Occupational Health Management™

A monthly advisory for occupational health programs

AHC Media LLC

INSIDE

Statement of Financial Disclosure: Allison Mechem Weaver (Editor), Coles McKagen (Associate Publisher), Joy Dickinson (Senior Managing), 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.

JUNE 2007
VOL. 17, NO. 6 • (pages 61-72)

Workplace violence: Occupational health nurses can be 'early alerts' to trouble

VA Tech, other scenes of violence show warning signs

Occupational health experts say there are some lessons in workplace safety that can be gleaned from the April 2007 shootings at Virginia Tech. To make those lessons effective, however, we first have to stop believing that workplace violence only happens to other people, they say.

"It's human nature to say, 'Oh, that only happens at other worksites,' but occupational health nurses know that it can happen anywhere," says **Louann Beck**, BSN, MS, COHN-S, occupational health nurse for Pacificorp in Portland, OR, and a frequent author and speaker on workplace violence. "In 23 years in occupational health, I have worked at a variety of worksites, and I have intercepted many cases," says Beck, referring to people on the brink of violent acts at work.

In fact, the American Association of Occupational Health Nurses (AAOHN) in 2003 conducted a survey on workplace violence, and some results clearly indicate a degree of denial among American workers and their attitudes toward workplace violence.

The AAOHN Workplace Violence Survey revealed that while one-fifth

EXECUTIVE SUMMARY

The recent mass murder at Virginia Tech University illustrates some facts about workplace violence that occupational health nurses (OHNs) have known:

- Most perpetrators of workplace violence show clear signs of danger before anything actually happens.
- OHNs are well-placed and well-trained to intercept potentially violent workers before they act out.
- Many workplaces believe that violence happens elsewhere, but won't happen at their jobs.
- In the aftermath of a violent act, OHNs must think of all groups of people who should be protected from exposure to bloodborne pathogens — not only anyone present at the incident, but also housekeepers and workers who deal with cleanup and repair.

of the U.S. workforce has experienced an episode of workplace violence within their own working environment (as opposed to hearsay about incidents occurring in other locations), 61% said they are not concerned about workplace violence in their worksite. Twenty-seven percent said they were concerned; 8% said they were "very concerned," and 4% said they were "extremely concerned; " **(See resource box, p. 63, for information on how to see the entire AAOHN survey report. Also, see "Survey: Violence warning signs often go undetected,"** ***Occupational Health Management*****, February 2004, p. 22-23.)**

AAOHN past President **Susan Randolph**, MSN, RN, COHN-S, says the survey indicated that most workers do not know what to look for in recognizing potentially violent offender characteristics. "These findings alone define a significant need for companies to commit to and implement workplace violence education and prevention programs," said Randolph. "Without employee education, a company will be far less able to defuse a potential violent situation before it arises."

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 $9.95 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: **Allison Mechem Weaver.**
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 **Leslin Hamlin** at (404) 262-5416.

Take danger signs seriously

Ignoring the early warning signs that so often precede violent acts is easier than confronting them, points out **W. Barry Nixon**, executive director of the National Institute for Prevention of Workplace Violence, an Orange County, CA-based consulting group that helps employers create workplace security programs.

Nixon says many employees fall victim to ignoring early warning signs. "The earlier you identify the problem and start taking steps to intervene, the more likely you are to prevent violence from occurring," says Nixon.

Experts say warning signs can include escalating, out-of-proportion anger toward co-workers, employers, or family members; an obsession with perceived injustices; altercations with co-workers; inappropriate responses to normal changes; expressions of feeling targeted or conspired against; and a refusal to accept feedback, particularly if it is critical. More lethal signs include verbalized threats or physical violence; a new, and possibly obsessive, interest in weapons; and expressions of sympathy for the perpetrators of violence.

"If someone is reading about the Virginia Tech shootings and says, 'I can understand why that guy did that,' that is a huge, very dangerous sign," Beck points out.

The AAOHN survey on workplace violence found the vast majority of respondents did not recognize many of the key workplace violence warning signs that have been identified by the FBI and other agencies. When given a list of "red flag" behaviors, less than 4% of respondents were able to identify some of the most common warning signs usually seen in potential offenders. The warning signs referred to in the survey included: changes in mood, personal hardships, mental health issues (e.g., depression or anxiety), negative behavior (e.g., untrustworthy, lying, or bad attitude), verbal threats, and past history of violence.

"We like to think that the people who do these [acts of violence] are psychotic, but the truth is, very psychotic people aren't out there holding down jobs," Beck stresses. "The people who are likely to commit these acts are people with symptoms resembling borderline personality disorders."

Beck says she is familiar with a recent episode involving a male employee who became increas-

ingly threatening toward his female boss. He was suspended from his position for one offense, but disregarding orders that he stay off the premises, returned to the office with a video camera and began filming his boss while he made threats to her. Later, he mailed her an envelope containing a photo of a woman who resembled her, and the photo had been cut into pieces.

"These were such dangerous signs. They tell me that not only is he mentally ill, he hates his boss and is harboring violent thoughts about her," says Beck. "But when she kept going to human resources, they kept responding that they didn't believe he was actually capable of committing violence." In fact, Beck says, the human resources staff recommended mental health counseling — for the female boss, to help "calm her down."

Worker defensive about time off?

Another sign to watch for is an employee who is missing a lot of time at work, and becomes defensive when confronted about it, according to **Karen Vesterby**, RN, BSN, COHN-S/CM, an occupational health nurse with the U.S. Department of State medical services office in Washington, DC. "Occupational health nurses are in the position of being able to see these signs early, maybe during a health screening, hearing test, or other encounter," says Beck. Also, employees tend to trust occupational health nurses, she says. "We're not the boss," Beck says. "And one of the things we're able to do for the employer is to be an arms-length resource for the employee. We can talk with them about things their managers can't, and if there is a problem, we can go to the supervisor and say, 'He's going to be off work for about a month,' and that's all they need to know."

When the worst happens, however, Vesterby says occupational health nurses must address the risks left in the wake of a violent incident. Occupational health and safety professionals must think of all groups of people who should be protected from exposure to bloodborne pathogens — not only anyone present at the incident, but also housekeepers and workers who deal with cleanup and repair, she says. **(See "Occupational health addresses the aftermath," p. 64.)**

Violence and health care not natural partners

The facts about health care workplace violence have been well documented. Health care leads all other sectors in the incidence of nonfatal workplace assaults, according to the Emergency Nurses Association (ENA), which recently adopted a position statement on violence in the workplace. **(For information on how to access that statement, see resource box, below.)** In a recent survey of more than 1,000 emergency department nurses, the ENA says 86% reported being the victim of violence in the last three years by patients or patients' family members, and 19% experience violence in the workplace on a daily basis.

"A lot of times, we've said, 'Oh, they can't help it; they're psychotic,'" says Beck. However, a lot of times, the violent patient or family member is in control of what they're doing, she says. "They're angry, or they have abused drugs or alcohol."

Nixon says nurses — and for that matter, anyone who works in health care — have long worked under the misconception that violence is part of their jobs. "But that notion is starting to change, and nurses are starting to be clear that it's not part of their job, they shouldn't have to put up with it, and more institutions are coming to terms with that," he says. ■

SOURCES/RESOURCES

For more information on workplace violence, contact:

- **Louann Beck**, BSN, MS, COHN-S. Occupational Health Nurse, Pacificorp, Portland, OR. Phone: (503) 813-5086. E-mail: louann.beck@pacificorp.com.
- **W. Barry Nixon**, Executive Director, National Institute for the Prevention of Workplace Violence. Phone: (949) 770-5264. Fax (949) 597-0977. E-mail: wbnixon@aol.com. Web site: www.WorkplaceViolence911.com.
- **Karen Vesterby**, RN, BSN, COHN-S/CM. Occupational Health Nurse, U.S. State Department Office of Medical Services. Phone: (703) 875-5120. E-mail: vesterbykm@state.gov.

The **Emergency Nurses Association** position statement, "Violence in the Emergency Care Setting" is available for free at the association's web site, www.ena.org. Click on "About ENA" and "Position Statements."

The **American Association of Occupational Health Nurses, Workplace Violence Survey** (2003) is available for free at www.aaohn.org. Click on "Pressroom" at left of screen. Click on "Archived Releases" to right of screen. Scroll down to "Critical Warning Signs of Workplace Violence Not What Employees Expect: AAOHN and FBI Deliver Workplace Violence Prevention Tips and Tools to Prepare Workforce (12/1/03)."

Occupational health addresses the aftermath of violence

Sometimes overlooked in the wake of an incident of workplace violence is the exposure risk that might result.

Karen Vesterby, RN, BSN, COHN-S/CM, an occupational health nurse with the U.S. Department of State medical services office in Washington, DC, worked at one federal agency where a man came to the office and shot and killed a woman there. In the midst of the shock and chaos, Vesterby says, her occupational health experience kicked in.

"We had to then consider that we had a bloodborne pathogen exposure and had to make sure that all people who were exposed were protected," she says. "They had to replace all the flooring, so we had to make sure the carpenters and flooring people were protected. It went far beyond just the people who were present that day [of the shooting]."

Housekeepers need protection in the aftermath of an exposure, as do security officers and even visitors, Vesterby adds. "This is when you see how effective your exposure control plan is, because in this case, there were 14 buildings at this facility, so there's no way an occupational health nurse could be the first one on site [to ensure immediate compliance with the plan]," she explains. "So have an exposure control plan ready and in place, and make sure that security and risk management includes occupational health nurses at the table while it's being drawn up."

W. Barry Nixon, executive director of the National Institute for the Prevention of Workplace Violence, says that if he tries to find a positive outcome that can be pulled from the aftermath of the Virginia Tech shootings, it is the indication that colleges and other employer sites with large numbers of employees scattered over an area are looking at how to communicate threats of violence when they occur.

"One of the issues being debated is how to connect with the information that someone might be about to do harm to himself or others and get that information directed to the right parts of the organization," he says. "There are privacy issues, but put that aside and ask how can occupational health identify what they perceive as a danger and communicate that to security or human resources or even a threat-assessment committee.

"Because of their interaction with employees, it's very possible that occupational health might be one of the early alert systems in a crisis." ■

Hospital mandates influenza vaccinations

Launched in 2004 to controversy and the threat of lawsuits, Virginia Mason Medical Center's (VMMC) mandatory influenza vaccine policy has been named the best in the country among health care immunization programs.

The National Influenza Vaccine Summit, an arm of the Centers for Disease Control and Prevention (CDC) and the American Medical Association (AMA), gave the Seattle medical center its award for excellence in health care immunization for achieving a 98% immunization rate among everyone working at the site — all employed staff and other individuals working in its facilities, including community physicians, vendors, volunteers, and contingent labor.

"We are delighted to be recognized for our efforts to protect our patients, our staff, and their families," says **Patti Crome**, RN, MN, CNA, FACMPE, senior vice president and clinic administrator at VMMC and part of the Virginia Mason flu team. Recognizing that other hospitals have met with varying degrees of success in getting employees to get flu shots, the center's employee health supervisor, **Beverly Hagar**, BSN, COHN-S, shared the program's history and tips for success with *Occupational Health Management*. Health care workers are among those groups that the CDC recom-

EXECUTIVE SUMMARY

The Centers for Disease Control and Prevention and American Medical Association have recognized two hospitals for exceptional success in immunizing staff against influenza.

- Virginia Mason Medical Center in Seattle has mandated its vaccination policy for all employees, volunteers, and vendors, achieving a 98% vaccination rate. The Washington State Nurses Association has sued Virginia Mason. It opposes making shots or masks requirements of employment.
- Waverly (IA) Health Center approached the immunization challenge by "busting" commonly held myths about flu vaccines, and it achieved a nearly 95% vaccination rate.
- Both campaigns relied heavily on staff input and participation, employee education, and lighthearted incentives.

mends receive annual influenza vaccine. **(See box, below.)**

Introducing a different plan

Hagar says VMMC was the first vertically integrated health care delivery system in the country to successfully implement an influenza immunization fitness-for-duty (i.e., mandatory) policy.

"The policy affects all employed staff and other individuals who work in our facility, including community physicians, vendors, volunteers, and contingent labor," says Hagar. "This ground-breaking work began as an idea generated from front-line staff, further developed during a Rapid Process Improvement Workshop [RPIW], and then grew into an innovative, organization-wide initiative supported by physician and administrative executive leadership and the board of directors."

Once the idea was adopted in principle, Hagar says, feedback was solicited from management and staff. "Comprehensive change management methods were utilized to engage the organization," she explains. "Management and staff meetings occurred during which there were open forums to discuss the program. Teams utilized Edward DeBono's 'Six Hats' discussion techniques to gather input and involve as many staff as possible." **(See resource box, p. 67, for more information.)**

VMMC fully implemented its influenza immunization fitness-for-duty policy in 2005 and 2006. In the program's first year, the center fielded legal action by the state nurses' union, which filed suit in federal court seeking to stop the vaccination program. The program was further hindered by a vaccine shortage that left VMMC with only about one-quarter of the vaccine it needed for a full program. Hagar says the medical center kicked off its campaign with a tailgate party featuring members of the Seattle Seahawks pro football team and "fueled by popcorn, bratwurst, and soft drinks." Seven hundred of VMMC's nearly 5,000 employees were vaccinated during the event.

In other efforts to promote vaccination, staff engaged in a "Name the Campaign" contest, in which they submitted slogans for the campaign. The winning slogan — "Save Lives — Immunize!" — was printed on bracelets and lanyards given out at vaccination clinics. The flu team developed a teaching video that used humor and personal stories from VMMC staff to emphasize the importance of flu immunizations in keeping patients, staff, and the community safe from widespread flu. Nurse and physician "flu champions" were designated to educate staff one-on-one.

Other campaign features included:

- The establishment of respiratory protection kiosks stocked with masks and educational materials at all entrance/access points systemwide;
- A "double shot" campaign with a local coffee company. Seattle-based Tully's Coffee teamed up with VMMC to reward those taking advantage of the medical center's two drive-up immunization centers with a free cup of coffee;
- Celebrity vaccinations featuring local sports figures and business leaders;
- Deployment of "flu shot carts" that brought flu shots to employees at their worksites during their shifts.

"One of the things we found to be challeng-

Persons for Whom Annual Influenza Vaccination is Recommended

- Children age 6-59 months
- Women who will be pregnant during the influenza season
- Anyone age 50 years or older
- Children and adolescents (age 6 months to 18 years) who are receiving long-term aspirin therapy and therefore might be at risk for Reye syndrome after influenza infection
- Anyone who has chronic pulmonary or cardiovascular disorders, including asthma
- Anyone who has required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunodeficiency caused by medications or HIV
- Anyone who has any condition (e.g., cognitive dysfunction, spinal cord injury, seizure disorder, or other neuromuscular disorder) that can compromise respiratory function or the handling of respiratory secretions, or that can increase the risk for aspiration
- Residents of nursing homes and other chronic-care facilities that house anyone with chronic medical conditions
- Anyone who lives with or cares for persons at high risk for influenza-related complications, including healthy household contacts and childcare providers
- Health care workers ■

Source: Centers for Disease Control and Prevention, Atlanta.

ing was debunking the myths around influenza immunization, such as, 'The flu vaccine gives you the flu,' and mercury issues, etc.," recalls Hagar. "We launched an educational campaign to address these many issues."

(Editor's note: The American Lung Association offers a list of some commonly held myths about influenza, at its prevention web site, www.facesof influenza.org. Under "Professional Health Info," click on "For Health-Care Providers," and then scroll down to and click on "Myths about Influenza Fact Sheet.")

Accommodations, not declinations

Declination forms, a point of contention at some hospitals where staff felt singled out by the forms, are not used in Virginia Mason's program. "We did not use the written declination system. We did provide an accommodation process, where individuals submitted an accommodation form to a committee who reviewed individual requests for medical and religious accommodations," Hagar explains. "Individuals who were accommodated had to use a mask for the duration of the flu season."

Laws on immunizing patients, HCWs vary widely by state

Centers for Disease Control and Prevention: Unclear if more laws make people safer

The Centers for Disease Control and Prevention (CDC) launched a study in 2005 to determine what states have laws regulating vaccinations for health care workers and patients, and it revealed in the published results that there are wide variations from state to state.

The CDC researchers say the results set the stage for future research to determine whether more laws could serve as effective tools to combat infectious diseases, but they do not conclude that more statutes would equal better protection.

More research is needed to provide evidence that laws "are an effective tool for ensuring coverage of vaccines for health care workers and others," says lead author **Megan Lindley**, MPH, of the CDC's National Center for Immunization and Respiratory Diseases. The authors of the study write that school entry laws nationwide have succeeded in maintaining high vaccination levels among children, thus reducing the incidence of diseases that vaccines can prevent. State laws geared toward immunization of other population segments are inconsistent, and there are no federal immunization laws. The authors say the study is the first to review laws mandating immunization of health care workers and patients in a variety of settings in all 50 states and Washington, DC. "There aren't very many laws, period," Lindley points out.

Laws pertaining to vaccination of health care workers and patients vary widely by state in terms of specific vaccines required, where the health care workers are employed, and the people covered, the report states. Mandatory vaccination laws most often pertained to patients or residents in institutional settings such as prisons or facilities for the developmentally disabled.

Only 32 states had some type of law about administering vaccines to health care workers. Of those, the laws in 21 states were for voluntary immunization of health care workers and the laws in 15 states were for mandatory vaccination. The majority of laws for voluntary immunization of health care workers, enacted in 20 states, concerned hepatitis B immunization; only three states — New Hampshire, North Carolina, and Kentucky — had laws mandating that health care workers be vaccinated against influenza (with no exceptions for those who wish to decline). The data are current as of June 2005.

"We are looking for tools so people can be vaccinated against diseases," Lindley said. "State laws are one of the tools that could be used. It's premature to use our data to say there ought to be a law, even if we suspect that if we had better laws we would have better [immunization] coverage."

The American Nurses Association (ANA) opposes mandatory vaccination for nurses as a condition of employment and states that the decision to be immunized should be made based on personal choice. The ANA does strongly encourage nurses to be immunized, however, especially against hepatitis B and influenza.

Model legislation could help states that want to implement vaccination requirements in various health care settings, the study concludes. Such requirements for health care workers and patients, properly enforced, should be an effective tool in reducing infections associated with health care and should increase the overall quality of medical care, according to the authors.

(Editor's note: For more information, contact Lindley at mlindley@cdc.gov. The report on the study, "Assessing state immunization requirements for healthcare workers and patients," appears in the June 2007 issue of the *American Journal of Preventive Medicine*, available at www.ajpm-online.net/content/advance. Click on "Assessing State Immunization Requirements for Healthcare Workers and Patients.") ■

Waverly Health succeeds by 'busting' flu myths

To boost its influenza vaccine rate among employees, Waverly (IA) Health Center (WHC) borrowed from the popular Discovery Channel series "MythBusters" and created its own "FluBusters" program, which resulted in a nearly 95% immunization rate in its staff.

"Waverly Health Center is fortunate to have an excellent infection control department who actively takes control of influenza," according to **David Rathe**, DO, director of the Waverly Infection Control Committee.

WHC's FluBusters committee members teamed up with employee health to create a "Vaccine Mobile" that traveled to all departments throughout the campaign week, offering the injectable flu vaccine and the FluMist nasal vaccine. Detailed vaccine information sheets were posted, and "MythBusters" cards were made available in every department to help dismiss any concerns regarding flu vaccinations. Staff members were photographed and included on posters displayed throughout the health center to encourage others to become FluBusters.

Paycheck stuffers were inserted into all paychecks with stickers that contained the "Be a FluBuster!" campaign logo, and after staff members were vaccinated, they received a sticker that said "I'm a FluBuster!" A caramel apple sundae party was given for all staff members who received a flu vaccination.

"This recognition is a tremendous honor, and I know Waverly Health Center can achieve a voluntary 98% staff vaccination rate with more education," says **Dixie Kramer**, RN, occupational health manager. "In the future, I would like to have a physician from our infection control committee present information to help educate staff about the influenza vaccine, including its effectiveness and safety, to dismiss any myths individuals may have."

[Editor's note: For more information on the Waverly Health Center program, contact: David Rathe**,** DO, Director, Waverly Infection Control Committee, Waverly Health Center, Rohlf Memorial Clinic, 220 10th St. SW, Waverly, IA 50677. Phone: (319) 352-4340 or Dixie Kramer, RN**,** Manager, Occupational Health, Waverly Health Center. Phone: (319) 352-4948.] ■

The Washington State Nurses Association (WSNA) has objected to the VMMC policy from the beginning. The WSNA advocates for all health care workers to be immunized, but it is against mandating the shots as a condition of employment. In a letter to VMMC nurses in January,[1] WSNA labor relations director **Barbara E. Frye**, BSN, RN, wrote that the court battle continues over the immunization program and the requirements that accommodated employees wear masks. "[We] are awaiting a trial or decision by the court." "In the mean time, the hospital cannot force any registered nurse to take a flu shot against their will."

However, the National Labor Relations Board has ruled that the hospital can require that those who don't receive the vaccine shot to wear masks, Frye told nurses. "We hope to get this ruling overturned," she added.

Hagar, however, says the vaccination program "has set a solid foundation for our medical center's annual influenza immunization efforts and for the safety of our many constituencies — patients, staff, and visitors.

"Virginia Mason was able to provide 100% protection through this program and we plan to continue these efforts. The medical center set an example of what is possible, and we would encourage other organizations to look at a program around mandatory."

Reference

1. Barbara Frye, in letter to Virginia Mason Medical Center nurses, Jan. 18, 2007. Web: www.wsna.org/localunits/virginiamason.asp. ■

SOURCES/RESOURCES

For more information on influenza vaccine programs:

- **Beverly Hagar,** BSN, COHN-S, Supervisor of Employee Health, Virginia Mason Medical Center, 1100 Ninth Ave., Seattle, WA 98101. Phone: (206) 341-0575.
- **Patti Crome**, RN, MN, CNA, FACMPE, Senior Vice President and Clinic Administrator, Virginia Mason Medical Center, 1100 Ninth Ave., Seattle, WA 98101. Phone: (206) 583-6517.

- For information on the "thinking hats" approach to issues from different perspectives, go to www.debonogroup.com/6hats.htm.

- To see newsletters from the **National Influenza Vaccine Summit**, sponsored by the American Medical Association and the Centers for Disease Control and Prevention, go to www.preventinfluenza.org and click on "National Influenza Vaccine Summit."

Do medical surveillance after drug exposure

Clinical, non-clinical personnel at potential risk

It's estimated that 5.5 million workers are potentially exposed to hazardous drugs or drug waste at their worksites, ranging from manufacturing and shipment of the drug to receiving it at a hospital, storing it, delivering it to patients, and disposing of it.[1] The significant threat to hospital workers has led the National Institute for Occupational Safety and Health (NIOSH) to issue an advisory on medical surveillance of health care workers exposed to hazardous drugs.

Drugs are classified as hazardous if studies in animals or humans indicate that exposures to them have a potential for causing cancer, developmental or reproductive toxicity, or harm to organs. Drugs used in treating cancers are among the most common hazardous drugs encountered in hospitals, according to the NIOSH alert.

"Health care workers must be informed and educated. Those who do not use recommended safe handling precautions are at risk for exposure," says **Marty Polovich**, MN, RN, AOCN, a member of the NIOSH Hazardous Drug Safe Handling Working Group. The group was formed in 2000 and issued a 2004 alert on safe handling and the April 2007 advisory on medical surveillance.

Workers at risk of exposures, other than nurses, include pharmacists and pharmacy technicians, physicians, operating room personnel, shipping and receiving personnel, waste handlers, and maintenance workers.

Exposed health care workers risk experiencing the same side effects that the drugs cause in ill patients, but with no therapeutic benefits. Occupational exposures can lead to acute effects such as skin rashes or gastrointestinal complaints, chronic effects such as adverse reproductive events (miscarriage, congenital malformation, etc.), and cancer, NIOSH reports.

A 2003 survey of more than 500 oncology nurses revealed that while more than 94% reported usually wearing gloves during chemotherapy handling, usual use of face and respiratory protection was less than 6%. Less than half (46%) said their worksites provided any type of medical monitoring.[2]

EXECUTIVE SUMMARY

Because of the widespread risk that hospital personnel receive toxic exposure to hazardous drugs, the National Institute for Occupational Safety and Health (NIOSH) has issued an advisory on medical surveillance of workers exposed to hazardous drugs.

- Occupational exposures can lead to acute effects such as skin rashes or gastrointestinal complaints, chronic effects such as adverse reproductive events (miscarriage, congenital malformation, etc.), and cancer.
- Employee health managers should develop a medical surveillance plan as part of a safety and health program that includes engineering controls, good work practices, and personal protective equipment (PPE).
- A survey of oncology nurses revealed that only 46% said their worksites provided any sort of medical monitoring for exposures.

Educate and develop surveillance plan

A comprehensive approach to minimizing worker exposure should be part of a safety and health program that includes engineering controls, good work practices, and personal protective equipment (PPE) supported by a medical surveillance program, NIOSH advises. Medical surveillance involves collecting and interpreting data to detect changes in the health status of working populations potentially exposed to hazardous substances. The elements of a medical surveillance program are used to first establish a baseline of workers' health and then to monitor their future health as it relates to their potential exposure to hazardous agents.

Employers should ensure that health care workers who are exposed to hazardous drugs are routinely monitored as part of a medical surveillance program. These health care workers include personnel such as nurses' aides and laundry workers who may come directly into contact with patient waste within 48 hours after a patient has received a hazardous drug.

NIOSH says the elements of a medical surveillance program for hazardous drug exposures should include, at a minimum:

- Reproductive and general health questionnaires completed at hire and periodically thereafter;
- Laboratory work, including complete blood count and urinalysis completed at the time of hire

SOURCES/RESOURCE

For more information on hazardous drug exposure precautions:

• **Marty Polovich**, MN, RN, AOCN, Oncology Clinical Nurse Specialist, Southern Regional Medical Center, 11 Upper Riverdale Road, Riverdale, GA 30274. E-mail: marty.polovich@southernregional.org.

• **NIOSH Hazardous Drug Safe Handling Working Group. Preventing occupational exposure to antineoplastic and other hazardous drugs in health care settings** (NIOSH publication No. 2004-165) is available on-line at www.cdc.gov/niosh/docs/2004-165.

and periodically thereafter. Additional tests, such as liver function and transaminase tests, may be considered;

• Physical examination completed at the time of hire and then as needed for any worker whose health questionnaire or blood work indicates an abnormal finding;

• Follow-up for those workers who have shown health changes or have had a significant exposure (substantial skin contact, cleaning a large spill [a broken bag, leaking IV line], etc.). Once a surveillance program is in place, NIOSH recommends, health questionnaires and lab results should be examined periodically to detect trends that might be a sign of health changes due to exposure.

References

1. NIOSH Hazardous Drug Safe Handling Working Group. Medical surveillance for health care workers exposed to hazardous drugs. NIOSH publication No. 2007-117. Web: www.cdc.gov/niosh/docs/wp-solutions/2007-117. Accessed May 5, 2007.

2. Martin S, Larson E. Chemotherapy-handling practices of outpatient and office-based oncology nurses. *Oncology Nursing Forum* 2003; 30:575. ■

CA proposes biannual fit-testing for HCWs

Draft targets airborne diseases

Once again a trendsetter in occupational health, California has created a draft standard on aerosol transmissible diseases that would allow biannual fit-testing of N95-filtering facepiece respirators until at least 2012 but would require the use of powered air purifying respirators (PAPRs) during high-hazard procedures.

Modeled after the bloodborne pathogen standard, the draft aerosol transmissible diseases standard calls for employers to maintain an exposure control plan that would outline source control measures, procedures for identifying suspect or confirmed cases, medical surveillance, communication with employees, training, and response to exposures.

Employers also would need to include information in the exposure control plan about how they would ensure an adequate supply of personal protective equipment.

The draft standard was designed to be flexible and applicable to various workplaces, from health care to homeless shelters. "It gives employers a way to tailor the control measures to the environment they're working in and also to their resources," says **Deborah Gold**, MPH, CIH, senior safety engineer with Cal-OSHA.

The standard still is under review. When it is formally proposed, Cal-OSHA will receive comments during a 45-day period, and the standards board will hold public hearings.

So far, more than 100 people have participated in the advisory committee process, including major organizations such as the California Nurses Association, the Service Employees International Union, and the California Hospital Association.

The draft standard grew out of concerns about respiratory protection, particularly after the U.S. Occupational Safety and Health Administration (OSHA) withdrew its tuberculosis standard in 2003, Gold says. That made health care employers subject to the general industry respiratory protection standard and its annual fit-testing rule.

Severe acute respiratory syndrome (SARS) heightened the awareness of airborne infectious disease risk to health care workers; 1,707 health care workers became ill from SARS worldwide, representing 21% of all cases, according to the World Health Organization.[1] "Employees and employers in health care started wondering, 'How are we going to control these emerging infections?'" says Gold.

In planning for pandemic influenza, once again issues of respiratory protection are at the forefront. "There's been a push to do something

on this issue," she says. "We don't want to write a new standard whenever a new pathogen comes out."

Cal-OSHA has been enforcing the annual fit-testing rule using state funds because of a Congressional prohibition on using federal funds for fit-testing enforcement. But the temporary biannual rule is designed to reduce the burden until there is further information from research on fit-testing by the National Institute for Occupational Safety and Health (NIOSH). Until Jan. 1, 2012, employers may increase the interval for repeat fit-testing to no more than two years for employees who do not perform high-hazard procedures, under the draft standard.

"This is the compromise that came out of advisory meetings," says Gold, although she acknowledges, "This could be challenged in rule-making."

The draft standard also requires employers to review and update their respiratory protection program annually and to provide annual training to employees.

The result is an increased focus on respiratory protection and airborne infectious diseases overall, Gold says.

Reference

1. World Health Organization. Summary of probable SARS cases with onset of illness from 1 November 2002 to 31 July 2003. 2003 Sep 26 [cited 2007 Mar 21]. Web: www.who.int/csr/sars/country/table2003_09_23/en. ■

Electromagnetic fields are no hazard to workers

Electromagnetic fields do not pose a health hazard to workers in the electrical energy supply industry, suggests a study of 28,000 people.

Exposure to low frequency electromagnetic fields of 50 to 60 Hz has been implicated in an increased risk of leukemia, brain, and breast cancers. Danish researchers examined the health and employment records of more than 22,000 utility workers at 99 electrical energy supply companies in Denmark. They found that even after two decades, the incidence of leukemia and brain and breast cancers was not increased.

There were no excess cases of leukemia among men or breast cancer among female employees who had been exposed to medium to high-frequency magnetic fields.

Women exposed to medium frequency electromagnetic fields were more likely to develop brain cancer than women with background frequency levels. But this was not true of men who had been exposed to high-frequency magnetic fields; they were less likely to develop the disease.

(*Editor's note: "Risk For Leukaemia and Brain and Breast Cancer Among Danish Utility Workers — A Second Follow-Up" was published in the online version of Occupational and Environmental Medicine. To access it, go to oem.bmj.com. Click on "Online First" in the upper right corner of the page. Scroll down to "May 1,* 2007.") ■

American Heart Association launches Start! campaign

The American Heart Association (AHA) has launched Start!, a national campaign that encourages individuals and employers to create a culture of physical activity and health.

Its goal is to reduce the risk for heart disease and stroke by promoting physical activity through workplace walking programs, thereby enabling participants to lead longer, healthier lives.

Start! is a free comprehensive program that calls for a long-term commitment from its participants, individuals, and companies alike. For individuals, MyStart! Online Fitness Tool offers a web-based fitness and nutrition tracker along with health information integrated within a single online resource.

For companies, the Start! Fit-Friendly Companies Program helps foster a culture of physical activity in the workplace. AHA offers many free tools and resources for employee health managers to use in creating workplace wellness and walking programs, and it recognizes businesses that commit to them on its website.

For information on implementing the Start! program at your worksite, please visit the AHA web site at www.americanheart.org/start. ■

CE Objectives / Instructions

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.

COMING IN FUTURE MONTHS

- How hospitals are cutting rising costs linked to obesity
- Proven strategies to dramatically reduce employee falls
- How to tell when you need your own attorney
- Increase your leverage with hospital administrators

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, you must complete the evaluation form provided in ***this*** 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.

CE *questions*

21. Which of the following best describes one of the findings of the AAOHN 2003 survey on workplace violence?
    A. Most surveyed recognized red flags pointing to workplace violence, but were not worried about it happening at their jobs.
    B. Few recognized red flags indicating risk of workplace violence, and more than half were not concerned about violence at their worksites.
    C. Most recognized red flags indicating risk of workplace violence, and more than half said they are "extremely concerned" about violence happening at their jobs.
    D. Few recognized red flags indicating risk of workplace violence, and more than half said they are "extremely concerned" about violence erupting at their workplaces.

22. Respiratory protection kiosks at hospitals, a "double shot" campaign with a local coffee company, celebrity vaccinations are part of:
    A. Virginia Mason Medical Center's influenza immunization program
    B. Waverly (IA) Health Center's FluBuster campaign
    C. The CDC's guidelines for encouraging health care worker vaccinations
    D. None of the above

23. CDC researchers learned that nearly all states have immunization laws that comply with the federal law on health care worker immunizations.
    A. True
    B. False

24. According to NIOSH, which of the following should be included in a medical surveillance program for hazardous drug exposures?
    A. Reproductive and general health questionnaires completed at the time of hire and periodically thereafter
    B. Laboratory work, including complete blood count and urinalysis completed at the time of hire and periodically thereafter
    C. Physical examination completed at the time of hire and then as needed for any worker whose health questionnaire or blood work indicates an abnormal finding
    D. All of the above

Answers: 21. B; 22. A; 23. B; 24. D