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# 'Green' revolution in hospitals boosts employee health programs

*Efforts to reduce hazardous chemicals*

The "greening" of American hospitals may be a golden opportunity for employee health.

Six major health systems have joined together to promote "green" purchasing and sustainability that promises to substantially reduce health care worker exposure to hazardous chemicals.

This Healthier Hospitals Initiative offers a new role for employee health professionals as they help reshape the environment for employees, patients, and the community, says **Anna Gilmore Hall**, RN, CAE, co-executive director of Health Care Without Harm, an international coalition based in Arlington, VA.

"We can improve patient outcomes, occupational health and safety, community health and environmental health," says Hall. "We're encouraging other hospitals and health care systems to adopt this agenda [of sustainability]. If we all work together and leverage the purchasing power and the status health care has in our community, we can reduce our own footprint in a way we think will save money in the long run for the health care sector."

The Healthier Hospitals Initiative will share best practices that redesign processes to reduce waste, substitute safer materials, and conserve energy. The goals include altering food choices by reducing meat purchases, buying local and organic products, and eliminating soft drinks. *(See related story, p. 87.)*

"What we really want to do is improve the environmental performance of the health care sector. That's our aim," says **Kathy Gerwig**, vice president for workplace safety and environmental stewardship officer at Kaiser Permanente in Oakland, CA.

The other participating health systems are also among the largest in the country: Advocate Health Care, an Oak Brook, IL-based system of nine hospitals, two children's hospitals, and 200 sites of care; Catholic Health-

care West, based in San Francisco with hospitals in California, Arizona, and Nevada; Hospital Corporation of America (HCA, Inc.) of Nashville, TN, the nation's largest hospital system with 163 hospitals and 105 freestanding surgery centers in 20 states; MedStar Health, a network of nine hospitals and 20 other sites in the Maryland and Washington, DC region, and Partners Healthcare, a Boston-based health system founded by Brigham and Women's Hospital and Massachusetts General Hospital.

The initiative has a broad aim to reduce environmental hazards, but it also directly impacts health care workers. The potential occupational hazard of chemical exposures was underscored in a recent report that identified 401 cases of injuries linked to anti-microbial pesticides, or disinfecting chemicals, in a five-year period. There was one fatality due to acute asthma. *(See related article on p. 88.)*

## Environmentally preferred purchasing

At Kaiser Permanente, environmental and sustainability concerns are an integral part of the purchasing process. Kaiser adopted an "Environmental Performance" scorecard as a part of product evaluation.

When soliciting bids, Kaiser asks suppliers about the content of products, such as if they contain mercury or polyvinyl chloride or one of hundreds of chemicals identified by California as causing cancer or reproductive harm, and the proportion of recycled materials. Multi-use items are favored over single-use, and latex-free are preferred over those with latex. *(See box on p.87.)*

"The environmental considerations are never going to trump something like patient safety considerations," Gerwig says. "We're never going to go for a product where we're compromising on safety to meet environmental goals."

But Kaiser has been emphatic about the desire to reduce exposure to toxic substances. Gerwig testified before the U.S. Senate subcommittee that is reviewing the Toxic Substances Control Act.

"In the U.S. today, it is perfectly legal and commonplace for manufacturers to use known hazardous ingredients in the products we all buy," she says. "We think the chemical ingredients in products ought to be tested for their safety in human health prior to being put into products."

Glove purchases provide one example of Kaiser's approach. When the health system decided to eliminate latex exam gloves due to concerns about latex allergy, vinyl gloves were not considered a preferred alternative. Kaiser uses tens of millions of gloves per year, and dioxin is released when those gloves are produced and when they are incinerated in their disposal, says Gerwig. Instead, Kaiser selected nitrile gloves.

"Kaiser Permanent was the first large health care system to move to nitrile gloves. It really changed the marketplace," she says.

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More recently, Kaiser selected a rigid endoscope that can be steam sterilized and doesn't require chemical disinfecting. "We're removing hazards from the workplace, and we're getting the same efficacy. Why wouldn't you choose that?" says Gerwig, who notes that clinicians were involved in the selection.

Kaiser also substituted vinyl flooring with rubber, which meant it didn't require harsh cleaners and strippers, she says. As a side benefit, nurses reported that they had fewer foot problems as the rubber was more comfortable.

Now the health system is reviewing its flooring options again. "New materials have come on the market that we think might be even better than rubber and have more advantages for workers, patients and the environment," she says.

Cost has not been a barrier to this environmentally-conscious approach, says Gerwig. "We've not found that picking the sustainable products costs us more. In most cases, it ends up being cost-neutral or it saves us a little money," she says.

## EH can build awareness

The Healthier Hospitals Initiative plans to share and promote best practices, such as those of Kaiser. "We're trying to establish a system where we can share this information in a non-competitive way," says Hall. Hospitals around the country can sign a pledge of endorsement as part of the initiative.

Employee health professionals can play an important role in their hospitals, Hall says. For example, they can promote product selection that reduces hazardous exposures, such as the purchase of greener cleaning products. Resources and a list of safer alternatives are available from the Lowell, MA-based Sustainable Hospitals Project, at http://www.sustainablehospitals.org/cgi-bin/DB_Index.cgi.

A movement toward "greener" policies also requires increased awareness. For example, employees need to understand which waste needs biohazardous disposal and which does not, says Gerwig. Reducing the waste that goes into biohazard containers unnecessarily will reduce the amount of incineration, she says.

"[Employee health professionals] are positioned really well to be champions in educating workers and clinicians about the impact of chemicals in their workplace," Gerwig says. "They can expand that view to include the health of the environment overall."

## Healthier hospitals initiative agenda

**Improve Environmental Health and Patient Safety**

1. Design and operate healthier and safer facilities for patients and employees
2. Purchase safer and more sustainable products and materials
3. Support the use of safer chemicals and green chemistry
4. Promote nutritious, sustainable food choices

**Reduce Health Care's Use of Natural Resources and Generation of Waste**

1. Reduce the consumption of energy, Support the transition to renewable energy sources
2. Conserve water
3. Minimize waste and emissions; decrease /eliminate incineration
4. Address pharmaceutical waste
5. Improve transportation strategies for patients and staff

**Institutionalize Sustainability and Safety**

1. Make sustainability and safety a strategic imperative
2. Promote environmental health literacy internally and through community programs
3. Invest in sustainability research and innovation
4. Engage in public policy to promote sustainability and safety

Hospitals can start with modest goals. "I would just encourage them to look around their workplaces and target a few products and see if they can't make a few changes and leverage that success," she says.

As the goals of energy conservation, sustainability, and "greener" living take center stage nationally, hospitals can become leaders in the community by taking proactive steps, says Hall. "I would argue that if you aren't currently working on this you are way behind the ball," she says.

*[Editor's note: More information about the Healthier Hospitals Initiative is available at www.healthierhospitals.org/.]* ■

# Splashes, fumes cause injury to HCWs

*One death from asthma reported*

A laundry worker died of acute asthma after breathing bleach fumes from an open pail. Floor cleaner splashed in the eyes of housekeepers. Even bystanders suffered irritating effects of disinfecting chemicals.

An analysis of surveillance data in four states revealed 401 cases of work-related injury due to anti-microbial pesticides – cleaning or disinfecting products – from 2002 to 2007. "This is the first multi-state report looking at the magnitude from poisonings from the antimicrobial pesticides," says **Geoffrey M. Calvert**, MD, MPH, a team leader in the Surveillance Branch of the Division of Surveillance, Hazard Evaluations and Field Studies of the National Institute for Occupational Safety and Health (NIOSH) in Cincinnati.

While most cases involved mild symptoms that quickly resolved, there were some serious incidents, the surveillance from California, Michigan, Louisiana, and Texas showed, says Calvert. Housekeepers or janitors were the most likely to be injured (24%), followed by nursing or medical assistants (16%). A majority of the incidents involved splashes to the eyes.[1]

The surveillance data likely underestimates the magnitude of the exposure problem because of underreporting, says Calvert. "This could be the tip of the iceberg. We have no way of knowing what the true magnitude of these poisonings is," he says.

The fatality occurred when a 52-year-old laundry worker was exposed to fumes from undiluted bleach that was in an open pail near a running clothes dryer. The woman, a two-pack-a-day smoker, had a history of asthma and chronic bronchitis. According to the surveillance report, she complained of shortness of breath and used her albuterol inhaler before collapsing. She was not revived and died five days later in the hospital.

The case points out the hazards inherent even in common products such as bleach, says Calvert. Health care workers have a higher rate of asthma than the general population, and some of the cleaning products can exacerbate asthma, he says.

Health care workers also may not be aware of the risks of cleaning and disinfecting products, he says. For example, a nursing assistant in Michigan was pouring a germicidal cleaner into a mop bucket when some of it spilled and soaked through her pants. She changed her pants, but didn't clean her leg immediately. About 90 minutes later, she suffered from a skin irritation when the area began to itch and turn red, Calvert says.

In another case, a viricidal disinfectant splashed into the eye of a 43-year-old woman. She immediately rinsed her eyes, but the disinfectant had already done damage. She had a corneal abrasion caused by a chemical burn, says Calvert.

Substituting safer products may help reduce injuries, but Calvert notes that by their nature, anti-microbial products will be hazardous to humans, as well. "These antimicrobial pesticides are important for maintaining infection control in hospitals," he says. "There's no safe way to kill these organisms. There's no way you can do that without having an effect on humans."

To prevent exposure and injuries from antimicrobials, Calverts offers these recommendations:

**Ensure employees wear eye protection when appropriate.** About half (51%) of the injury events involved splashes, and only 15% of the 265 health care workers who had exposures while handling anti-microbial pesticides were wearing eye protection, according to the surveillance report. Employee health professionals should make sure employees understand the need for eye protection and wear the appropriate personal protective equipment, he says.

**Raise awareness of chemical hazards.** Most of the incidents involved commonly used products, including quarternary ammonium compounds, glutaraldehyde, and sodium hypochlorite (bleach). Employees need training in the safe handling of those products, says Calvert. For example, they need to know the proper dilution, the possible health effects, and the recommended personal protective equipment. Employees should be encouraged to report any incidents of exposure, he says.

**Look for safety in product packaging.** The design of the containers or dispensing of products can impact the potential for exposure. For example, employees using disinfecting wipes were unexpectedly splashed in the eye when the action of pulling the wipe out of the container created a small splash. Using a container with a pump dispenser can reduce spills or splashes when employees need to dilute chemicals with water in a bucket.

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# About face? A backlash to respirator quest

*Are the proposed criteria too stringent?*

Better-fitting respirators may not be the only outcome of proposed new criteria for N95s. Some critics predict frustration and confusion will be unintended consequences of the proposed rule.

At presstime for *HEH*, the National Institute for Occupational Safety and Health (NIOSH) was holding a second public hearing on proposed tough new criteria for "total inward leakage." It would require manufacturers to test their respirators on panels of 35 individuals and achieve a "total inward leakage" of only 1%. In other words, only 1% of a contaminant in ambient air would penetrate the respirator in a fit-test procedure.

To receive certification, at least 26 test subjects, or at least 74%, must be able to pass a fit within three tries. The respirator must fit at least one person in each "cell" or category that represents different facial features and sizes. Manufacturers also could market respirators to fit a specific niche, such as small facial dimensions. Twelve of 15 test subjects, or 80%, would need to pass in a niche designation.

Manufacturers would have three years to modify or phase out current respirators that don't meet the criteria.

The bottom line: With the new criteria, respirators would be more likely to fit right out of the box. While fit-testing would still be required, workers would have more protection if their employers didn't fit-test or if they were in an emergency situation that required them to use a respirator different from the one they had been fit-tested to wear.

"The requirements are to provide a minimum level of performance for these products," says **Jonathan Szalajda**, MSEP, MSIE, branch chief for Policy and Standards Development at NIOSH's National Personal Protective Technology Laboratory in Pittsburgh. "The goal is to have better respirators. The way to do that is through improved standards."

The proposed rule will benefit workers and employers by making it quicker and easier to conduct successful fit-tests, says AFL-CIO industrial hygienist **Bill Kajola**. "It would eliminate the low end of respirators that don't tend to fit workers very well," he says.

## An end to fit-testing?

In the quest for better-fitting respirators, is NIOSH implying that fit-testing may not be necessary? NIOSH officials emphatically deny that. After all, the U.S. Occupational Safety and Health Administration (OSHA) requires employers to have a respiratory protection program and to fit-test employees who may be exposed to respiratory hazards.

Yet in an emergency situation, if a health care worker needed to use a respirator for which they were not fit-tested, they would still benefit from products that have better fit characteristics, NIOSH stated. They also would have a greater chance of passing a fit-test.

The problem of poorly fitting respirators came to the forefront during the H1N1 pandemic, when supply shortages forced hospitals to switch to different respirators. Earlier this year, California recalled millions of respirators that had been distributed from the state's stockpile when they failed most quantitative fit-tests. *(See* HEH, *March 2009, p.25.)*

The proposed NIOSH rule would take some of the burden of fit off the employer and onto the manufacturer. Yet there's a danger that the new requirements will lead to misimpression that respirators will be certified to fit out of the box, says **Lisa Brosseau**, ScD, CIH, associate professor in the School of Public Health at the University of Minnesota in Minneapolis.

"They're pushing the envelope of what we can possibly do. A panel test will not be able to promise [actual fit]," says Brosseau, who analyzed the NIOSH testing related to the Total Inward Leakage rule for the International Safety Equipment Association in Arlington, VA.

Although NIOSH updated the set of facial dimensions that represent the American population and greatly improved the respirator test panels, there are still inherent weaknesses, she says. For example, the "cells" of different facial dimensions don't take into account certain facial features, such as the size or shape of a person's nose.

Few Asians were included in the panel, and with the increase in the weight and size of the average

## Fit isn't the only factor for HCWs

*Tolerability is a major concern*

The search for a better respirator continues. For health care workers, the difficulties with respiratory protection extend beyond the question of fit. They also struggle with tolerability and comfort throughout a shift.

In a study of healthcare workers who were asked to wear a respirator for the full duration of an 8-hour work shift, there was a probability as high as 59% that they would be unable to wear the respirator to the end of the shift. Their complaints included diminished speech communication, heat, pressure, and dizziness.[1]

The Veterans Health Administration in collaboration with the National Institute for Occupational Safety and Health (NIOSH), are now collaborating with manufacturers to design a respirator specifically for health care – one that health care workers would be willing to wear throughout a shift, if necessary.

Project B.R.E.A.T.H.E. (Better Respiratory Equipment using Advanced Technologies for Healthcare Employees) aims to produce a prototype respirator within a year or two, says **Lewis J. Radonovich**, MD, and director of Biosecurity Programs for the Office of Program Development at the North Florida/South Georgia Veterans Health System in Gainesville, FL.

Meanwhile, Radonovich is also coordinating a major study that will compare the use of respirators and surgical masks to prevent the spread of influenza and influenza-like illness. They study will recruit thousands of health care workers at multiple sites who will wear respirators or masks during patient care with patients diagnosed with flu or ILI for a 12-week period. The study will run for three or four years, Radonovich says.

"A variety of professional groups are interested in how well surgical masks perform against respiratory masks with infections such as the flu," he says. "The scientific and public health community would like to see results that are more definitive than what's out there."

The H1N1 pandemic that began last year prompted a new wave of debate about respiratory protection for influenza. The Centers for Disease Control and Prevention advised hospitals and health care providers to use NIOSH-certified respirators with the novel virus. The professional organizations of infection control practitioners insisted that surgical masks were adequate for influenza.

"N95 respirators are not superior to surgical masks in the prevention of transmission of influenza in most patient care settings," the Society for Healthcare Epidemiology of America (SHEA), the Infectious Diseases Society of America (IDSA), and the Association for Professionals in Infection Control and Epidemiology (APIC) said in a letter to President Obama, requesting a moratorium on U.S. Occupational Safety and Health enforcement of the CDC respiratory protection guideline.

At presstime for *HEH*, CDC was widely expected to alter its recommendation and allow the use of surgical masks to prevent transmission of H1N1 in hospitals – largely because of the widespread availability of a vaccine.

**REFERENCE**

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American, the smallest "cells" were eliminated. However, some hospitals hire a significant number of Asian health care workers, and the predominantly female population tends to be smaller in stature than men working in industrial settings, Brosseau notes.

When you examine the fit-related data, "what becomes very clear is that there is a lot of variability between people," she says. That means fit-testing will always be an important function, she says.

"It's been our position consistently that fit-testing is something that has to be done on the individual user in the workplace, not as a part of the initial testing [of the product]," says **Daniel Shipp**, president of the ISEA.

### Fewer respirators available?

The respirator you are currently using probably would not pass the proposed TIL criteria, and might have to either be redesigned or eliminated. That is the assertion of respirator manufacturers.

"[S]ome devices currently in use may not pass the new TIL limits even though they have been used effectively for years," **Joann Kline**, Regulatory Affairs Technical Leader for Kimberly-Clark Professional in Roswell, GA, said in written comments to NIOSH. "Significant design changes to these devices or complete market withdrawal would force users to find other models."

In its *Federal Register* notice, NIOSH said

benchmark testing of 101 "half-mask air-purifying particulate respirators" – filtering facepiece respirators such as N95s and elastomeric respirators – indicated that about 30% would fail the proposed criteria.

However, a much higher proportion of the filtering facepiece respirators failed to meet the TIL of 100."They've created a set of criteria that, in my own opinion, is probably going to exclude 99% of the N95 respirators that exist right now. They are not going to pass," says Brosseau.

NIOSH is proposing a three-year phase-in period. After that time, manufacturers would be required to meet the TIL criteria to receive NIOSH certification.

The proposed requirement is actually in line with the level of fit OSHA requires in quantitative fit-testing, says Szalajda. Some respirators on the market should meet the proposed standard, he says.

Using a larger test panel – 100 test subjects rather than 35, for example – would lessen the likelihood that a well-fitting respirator would fail the new TIL criteria, suggests **Mark Nicas,** PhD, MPH, CIH, adjunct professor of environmental health sciences at the University of California-Berkeley. "You would have a better measurement of the true proportion of the population that the respirator fits," he says.

Manufacturers have asked NIOSH to allow all currently approved respirators to remain on the market indefinitely. Employers who are satisfied with their current respirators would then still have access to them, says Shipp. "If a respirator doesn't fit or if an employer cannot get a fit for workers with a particular kind of respirator, they're not going to buy that respirator," he says.

### A new niche market?

The NIOSH proposal allows manufacturers to design a respirator for a particular subgroup and to market to that niche. This could mean a fundamental change in the way employers select respirators for their workers. A single model – even offered in different sizes – wouldn't be expected to fit all workers, says Szalajda.

"It's sort of like buying shoes. You don't just go out and buy a size 10 for everybody. You have to buy a variety of products with a variety of different characteristics," he says.

That raises questions about consumer information. How do you define a niche? How do you label the product? This goes beyond the typical labeling of small, medium, and large.

NIOSH says that manufacturers must provide a description of a subgroup that can be "reliably interpreted by users...Users must be provided sufficient information to allow them to self-identify. They might not effectively self-identify to match a manufacturer's intentions if provided only vague general descriptions of intended face shapes and characteristics."

NIOSH will need to develop some guidance for employers to help with respirator selection, says Szalajda.

Certification of respirators for a subgroup could benefit health care employers because a respirator could be designated specifically for women. There would still be quite a bit of variability, however, says Brosseau.

"Face size is not a predictor of fit. No one has ever found a good combination or size that tells you this respirator is going to fit this person well. That's why we recommend fit-testing," she says.

"Everybody would love to have the golden mask, to put it out there and say this will fit everybody," says Shipp. "I think it's clear that if the technology was there to do that it would have been done."

While NIOSH may alter its proposed rule in response to concerns raised by manufacturers, the agency is also under pressure to create criteria that will produce better-fitting respirators. Manufacturers will find a way to meet whatever criteria NIOSH ultimately sets, says Shipp.

"If the NIOSH requirements change, companies will do what is necessary to meet the NIOSH requirements," he says.

*[Editor's note: The Federal Register notice and comments submitted about the proposed rule are available at www.cdc.gov/niosh/docket/niosh-docket0137.html.]* ■

# HC reform boosts workplace wellness

*Provisions target health of HC workforce*

Work-based wellness programs and other occupational health initiatives are getting a boost under a little-known provision of the health

care reform legislation.

The law created a 15-member National Healthcare Workforce Commission, which will include health care workers, employers, labor unions, third-party payers, consumers, and health care economists. This panel will consider the current and future needs of the health care workforce.

"Dropped into this bill is a requirement that [the panel] submit recommendations to the Congress to improve the safety and health…in the workplace for health care workers," says **Pat O'Connor**, director of government affairs for the American College of Occupational and Environmental Medicine (ACOEM) in Washington, DC. ACOEM plans to nominate someone with a background in occupational health and safety, he says.

In a blog commentary on the website of the National Institute for Occupational Safety and Health, NIOSH director **John Howard**, MD, noted that the bill creates a $2 billion annual investment in public health for "prevention, wellness and public health activities." It seeks to expand the health care workforce as well as to support existing health care workers, he said.

"While many of the changes will not take place for several years, the Patient Protection and Affordable Care Act promises to go a long way towards improving the health of Americans and, in turn, American workers," he said.

Small employers can receive grants to implement wellness programs, and the bill directs the Centers for Disease Control and Prevention to provide tools and technical assistance to employers that are developing wellness programs. CDC also must evaluate workplace wellness programs to determine what works, says O'Connor.

The health care reform bill also called for CDC to conduct a survey of worksite health policies and programs and to make recommendations to Congress.

O'Connor notes that while Healthy People 2010 set a goal for 70% of workplaces to have wellness programs, fewer than 20% do. "What's been done to date [with wellness] has not been overly successful," he says. "We're hoping with health care reform that the tools will be there and the funding will be there to take this to the next level."

CDC – probably through NIOSH – will conduct research into the link between work-based wellness and employees' health status, he says. "One of the problems to date is that there's been no generally accepted metric for evaluating wellness programs," O'Connor says. "Do they reduce absenteeism? Do they reduce medical costs and the rate of workplace injury?"

ACOEM is especially interested in the link between wellness and workplace productivity, he says.

As the health care workforce expands, and health care reform emphasizes a need for greater efficiency, there will be new opportunities for occupational health, predicts **Bill Borwegen**, MPH, health and safety director of the Service Employees International Union. "[Policy makers] are clearly going to look at the changing workforce and the expansion of the workforce," he says of the impact of health care reform. "Ideally there will be more jobs for people who are concerned about health care worker health and safety." ■

# Fall program keeps $ from slipping away

*Slips, falls are becoming the No. 1 injury*

As more hospitals tackle the injuries from patient handling, a second major cause of musculoskeletal injury is coming to the forefront: Slips, trips, and falls.

In 2008, there were about 14,000 slips and falls in U.S. hospitals that led to days away from work, second only to cases of work loss due to overexertion, according to the U.S. Bureau of Labor Statistics.

Just as you have a comprehensive program to reduce patient handling injuries, you should design a program to address slip and fall hazards, advises **Jennifer Bell**, PhD, a research epidemiologist with the National Institute for Occupational Safety and Health (NIOSH) in Morgantown, WV.

"Hospitals tend to look at the nature of injury. We have a lot of sprains and strains," says Bell. "But they don't necessarily look at what's causing the sprains and strains. If they looked at the events, they would find a good percentage of them are actually due to slips and falls."

Bell and colleagues found that a comprehensive approach can reduce slips and falls by as much as 59%.[1] "There are so many different causes of slips and falls that any one change seems insignificant," says Bell. But the evidence shows that approaching the problem systematically can produce results, she says.

That is the approach taken by Trinity Health in Novi, MI. When workers' compensation director **Terry Fisk**, CIH, CSP, analyzed injury claims, she found that slips, trips, and falls were No. 1. "It was a little bit of a surprise," she says. "You'd think it would be lifting. It's starting to surface what a huge problem this is."

### Hospital invests in better shoes

Fisk first reviewed the literature on slips, trips, and falls in health care, including the NIOSH research and studies by the Liberty Mutual Research Institute for Safety in Hopkinton, MA. In a study of 123 health care workers who had reported a slip, trip or fall at seven hospitals, researchers found that 36% of the incidents occurred because of "liquid contaminants," such as water or cleaning solutions.

Most slips, trips, and falls (64%) happened where there was a transition in the floor, such as uneven surfaces or one type of flooring to another. More registered nurses (27%) reported slips, trips, and falls than other occupations.[2]

The researchers noted "the importance of managing surface contamination and surface transitions in hospital settings."

Fisk decided to start with one intervention that would be effective regardless of the flooring type or hazard: Slip-resistant shoes.

Trinity Health selected a shoe vendor and brought different styles to the hospitals in a mobile store. "We had about 30 pairs of shoes that were prequalified in varying price ranges," she says, noting that while they were from different manufacturers, they all met a slip-resistance standard.

The health system partially subsidized the shoes, Fisk says. "When you totally pay for the shoes, the associates don't see them as having the same value as if they put their own money on the line," she says.

The effort began with the highest-risk departments: environmental services, food services, and plant operations. It then expanded into clinical areas where floor surfaces were more likely to be wet, including central processing, surgery, and the laboratory. "The idea is to eventually go housewide with the nursing services area. I think they would really benefit from some of this footwear," says Fisk.

To do that, Trinity Health needs to involve nurses in the process and make them aware of the comfort, safety, and even style of the slip-resistant shoes, she says. Currently, the dress code requires shoes to be fully enclosed with no vents or holes and impervious to liquid. Slip-resistant shoes are not yet required in most areas. "We strongly encourage it and it's part of the dress requirement for some departments," she says.

Meanwhile, the health system is looking at other hazards. For example, the workers' compensation data shows that 22% of claims were from tripping over cords, equipment, or other obstructions. The design of workspace needs to take into account the potential trip and fall hazards, she says.

Winter weather is responsible for another 18% of slips and falls, which indicates a need to reduce the snow and ice hazards.

The slip-resistant shoes have been a good place to start, says Fisk. "We started with the shoes because this is at least one piece we can control and work on," she says.

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# Wellness a factor for 'best place to work'

*Investments in employee health saves money*

For one health system, the path to being a "Best Place to Work" began with small steps. It started with a focus on the well-being of employees as well as the outcomes of patients. And after years of work, while garnering accolades for its wellness program and other benefits, it yielded a substantial savings in medical costs and workers' compensation claims.

From 2004 to 2008, Baptist Health South Florida, a five-hospital system based in Miami, saved $1.1 million in reduced medical claims by improving the health status of 800 employees at high risk for heart disease or diabetes. It saved another $835,000 in reduced workers' compensation claims related to patient handling. That doesn't

include the indirect cost-savings from a reduction in lost workdays of 72.5%.

Turnover is also below 10%. In a survey, "the number one thing that [employees said] they valued at Baptist Health was the caring attitude toward employees," says **Maribeth Rouseff**, assistant vice president of Wellness Advantage, the system's wellness program. That caring attitude scored above benefits and salary in importance, she notes.

"That spoke volumes to us. We have a bias toward doing the right thing and keeping them safe," she says.

Baptist Health was named one of the "100 Best Companies to Work For" by *Fortune* magazine for 10 of the last 12 years. In 2010, it ranked 32nd among the 100 companies. Among other awards, it recently received a Corporate Health Achievement Award from the American College of Environmental and Occupational Medicine (ACOEM).

ACOEM noted that Baptist Health focuses its wellness program to address the specific health needs of its employees.

### Helping employees live a healthy life

The current wellness program dates back to 2000, when the health system decided to become self-insured for the medical costs of its employees, which now number about 13,000 in five hospitals and 26 outpatient centers. (A sixth hospital is due to open this year.)

The system's president and CEO, projected a strong wellness message, recalls Rouseff, saying: "We need to actively encourage our employees to make healthy decisions and live a healthy life."

The first steps were relatively inexpensive. The system maintained fitness centers at each hospital that were open 24 hours a day, seven days a week. Every employee received a self-care guide with a letter from the CEO, to provide some basic information about common health concerns.

Wellness coaches made their own bookmarks with wellness tips and handed them out to employees at shift changes. They created "goal cards" for employees to record their cholesterol, blood pressure, and blood sugar – and the optimal levels.

"We didn't have a big budget. We did all kinds of zany things in terms of contests," says Rouseff.

One contest coincided with the 2006 Olympic Games in Torino, Italy. Employees vied for gold, silver, and bronze levels by meeting goals for exercise and nutrition. The gold winners were placed in a raffle for an all-expense paid trip to Italy.

## CNE QUESTIONS

5. According to surveillance from the Centers for Disease Control and Prevention, what was the main cause of injury to health care workers from antimicrobial pesticides?
   A. Fumes from cleaning agents
   B. Skin irritation from disinfectants.
   C. Allergic reaction
   D. Splashes to the eyes

6. To meet a proposed Total Inward Leakage requirement from the National Institute for Occupational Safety and Health, how many test subjects would have to pass a fit-test with a respirator model?
   A. 26 of 35
   B. 21 of 35
   C. 12 of 15
   D. 12 of 18

7. According to a study by the Liberty Mutual Research Institute for Safety in Hopkinton, MA, 36% of slips and falls were caused by:
   A. Icy patches in the parking lots.
   B. Liquid contaminants such as water or cleaning solutions.
   C. Exposed electrical cords.
   D. Spilled food.

8. To promote healthy eating, Baptist Health South Florida altered its food offerings by:
   A. Eliminating all vending machines.
   B. Reducing portion sizes.
   C. Making healthier food less expensive.
   D. Banning potato chips.

**Answer Key: 5. D; 6. A; 7. B; 8. C.**

## CNE INSTRUCTIONS

Nurses participate in this continuing nursing 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 to receive a credit letter.

The health system didn't actually spring for a trip overseas. This trip took a family of four to the Italy attraction at Epcot in Disney World – about a four-hour drive away. "It wasn't quite the real deal, but it was fun," says Rouseff.

The wellness program was able to generate enthusiasm even without deep pockets, she says. "From very meager beginnings, we started little by little," she says.

Promoting health eating started at the workplace. First, the health system removed all trans fats from the cafeteria and dietary service. Then it eliminated monosodium glutamate (MSG). That meant no Doritos or Cheetos in vending machines.

Fried food was the next to go. Instead of using fryers, the system purchased the Rational Combi-Steamer to get a similar flavor and texture without the fat.

Baptist Health also created a financial incentive for employees (and others) to buy healthier choices. Wellness meals that are lower in fat, sugar, calories, and sodium cost just $3 and include a bottle of spring water. They're available for breakfast, lunch, or dinner.

An animated icon – "Peppy" pineapple – marks the healthier choices in the cafeteria and vending machines. The healthier vending machine items are 25 cents cheaper.

### One-on-one coaching works

Comprehensive health risk assessments and health coaching began in 2004. A nurse contacts employees who have a moderate to high number of risk factors for heart diseases or diabetes. The nurses have face-to-face interaction with employees as part of the Health Check program – a personal involvement that led to a significant drop in the average medical claims of this group.

In 2005, the health system focused on reducing patient handling injuries. Working with Diligent of Roselle, IL, a consulting firm that is a subsidiary of the ARJO patient handling equipment manufacturer, Baptist Health created a comprehensive patient handling program and purchased equipment. Today, when nurses complete an online patient assessment, the form requires them to input the patient handling needs. "It's no longer an option. It's an expectation," says Rouseff.

The job description for nurses once required them to be able to lift 80 pounds. Now that has been reduced to 25 pounds.

Over the years, Baptist Health has molded its wellness to the needs of employees. For example, employees can receive treatment for mild ailments during "employee care hours" at the employee health clinics.

Recently, the health system added domestic violence support, which includes security escorts to and from their cars, monthly support group meetings, and even emergency funds for shelter or other needs.

"Each decision we've made to add services has been in response to seeing a need for that service," says Rouseff.

Wellness Advantage has grown over the years, but it still runs with lean resources. There is one wellness coach at each of eight facilities and five personal trainers for the fitness centers. Four registered nurses work for the Health Check team.

"Our goal is for people to be comfortable enough [with the program] so that when they're ready for healthy change, they know we're here for them," Rouseff says. ■


# AOHP conference offers broad appeal

*Sept. 15-18 in Boston*

The Association for Occupational Health Professionals in Healthcare (AOHP) 2010

## COMING IN FUTURE MONTHS

- Tools for EH quality assessment
- Preventing blood exposure from splashes
- Marketing safe patient handling to employees
- A new imperative for hand hygiene
- A new environment for influenza vaccination?

National Conference features four days of dynamic educational programming, exchange of successful research &innovative practices. Joint fellow occupational health professionals for networking and earn continuing education hours in CNE, CME and CCMC. (Visit www.aohp.org or email info@aohp.org for more information.) The AHOP is providing sessions for employee health professionals at all levels – from a special workshop for beginners to information on injury prevention strategies geared toward seasoned professionals. The conference will be held Sept. 15-18 in Boston. More information is available at www.aohp.org/pages/education/conference_agenda.html. ■

## CNE OBJECTIVES

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

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