



Hospital Employee Health[®]



Eye of the needle: Surgeons reluctant to trade suture sharps for 'blunt' safety

Will calls for change, new designs finally get point across?

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Sharps safety finally may permeate the nation's operating rooms, the last bastion of resistance in American hospitals. Surgeons have been reluctant to use blunt suture needles, but new messages from the American College of Surgeons (ACS), the U.S. Occupational Safety and Health Administration and the National Institute for Occupational Safety and Health may get their attention. Those organizations are actively promoting the use of blunt suture needles.

They have a difficult mission. Suture needles are responsible for about one-fifth (21%) of all blood and body fluid exposures, according to 2004 data from EpiNet, a multihospital database of the International Health Care Worker Safety Center at the University of Virginia in Charlottesville. The operating room has been the slowest part of hospitals to adopt the use of the safer devices, which are required by OSHA's bloodborne pathogen standard.

"Blunt needles are underused in the United States. We are trying to let all of the 60,000 fellows of the college know about this issue," says **William Schecter**, MD, FACS, chairman of the ACS Committee on Perioperative Care and chief of surgery at San Francisco General Hospital. "This technology is out there. It can be used."

It has been two years since the American College of Surgeons first issued a position statement endorsing the use of blunt suture needles for fascia closure, but *Hospital Employee Health* found that surgeons still are reluctant to adopt the technology. About 59% of all suture injuries occur while suturing fascia.¹

"Surgeons remain ignorant of sharps injury rates," says **Ramon Berguer**, MD, FACS, clinical professor of surgery at the University of California Davis and chief of surgery at Contra Costa Regional Medical Center in Martinez, CA. "They remain a little wary on the use of blunt suture needles. Some of the early blunt suture needles were really blunt and difficult to use."

Berguer, a general surgeon and member of the ACS Committee on

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Perioperative Care, uses blunt suture needles and tries to eliminate sharp devices by using electric cautery and skin staples. "I get stuck at least once a year, and I think every surgeon just accepts that," he says. "I don't think we have to accept that. That's the mentality we have to change."

In fact, a recent study found that 99% of surgical residents have at least one sharps injury during their training, but only about half of them are reported. (See related article on p. 111.)

Hospitals are required to evaluate blunt suture needles, just as they do blood collection devices. In a joint bulletin on blunt suture needles, OSHA

and NIOSH note that "employers must use safer devices to replace corresponding conventional sharp-tip suture needles in their workplaces when clinically appropriate."

If the hospital uses conventional needles, justification must be documented in the exposure control plan.

"The surgeons' preferences are secondary to [the regulatory requirements]," says **Sheila Arbury**, RN, MPH, COHN-S, health scientist in OSHA's Directorate of Science, Technology and Medicine. "If they're able to do the procedure using blunt sutures without any harm to the procedure, the patient, or [other clinical concerns], they really need to try this."

OSHA inspectors rarely venture into the OR arena. Most of OSHA's inspections are triggered by complaints, and complaints are rare from members of the tight-knit OR teams. So OSHA and NIOSH are trying to promote blunt suture use through their alliances and partnerships — by encouraging The Joint Commission to call for their use, by working with vendors to improve the availability of various needles and suture materials, and by spreading the word among health care workers.

Still, despite surgeons' recalcitrance, hospitals are subject to citation if they don't use blunt suture needles where clinically appropriate, says **Dionne Williams**, MPH, team leader in OSHA's Directorate of Enforcement Programs.

"It can't be infeasible in every single surgical procedure [to use blunt suture needles]," she says. "If we're looking at [a hospital's] exposure control plan and they're writing that they're infeasible altogether, that would raise a question in our minds. It's not going to be appropriate in every single situation, but if it is appropriate for some procedures, we'd like to see that incorporated in the plan."

Blunt needles reduce injuries

However, even surgeons who support the use of blunt suture needles have found impediments. **Janet Stein**, MD, participated in a study of blunt suture needles in gynecologic surgery sponsored by the Centers for Disease Control and Prevention. The study, published in 1997, showed that blunt suture needles could significantly reduce needle-stick injuries in the OR. Each increase in the use of blunt suture needles was associated with a decrease in injuries.

Based on the findings, CDC estimated that if

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Use data to push sharps safety in the OR

Surgeons respond with safer practices

Although blunt suture needles are rare in the operating room, other safer practices have begun to take hold.

At Gwinnett Medical Center in Lawrenceville, GA, **Vangie Dennis**, RN, CNOR, CMLSO, advanced technology manager, places an emphasis on data and scientific literature as she tries to convey her sharps safety message to surgeons. For example, she shared information on the protective benefits of double-gloving. One study showed that of 88 glove perforations during surgery, only 6.8% perforated the inner glove.

She also shared information about sharps injuries in the hospital's OR. Dennis put a poster above the scrub sinks showing hands with red dots that indicated the sticks occurring in different surgical departments.

"I blitz them with information," she says. "I let them know how many sticks we've had. They want data."

When Dennis implemented a neutral zone for passing instruments, she used an incentive program

to get the OR teams' attention. Surgeons and other OR personnel may place one item in a "passing zone" or multiple items in the designated neutral zone.

She organized a "Neutral Zone Round-Up" with "Neutral Zone Sheriffs." Nurses wearing badges would "ticket" people who used the neutral zone — but in this case, the tickets results in a reward — a candy bar. The names of surgical personnel also were placed in a bucket for a weekly drawing for \$10 certificates to Starbucks, the local movie theater, and other prizes.

Now that work practices have improved, Dennis plans to move forward with promotion of blunt suture needles. She has developed a presentation on sharps exposures in the OR and gained the support of some surgeons who are willing to try the needles, and she plans to meet with the safety committee and surgical department committees.

Dennis also will place information about suture needle injuries and the American College of Surgeons statement on blunt suture needles above scrub sinks and in the doctors' lounge.

A recent incident may make surgeons more receptive to change. A general surgeon retired after contracting hepatitis C from a needlestick and suffering from an acute infection. "That shook some people up," says Dennis. ■

half of the curved suture needles were replaced with blunt needles, injuries would drop by 87%. Surgeons reported technical difficulties with the blunt suture needles in only 6% of the cases, and patient care was not affected.²

"It's a no-brainer to me. If it's available, why would you use anything else?" says Stein, who is now vice chair and director of the residency program in the department of obstetrics/gynecology at Beth Israel Medical Center in New York City and the Manhattan campus of Albert Einstein College of Medicine.

However, in the years after the study, surgeons no longer used the blunt suture needles at the hospital. Often, the preferred suture material wasn't available with the needles or had to be special ordered, Stein says. Other advances in the OR such as laparoscopy and the use of cautery led to reduced injuries. In addition, other safer practices, such as hands-free passing of instruments became routine. But surgeons never became fully comfortable with the blunt suture needles, she says.

"Calling something a 'blunt needle' really turns surgeons off," she says. "We really wanted

to call them safety needles, and we thought people would be a lot more interested in using them if we called them safety needles."

Stein hopes a resurgence of interest in blunt suture needles will lead to increased acceptance among surgeons.

Surgeons need to request the products that will work best for them, stressed Schecter. "I think the profession as a whole is going to have to deal with this issue and work with industry," he says. "Industry will provide whatever we need if we ask for it."

The Association of Perioperative Registered Nurses (AORN) also supports the use of blunt suture needles, as well as other techniques to reduce injuries, such as double-gloving. Employee health professionals should work with the OR educator as well as leaders, such as the surgery medical director, advises **Carol Petersen**, RN, BSN, MAOM, CNOR, perioperative nursing data set manager with AORN.

They need to present detailed data about the types of sharps injuries occurring in the OR. They should work through the OR steering committee

Must needlesticks be a rite of passage for surgeons?

Survey: OR sharps injuries are universal

Virtually every surgical resident will have a needlestick before his or her training is complete, but only half of those needlesticks will be reported, according to a report in the *New England Journal of Medicine*.

A survey of about 600 surgeons in training at 17 medical centers around the country revealed that half of the exposures (53%) involved a high-risk patient, and only 16% of those high-risk exposures were reported. Surgical residents were six times more likely to suffer a needlestick than other medical residents.¹

The survey, by researchers at Johns Hopkins University, highlighted the need for better sharps safety and improved training among surgical residents.

Sharps safety for surgical residents should begin in medical school and continue through their residency, says **William Schecter**, MD, FACS, chairman of the American College of Surgeons (ACS) Committee on Perioperative Care and chief of surgery at San Francisco General Hospital.

The ACS has set up education centers around the country, with high-tech simulators, to enable surgeons and surgical teams to work on their technique, says Schecter. Meanwhile, training in blood-borne pathogen exposure and sharps safety is mandatory for surgical residents, he adds.

Creating a safe OR environment is a top priority for the ACS, he says. "In this case, what's safe for the operating team is safe for the patient," says Schecter.

Timely reporting of sharps exposures in the OR is a particular problem for surgical residents, the Johns Hopkins study found. "[U]nderreporting may result in a substantial underestimation of the magnitude of the problem," the authors said.

There are many barriers to reporting in the OR. "Lack of time" was the primary reason that surgical residents failed to report injuries — which would prevent the physicians from receiving prompt post-exposure prophylaxis for HIV or HBV or baseline testing for HCV.

Employee health professionals need to make reporting easier for OR personnel, perhaps through hotlines or even postoperative checklists that include a question about needlesticks that occurred during the case, the Johns Hopkins researchers said.

Reporting and providing baseline blood samples need to be as convenient as possible, says **Ramon Berguer**, MD, FACS, clinical professor of surgery at the University of California Davis and chief of surgery at Contra Costa Regional Medical Center in Martinez, CA.

"If you're in the middle of an eight-hour operating day, the idea that you're going to drop your cases, go stand in line at employee health, and go through four hours of treatment is just unrealistic," he says. "They want to finish their obligations for the day."

Still, surgical leaders are optimistic that they can create a greater culture of safety in the OR — starting with the surgeons in training.

Reference

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or other multidisciplinary teams to implement changes, she says. Surgeons will want scientific evidence that new devices will improve safety while safeguarding patient care. "Always go into those meetings prepared," she says.

(Editor's note: The American College of Surgeons position statement is available at www.facs.org/fel-lows_info/statements/st-52.html.)

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Convenience, persistence up HCW vaccination rates

'Persistence just short of annoyance' works

In October, influenza vaccination campaigns will start up once again as hospitals try to improve on a generally dismal performance in immunizing health care workers. Facilities have used various strategies to make the flu vaccine more accessible and convenient and to educate health care workers about its importance. Here are two examples from hospitals that were scheduled to present information about their programs at the annual conference of the Association of Occupational Health Professionals in Healthcare, scheduled for Sept. 27-29 in Savannah. More information about

the conference is available at www.aohp.org.

When occupational health nurse **Don Dush**, RN, COHN, walks down the halls of Parkland Health Center in Farmington, MO, employees often don't even bother to say hello. They just say, "I've already gotten my flu shot, thank you."

Dush admits that he is "persistent to a point just short of annoyance" when flu vaccination season comes around. But that persistence led to an 80.6% vaccination rate in 2006 — the best in the BJC Healthcare system.

Dush chuckles when he recalls one employee who didn't really want to get the flu shot but quipped, "If you give it to me at 3 o'clock in the morning, I'll take it." When Dush showed up at 3 a.m. with the flu vaccine, the employee was too shocked to decline.

"A lot of people said, 'The only reason you got this done is because you were hunting people down and making a nuisance of yourself.' Maybe so, but it's that important," he says.

E-mails, postcards, in-person reminders

That kind of attention to individual employees is possible at a 600-employee hospital but wouldn't be at one that was 10 times bigger, Dush concedes. He followed up with e-mails, postcards, and even in-person reminders. For the laggards, he sent certified letters so that every employee either had the flu vaccine or signed a declination.

But Dush also employed techniques that any employee health service could use. For example, the hospital leadership agreed to donate \$1 for every flu vaccine delivered to employees for an incentive program. He drew the names of three vaccinees in the days before Christmas to share the "kitty."

"It created peer pressure among the employees to get the flu shot," he says.

Dush, who is the only employee health professional at the hospital, used a per diem nurse to help with the vaccinations. If a manager was planning to send home a nurse on a unit that had a low patient census, he asked for the nurse instead to be diverted to assist him.

In fact, in some units, managers administered the vaccines. "That's leadership support," says Dush. "Some of the first people to come in here and get their flu shot were managers."

This year, he will use incentives again but he'll

change them. After all, he wants to keep things interesting as he engages the staff with his enthusiasm — and persistence.

Campaign rides on the 'bus stop'

Vaccinating 29,000 employees is a daunting prospect. Yet that's what the Mayo Clinic in Rochester, MN, has managed to do, including vaccination of 69% of the 6,500 nurses in 137 units.

How did they deliver that much vaccine? Employee health nurses brought their flu "Bus Stop" to the units with rolling vaccination carts. The "bus stop" had a posted schedule, and a huge poster with a red stop sign alerted employees when the vaccinations would take place.

The schedule encompassed early morning hours — 6 a.m., for example — as well as evening stops to accommodate workers on night and evening shifts. Nurses appreciated the convenience, which meant they didn't have to leave their post to get the vaccine, says **Laurie Barnes**, RN, BSN, lead RN in preventive medicine. Flu vaccine also was available at stations set up outside the cafeteria.

An element of peer pressure

Having the flu vaccine readily available on the unit created other dynamics, as well, she says. For example, there was an element of peer pressure. "It was more likely more people would have the vaccination if there were others getting it on the unit," says Barnes.

Units engaged in friendly competitions. Units would challenge one another to have the best vaccination rate. The winner would receive a pizza party hosted by the other unit or units.

Meanwhile, Barnes and her colleagues created "e-posters" that ran continuously on computers throughout the system. They also developed an educational slideshow with statistics about the flu and reasons for getting the flu vaccine. The Mayo Clinic home page contains a link to education and information on the flu and flu vaccine.

By focusing on accessibility and education, the Mayo Clinic improved its vaccination rate of nurses from 45% in 2002-2003 to 69% in 2006-2007. The "bus stop" program has become a familiar part of life at Mayo. Employees began signing up on the schedule even before summer ended.

"We're hoping this year to see an even higher increase [in flu vaccinations]," says Barnes. ■

Outbreak leads to 40% absenteeism rate

Norovirus event brings pandemic lessons

Imagine a communitywide outbreak so pervasive that employees fell ill at work, 40% called in sick, and even the chief nursing executive pitched in to work as a staff nurse.

This sounds like a scenario from a pandemic influenza drill — but it actually was a real-life episode of norovirus at Missouri Baptist Hospital–Sullivan, a rural hospital about 70 miles from St. Louis.

The 2006 norovirus outbreak at a small, rural facility illustrated how vulnerable all hospitals are to the spread of infection and how an easily transmissible infectious disease can affect the hospital's operations, says **Shannon Akers**, LPN, employee health nurse and infection control assistant. Akers was scheduled to present information about the outbreak at the annual conference of the Association of Occupational Health Professionals in Healthcare in late September.

Before this outbreak, the threat of a pandemic "seemed very distant and far away," says Akers. "I just never felt we were going to be impacted by anything big. I have definitely changed my mind about that. I don't think we're sheltered from anything."

The hospital ultimately controlled the outbreak through rigorous adherence to hand hygiene and infection control precautions. But the lessons learned from the outbreak are still shaping the hospital's employee health policies and pandemic planning, Akers says.

Akers remembers vividly when the outbreak began. The hospital's infection control specialist was checking into reports of influenza in the community and found out about cases of gastroenteritis at the local high school. That was the first warning sign.

"Within 24 hours, we had a 70% absentee rate in [the] med-surg [unit]," says Akers. "From there, the absentees just kept coming."

Noroviruses, also known as Norwalk-like viruses, are highly contagious; exposure to as few as 10 virus particles can lead to infection, according to the Centers for Disease Control and Prevention. It is spread through fecal contamination of food or water or through environmental or fomite contamination.

In Missouri, norovirus had affected about half the passengers on a cruise ship on the Mississippi River. But it also had traveled along the interstates, moving through the state from other sources. "It's highly contagious," says **Monica Clonts**, RN, communicable disease nurse at the Crawford County Health Department in Steelville, MO, who had worked with Missouri Baptist. "We just watched it creep its way across the state."

Missouri Baptist–Sullivan, part of BJC Healthcare, is a small hospital with just 75 beds and a daily census of about 16 in its medical/surgical unit. It serves about 20,000 patients a day in its emergency department and has about 500 employees.

With norovirus, symptoms can appear within 12 hours of exposure. Although the hospital employees were greatly affected by the virus, only six patients — in the geropsychiatric unit — contracted norovirus from a hospital-based transmission.

"We attribute that to the enormous commitment our employees showed to patient safety," says Akers. "It was the employees who contained this. We're very proud of them."

To contain the outbreak, environmental service workers scrubbed the hospital clean with bleach — twice. Health care workers were meticulous about hand hygiene. Anyone with symptoms was instructed to stay home, and ill employees were told to stay home for 72 hours after the symptoms subsided.

The outbreak pointed out weaknesses in the hospital's emergency planning, says Akers. "What this showed us was that we were deficient in offering our employees options," she says. "We don't have a day care [center]. We didn't have staff properly cross-trained. If there was an emergency in a department, there wouldn't be anyone to replace them. Those are areas that we're looking at to improve."

During the outbreak, employees received spot-training to enable them to work in different departments. However, the hospital now is gearing up for more cross-training. Akers and her colleagues are also taking a closer look at how to provide day care and meet other employee needs during an emergency. The hospital also monitors spikes and trends in employee absences.

Communication with the health department was also a key to controlling an infectious disease that had spread throughout the community. The health department tracks trends in gastrointestinal and respiratory illnesses. "It was a group effort to get this investigated and contained," says Clonts, who noted that the relationship

between the hospital and the health department grew stronger as a result of the outbreak.

It took about 30 days to control the hospital outbreak, and the norovirus eventually died out in the community. "It's my understanding that it just kept moving down the highway," says Akers. ■

NIOSH to study safety of ortho-phthalaldehyde

Substitutes not always better

The dangers of glutaraldehyde are well known and well studied — from skin irritation to occupational asthma. Switching to another substance would seem to be the best way to protect workers.

But experts in chemical hazards are cautioning health and safety officials to maintain a high level of protective measures with the substitute, ortho-phthalaldehyde (OPA). The National Institute for Occupational Safety and Health (NIOSH) has launched a two-year, multihospital study to investigate the potential hazards associated with OPA.

"On the surface, it seems fairly simple. Substitute a chemical with another chemical," says **Jim Boiano**, MS, CIH, industrial hygienist in the NIOSH surveillance branch in Cincinnati and assistant coordinator for the health care and social assistance sector for NIOSH's National Occupational Research Agenda. "With glutaraldehyde and OPA, there are a number of factors that come into play."

OPA has a low vapor pressure, which means health care workers may have less exposure to the aerosolized substance. It also is used in lower concentrations than glutaraldehyde (0.55% compared to 1% to 50% solutions).

Yet OPA and glutaraldehyde have similar structural and reactive properties,¹ according to an analysis by Karen Rideout, who was then a master's student at the University of British Columbia. Little research has been conducted on the potential occupational hazards of OPA, Boiano says. (OPA is marketed as Cidex OPA by Advanced Sterilization Products, a division of Johnson and Johnson of New Brunswick, NJ.)

NIOSH cannot make recommendations on the use of a chemical without data, says **Mark Toraason**, PhD, toxicologist and senior service fellow with NIOSH's Division of Applied Research and Technology in Cincinnati and

principal investigator of the OPA study.

The study will include health hazard evaluations at hospitals that use OPA. Researchers will conduct wipe tests of surfaces, air sampling, and will look for biomarkers in the urine and blood of workers. They will note workplace characteristics and work practices.

Meanwhile, health care workers should exercise caution, says Toraason. "No one has come up with a [disinfecting] solution that's so selective that is harmful to bacteria but totally safe for humans," he says. "This is a material that has to be handled with caution."

In fact, hospitals should learn a lesson from other industries in which substitutes later were found to present a new set of hazards, says

"If we don't look at hazards with substitution products, we run into the same old problems," says **Mark Catlin**, industrial hygienist with the Service Employees International Union in Washington, DC. "It's not clear that substitutes are safe substitutes."

When Kaiser Permanente, based in Oakland, CA, switched to OPA, the health system used the "precautionary principle," says **Erica Stewart**, CIH, HEM, project manager with Kaiser Permanente National Environmental Health and Safety.

"We don't know what the health effects are, so we're going to treat it as if it's as irritating as glutaraldehyde," she says. "We require the same ventilation controls in areas that use OPA."

The equipment processing rooms have negative-pressure, nonrecirculating exhaust and 12 air exchanges per hour, she says.

Stewart cites the report of anaphylaxis in nine patients who had undergone repeated cystoscopies with instruments that had been disinfected with OPA. In 2004, Advanced Sterilization Products issued an alert and advised that OPA should not be used on instruments for patients with a history of bladder cancer:

"In rare instances, CIDEX OPA Solution has been associated with anaphylaxis-like reactions in bladder cancer patients undergoing repeated cystoscopies. Therefore, ASP is contraindicating the use of CIDEX OPA Solution for the reprocessing of any urological instruments to be used on patients with a history of bladder cancer. Additionally, we received reports that, in rare instances, health care workers experienced an irritation or possible allergic reaction that may be associated with exposure to CIDEX OPA Solution. It appears that in most of these cases, the health care workers were not using the product in a manner consistent with the Instructions for

(Continued on page 117)

Glutaraldehyde Use Survey

This survey, developed by Jamie Tessler for the Sustainable Hospitals Program at the University of Massachusetts–Lowell, can be used to identify where glutaraldehyde is being used in the facility, improve work practices or protection, and monitor possible health effects. It can be adapted to incorporate glutaraldehyde substitutes.

Date: _____

Facility: _____

Interviewer: _____

General Information

1. Clinical Area where disinfection is performed: _____
2. Room Number where glutaraldehyde is used: _____
3. Are patients examined (or undergo procedures) in this room? _____
4. Name of employee(s) who performs disinfection activities (Optional) _____

5. Commercial product name (and % glutaraldehyde, if known): _____

Health Effects

6. Noticeable odor when using this product?: Yes ____ No ____
7. If you answered “Yes” to #4, is the Odor Strong ____ or Weak ____ ?
Any symptoms or health complaints associated with working with this product?
Yes ____ No ____ If Yes, please describe: _____

Please describe the following procedures:

8. Name of device(s) disinfected in this area: _____
9. What type of container is used for the glutaraldehyde solution? (Check box that applies to your situation.)
 Open Bin (describe Bin type or brand if available) _____
 Open Bin with Lid (describe Bin type or brand if available) _____
Are Lids kept on most of the time? some of the time?
 Enclosed System (list name brand and model if available) _____
10. Is this device routinely pre-cleaned before it enters the glutaraldehyde solution? (If yes, please list the name of the pre-cleaning solution utilized). _____
11. Length of time device is soaked in glutaraldehyde solution: _____
12. Method of retrieving device from glutaraldehyde solution (e.g. remove with gloved hand , tongs, etc):

13. Type of gloves worn, if any (brand and material): _____
14. Type of protective gear worn, if any (e.g., goggles, face shield, apron): _____
15. How often this procedure is performed (specify daily, weekly, or other): _____
16. Where do you dispose of the spent glutaraldehyde solution? _____
17. How do you dispose of the glutaraldehyde? _____
18. How much glutaraldehyde is disposed of per week? _____ Per month? _____
19. How do you refill the soaking bin or system with glutaraldehyde? (check box)
 pour from bottle
 pour from bottle with funnel
 pour with special glutaraldehyde spout
 other (please describe): _____

Source: Sustainable Hospitals Program, www.sustainablehospitals.org.

Use." (www.cidex-opa.com/Products_&_Services/CIDEX/CIDEX_OPA/LabelChange.asp.)

There also was a 2006 case report of occupational asthma and dermatitis of a nurse in an endoscopy unit in Japan that was linked to exposure to OPA. "This case indicates that OPA itself can be a powerful sensitizer, suggesting that widespread use of OPA as a substitute for GA [glutaraldehyde] may result in serious health risks for workers," the authors concluded.³

Chemical safety experts offer the following advice to ensure worker safety:

- **Look beyond the MSDS.** Employers are required to make the Material Data Safety Sheets available to employees, including information on hazards, safe handling practices and spill response. But the quality of information on the MSDS may vary significantly. When a new chemical is introduced into the hospital, Stewart conducts a literature search and looks for other sources of information. She also compares the chemical structure to current chemicals with known properties. "Just because there isn't any [occupational hazard] information shown on an MSDS doesn't mean it's completely safe," she says.

- **Conduct a hazard analysis.** Employers are required to assess the workplace for hazards as part of the Personal Protective Equipment standard of the U.S. Occupational Safety and Health Administration, notes Boiano. That would encompass any areas in which potentially hazardous chemicals are used.

- **Encourage employees to report symptoms that may be related to occupational exposure.** If employees develop a rash after cleaning a spill or if they notice that they have trouble breathing at work but never at home or on the weekends, you want to know, says Boiano. Employee health and safety professionals can request a health hazard evaluation from NIOSH if they have specific concerns.

- **Follow the strictest recommended measures.** If you don't know much about the hazards of a substitute, maintain the same protections that were in place for the original chemical, advises Toraason. For example, with OPA, "you should follow the practices that are put forward for glutaraldehyde and expect that it's comparable," he says. OSHA has not updated its permissible exposure limits (PELs) on most chemicals in decades, so you should also look at the NIOSH recommended exposure limits (RELs) and the voluntary threshold limit values for chemical substances (TLVs) of the American Conference of Governmental Industrial Hygienists. The European Union also has adopted

stricter standards for workplace chemicals.

- **When possible, use an enclosed system.**

Enclosed systems for instrument reprocessing can minimize or even eliminate worker exposures, Stewart says.

(*Editor's note: Information about safe use of glutaraldehyde is available from the 2006 OSHA document, "Best Practices for the Safe Use of Glutaraldehyde in HealthCare" at www.osha.gov/Publications/glutaraldehyde.pdf.)*

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How to make the most of rural resources

Networking, advice on tap at ICOH conference

What do you do if . . . you're the only employee health professional for a work force of several thousand employees? Or there is no occupational health physician for you to work with? Or you're trained in infection control but expected to know about occupational medicine?

Those are some of the issues that will be addressed as the International Commission on Occupational Health (ICOH) Conference on Health Care Worker Health devotes an all-day, pre-conference workshop to "Occupational Health Services for Rural and Remote Areas and Developing Countries." The ICOH conference will be held Oct. 26-28 in Vancouver. (**See editor's note for more information.**)

The ICOH conference is held every three years, and this year it will be combined with the annual State-of-the-Art Conference of the American College of Occupational and Environmental Medicine (ACOEM). It will include an all-day workshop on outbreak investigations, with lessons learned from SARS, *Legionella*, and other outbreaks. Sessions will cover psychosocial

issues, ergonomics, and current issues in health care worker health.

The conference offers occupational health physicians and other professionals an opportunity to network and share information with their international counterparts, says **Bob Orford**, MD, CM, MS, MPH, FACOEM, Organizing Committee chair and National Secretary of ICOH for the USA.

"We've had nurses and industrial hygienists involved in the planning of the meeting. The meeting is not simply a physician-oriented meeting. It's going to be of broad interest to all occupational health professionals," says Orford, who is a consultant with the Mayo Clinic in Scottsdale, AZ, and president-elect of ACOEM.

The workshop on occupational health in rural and remote areas is an ICOH effort to reach out to occupational health professionals who work with lean resources, both in the United States and around the world, says speaker **Annalee Yassi**, MD, DOHS, MSc, FRCP, who heads the division of occupational medicine at the University of British Columbia in Vancouver.

While some rural or remote hospitals may have fewer resources, they still face the same hazards and infectious disease threats, she says. For example, it may be difficult for a hospital to set aside funds to stockpile N95 respirators, but the need for pandemic influenza planning is just as great as for other hospitals, Yassi says. "There is no disease that would not be expected in a rural or remote area," she adds. "The conference will deal with creative solutions to problems that are particularly faced with being in a rural or remote area."

[Editor's note: The International Commission on Occupational Health (ICOH) Conference on Health Care Worker Health will be held concurrently with the 2007 State of the Art Conference of the American College of Occupational and Environmental Medicine (ACOEM) in Vancouver, BC, Canada, from Oct. 26-28. More information is available at www.acoem.org/icoh.aspx.] ■

PA law calls for testing HCWs for resistant staph

Measure part of broad health care reform

In a controversial provision in sweeping health care reform legislation, Pennsylvania is requiring the testing of health care workers who are exposed to patients with methicillin-resistant

CNE questions

13. According to the EpiNet database of the International Health Care Worker Safety Center, what proportion of all sharps injuries occur from blunt suture needles?
 - A. 12%
 - B. 21%
 - C. 33%
 - D. 51%
14. Which of the following is the primary barrier to reporting needlesticks among surgical residents in the OR, according to a study published in the *New England Journal of Medicine*?
 - A. Surgeons in training are embarrassed that they were stuck.
 - B. Surgeons in training perform more cases.
 - C. Surgeons in training don't have time to visit employee health to complete the report.
 - D. Surgeons in training don't think needlesticks are important.
15. According to occupational health nurse Don Dush, RN, COHN, which of the following was a critical factor in improving influenza vaccination rates?
 - A. Declination statements
 - B. Extending the campaign until January
 - C. Persistence in offering the vaccine
 - D. Fear about pandemic influenza
16. According to Shannon Akers, LPN, what preparation could help hospitals if they encounter a sudden high absenteeism rate?
 - A. Cross-training of staff
 - B. Stricter sick leave rules
 - C. Contracts with per diem staff
 - D. Better communication with public health

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

CNE instructions

Nurses 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 to receive a credit letter. ■

Staphylococcus aureus (MRSA).

Pennsylvania Gov. Edward Rendell signed the bills in late July as part of his "Prescription for Pennsylvania," which seeks to improve access, quality, and affordability of health care. His plan includes a tax-supported Cover All Pennsylvanians (CAP) program that would offer health care coverage to the uninsured and to small businesses. Reducing health care-acquired infections is a part of those efforts.

Reducing health care-acquired infections and specifically MRSA involve "not just an issue of quality, but also of cost," says **Elisabeth Myers**, deputy director of communications in the Governor's Office of Health Care Reform. "Individuals who acquire infections end up staying in the hospital for much longer."

In fact, in 2005, there were 19,154 cases of hospital infections and 2,478 related deaths in Pennsylvania. The infections cost about \$3.5 billion in hospital charges. The average charge for a patient with a health care-acquired infection was \$185,260 compared to \$31,389 for patient who did not have an infection.

Those statistics come from the mandatory reporting of health care-acquired infections. In 2004, Pennsylvania became one of the first to implement a mandatory reporting law.

The latest legislation again targets hospital infections. "There's been reporting, but there haven't been [any measures] to mandate or help health facilities with [efforts that would] affect these numbers," says Myers.

The most recent legislation requires hospitals to have an infection control plan. It also requires infection control professionals to identify patients who are colonized or infected with MRSA or other multidrug-resistant organisms and to have "procedures for identification, cultures, screenings, and follow-up care for staff who may have had exposure to a patient known to be colonized with an MDRO [multidrug-resistant organism] before that patient was identified."

The Pennsylvania Department of Health will develop guidelines to implement the screening later this fall, says Myers.

Meanwhile, the governor is pressing forward

with a broader health care reform bill. In addition to the CAP program, it would require "randomized screening" of inpatients, nursing home residents and health care workers. It does not specify whether employees would receive treatment if they test positive for MRSA, but requires health care facilities to "take all actions necessary to prevent the spread of MRSA to other inpatients, residents or staff." Failing to comply could threaten a hospital's license.

Screening patients for MRSA upon admission has been gaining favor around the country. The Veterans Health Administration recently expanded its successful MRSA program that began at the VA Pittsburgh Healthcare System. (See *Hospital Employee Health*, September 2007, p. 103.) But the VHA does not screen employees for MRSA.

"Even if [someone] were to become colonized, it's hard to know what that information means," explains **Rajiv Jain**, MD, FACP, chief of staff at the VA Pittsburgh Health Care System. "The majority of the time the employees are transient carriers. They just carry the organism for a very short time."

In fact, the Centers for Disease Control and Prevention do not recommend the screening of employees. In 2006 guidelines, an advisory panel to CDC, the Healthcare Infection Control Practices Advisory Committee, stated: "Some MDRO control reports described surveillance cultures of health care personnel during outbreaks, but colonized or infected health care personnel are rarely the source of ongoing transmission, and this strategy should be reserved for settings in which specific health care personnel have been epidemiologically implicated in the transmission of MDROs."¹

As the reform efforts progress in Pennsylvania, the provision on health care worker testing has raised some concerns.

"We need to be sure workers' rights are not infringed upon in this requirement to test workers," says **Evie Bain**, RN, MEd, FAAOHN, coordinator of the Division of Health and Safety for the Massachusetts Nurses Association who has been involved with the issue of MRSA and potential occupational risks to health care workers.

However, health care workers should know if

COMING IN FUTURE MONTHS

■ Violence underreported in hospital EDs

■ Risk of sharps injuries in home health

■ Are you a role model for employee health?

■ The high cost of depression in the workplace

■ Strategies to improve alertness on the job

they are colonized and should be provided with adequate personal protective equipment. For example, health care workers who are colonized with MRSA might need to take treatment before having surgery.

(Editor's note: More information about the Pennsylvania health care reform legislation is available at www.rxforpa.com.)

Reference

1. Siegel JD, Rhinehart E, Jackson M, et al. Management of multidrug-resistant organisms in healthcare settings, 2006. Centers for Disease Control and Prevention, Atlanta, GA, 2007. Available at www.cdc.gov/ncidod/dhqp/pdf/ar/mdroGuideline2006.pdf. ■

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 those issues affect health care workers, hospitals, or the health care industry in general;
- **cite** practical solutions to problems associated with the issue, based on overall expert guidelines from the Centers for Disease Control and Prevention, the National Institute for Occupational Safety and Health, the U.S. Occupational Safety and Health Administration, or other authorities, or based on independent recommendations from clinicians at individual institutions. ■

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