business plans; conducting a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to determine a strategy; understanding and gaining control of budgets; benchmarking; and understanding the concepts of balanced scorecards, says Haag. "My concern is that as occupational health nurses retire, they are not being replaced because of the lack of these skills," she says.

According to the survey, only 5% of respondents were age 35 or under, and 64% are older than age 45. **(See chart on. p. 2.)**

• Unfortunately, the OHN population is a graying one so many of the nurses are retiring, and there aren't always others to step in," says Fischer. "Hopefully down the road this will cause a greater demand for OHNs and increase salaries."

The survey indicated that more than half (55%) of respondents have worked in occupational health more than 13 years, with 20% having 19 or more years in the field. **(See chart on p. 3.)**

In addition to longevity, however, you must understand business strategies, says Haag. "I hope



it will someday take hold and naturally be a part of what the occupational health nurse finds important to include as part of her everyday practice," Haag says. "I am amazed when I ask my attendees to tell me the dollar amount their company pays in workers' compensation premiums and in group health care coverage. Very few can answer this question."

You also should know the top cost drivers at your company for workers' compensation costs and group health insurance, advises Haag. For workers' compensation, nurses usually say that ergonomic issues are the top cost, but many do not know where the money is going in regard to non-occupational illness and injuries, she says.

"Often, high-risk pregnancy is a top cost driver. Many do not know this, and about 99% of the nurses do not have a program to address high-risk pregnancies," says Haag. "Other programs needing development are sleeping disorders that I am sure lead to injuries, and presenteeism, or what we call the 'working wounded.' They are at work but are not functioning well," she says. "I instruct nurses that they cannot manage what they do not measure."

Calculate where your time is spent, and don't spend time on programs and activities that do not bring value to the company, says Haag. "Often occupational health is considered a 'cost item' to the company," she says. "What is often forgotten is to calculate the 'cost avoidance' by occupational health being there."

Find ways to "toot your own horn," urges Haag. "You are out of sight, out of mind if you do not get involved in the health and medical issues of the company," she says. ■