Occupational Health Management™

A monthly advisory for occupational health programs

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Take credit for reducing top health care cost drivers: Follow these steps

[Editor's Note: This is a three-part series on using financial data to demonstrate the value of occupational health programs. This month, we show you how to link programs to the top health care cost drivers at your workplace. In previous months, we reported on how wellness programs impact business objectives, and gave strategies to take credit for health care cost savings.]

Use data to get a "seat at the business table"

Can you name the high cost drivers at your workplace for workers' compensation claims? What about group insurance claims for non-occupational illnesses and injuries?

If you don't know this information, you won't be able to develop programs to prevent and control these conditions—a lost opportunity to save your company a lot of money, warns **Annette B. Haag**, MA, RN, COHN-S/CM, FAAOHN, a Simi Valley, CA-based consultant.

"I am still amazed when I ask nurses: What is the estimated dollar amount that your company pays in health care costs and workers' compensation? Can you list the three top cost drivers in each of these areas? And many cannot," says Haag.

However, when OHNs ask human resources or risk management personnel for this information, the attitude is often "Why do you need to know that?"

"You need to educate management about their health care costs and top cost drivers and how you can impact these," says Haag. "You don't

EXECUTIVE SUMMARY

Identify your top cost drivers for workers' compensation claims and non-occupational illnesses and injuries, and link these areas to safety and health promotion programs. Estimate a program's expected return on investment before it's implemented. Ask for additional time, computers, or personnel for data analysis. Involve safety, facilities, finance, and human resources personnel.

want to put your resources into a program that returns nothing."

She recommends saying the following: "As an OHN, one of my key responsibilities is to continuously monitor these costs, bring them to your attention and assist you in designing specific safety and health programs to reduce healthcare costs. For example, reducing workers' compensation costs can significantly reduce your loss ratio, resulting in a decrease in insurance premiums."

By developing, implementing and managing programs that demonstrate a positive outcome, you can "get a seat at the business table," says **Chris Kalina**, MBA, MS, RN, COHN-S/CM, FAAOHN, director of global occupational health programs and services at Wm. Wrigley Jr. Company in Chicago, IL. "Several years and jobs ago at another company, I was promoted from a staff position into management because I was able to demonstrate cost savings on various occupational health and safety programs," she says.

Follow these steps to show your impact on high-cost drivers:

Assess the current health promotion programs that are in place.

"Then look at the balance sheet of the business to see what the biggest cost drivers are, and determine strategies to mitigate the identified risks," says Kalina.

Get a fuller picture of health care costs.

OHNs typically provide reactive care for occupational injury or illness, and focus solely on those reports. "By also bringing employees into the clinic for preventive or disease management, and obtaining aggregate data from health benefits plans, you can get a much more complete picture of the population's health status," says **Karen Griffith**, global health, well-being and productivity senior program manager at Chandler, AZ-based Intel Corporation.

"Our goal is to better develop our programs, so we can not only decrease work-related injuries and illnesses, but also improve employee health and lower healthcare costs," says Griffith. By monitoring risk factor improvements and safety indicators in conjunction with individual healthcare benefits program costs, you can see whether programs are improving the health of employees over time.

Several new wellness and prevention programs have been added at Intel based on programs outcome information. "We recently expanded our smoking cessation program as a result of health risk assessment data, and are piloting some innovative musculoskeletal disorders impact reduction programs onsite," reports Griffith.

Identify high-cost drivers.

Cardiac conditions, hypertension and diabetes are the likely suspects for high-cost drivers, but high-risk pregnancies, sleeping disorders, and depression also incur significant costs. "These are areas that individuals don't often think about, and we are not doing a very good job of analyzing the data to identify these," says Haag.

To discover hidden cost drivers, work directly with the department that negotiates your company's healthcare benefits contract to obtain data on cost per illness. "This is the easiest way to obtain objective, valid data on how much illnesses and injuries are costing your company," says Kalina.

Determine which diseases are endemic in the employee population, then calculate the expected

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prevalence over the next 10 or 20 years, advises Kalina. "Everybody talks about diabetes, but Hepatitis C is becoming more prevalent among young people. So you can predict that cases will increase, and project that increase for all of the associated costs with liver damage," she says.

Estimate ROI for a program before it's started.

Before dedicating limited time and resources to a program, understand upfront what the value is. "Programs that are not planned in a way where clinical and business value can be demonstrated will be the first casualty when a cost crunch occurs," says Kalina.

For instance, a flu shot program isn't likely to be cost effective if the employee's insurance covers it or they can get vaccinations from the corner pharmacy—it's better to offer a resource that the employee can't get otherwise.

"If management doesn't understand the business rationale for a program, let it go—unless for some reason the program is critical to the health and welfare of the employee," says Kalina.

Not every program will demonstrate a high return on investment in terms of dollars. "But there are other gains in occupational health and safety that should be measured, both short and long term," says Kalina. These include improved employee morale, reduced absence, improved work-life balance, reduced safety costs and reduced turnover.

Involve others.

To get the data you need, enlist the help of facilities, finance, environmental health and safety managers and human resources. "Don't let them tie your hands if you have limited resources—ask for assistance," says Haag. "Ask for the support you need to get your analysis done—time, additional computer programs, or personnel."

Once you have team involvement with tackling costs, you have a valuable asset: Everybody's buy-in. "Then, obtaining data and getting information from supervisors becomes much easier, and they share in the satisfaction of a job well done," says Kalina.

Take credit for savings.

Connect the safety and health promotion programs you put in place with reduced insurance premium costs—for example, you may get a 20% discount on the manual rate you pay in workers' compensation premiums because your losses are minimal.

"If you have done a phenomenal job in reducing back injuries, do you want to be compared with other employers who don't do that and pay high workers' compensation premiums? Of course not," says Haag. "Show that you are bringing the premiums down because the costs are controlled. If the company had a 200% loss ratio and the ratio has dropped to 90%, take credit for that—you have brought that ratio down."

Resist the urge to "fudge the figures," warns Kalina. "That is the kiss of death in regards to your credibility and future programs, because a savvy business person will see that," she says. "Always get your figures from an objective source— your insurance company's calculations on utilization, or an electronic process in place to calculate absences. You have to be able to defend your data."

A common mistake is to inflate savings when costing out prevention programs. "Be careful of this—how do you say in 10 years you will eliminate six lung cancers?" says Haag. "If you don't know the numbers, don't use them." ■

SOURCES

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Heart attacks decreased for non-smokers by 70%

Results confirm hazards of secondhand smoke

After a countywide smoking ban was implemented in Indiana's Monroe County, hospi-

tal admissions for heart attacks dropped 70% for non-smokers, but not for smokers, according to a new study.[1]

Researchers compared 22 months before and after the smoke-free law was implemented, and found a 59% net decrease in hospital admissions for heart attacks in nonsmokers with no prior cardiac history, hypertension, or high cholesterol.

This shows the dramatic impact that a smokeless workplace can have on employee heart attack risk, says **Dong-Chul Seo**, PhD, CHES, the study's lead author and an assistant professor in Indiana University—Bloomington's Department of Applied Health Science.

"The results of my study confirm how hazardous exposure to secondhand smoke is," says Seo. "Occupational health professionals should use these research findings to advocate for a smoke-free workplace."

According to the American Nonsmokers' Rights Foundation, 12,559 municipalities are covered by a 100% smoke-free provision in workplaces, representing 62.8% of the U.S. population. A total of 26 states, Puerto Rico, and Washington, D.C. have laws requiring 100% smoke-free workplaces.

"The study shows that strong smoke-free workplace laws result in immediate and significant improvements in heart health, particularly in nonsmokers," says Seo.

Give workers a long lead time

Dallas-based Texas Instruments is currently evaluating the possibility of switching to a smoke-free workplace at five facilities in Texas and Arizona, covering 13,000 (85%) of its employees.

EXECUTIVE SUMMARY

Hospital admissions for heart attacks dropped 70% for nonsmokers after a countywide smoking ban in Indiana, showing the dramatic impact a smokeless workplace can have on heart attack risk.

The study's findings can help you to advocate for a smoke-free workplace.

Hospital admissions didn't decrease for smokers.

Twenty-six states require 100% smoke-free workplaces.

"We are in the process of building the business case and identifying the potential pitfalls and pros and cons of this, so we can present this to management and then proceed," says Linda Moon, manager of health promotion.

Moon says that a team of representatives from the company's different business units, facilities group, environmental safety and health, and benefits department is currently looking at several factors. These include the current location of designated smoking areas, maintenance costs incurred as a result of smoking, air condition and ventilation costs, and occupational illnesses and injuries related to secondhand smoke and productivity.

"We currently have an integrated data warehouse with all of our medical, pharmacy and disability data, so we can determine the impact of tobacco-related disorders on our overall claims experience, and the number of people who are using disability dollars as a result of smoking-related illness," Moon says. "We are pulling that data now, to begin to evaluate that."

Measuring loss of productivity due to smoking is more difficult. "That's a really hard thing to get your arms around," says Moon. The team is currently calculating the total time spent away from the work site due to smoking breaks that are being taken.

"Before we proceed, we will do some polls and studies with our management team to see how it may impact business operations if we do this," she says. "We want to be cautious about doing it in the right way if we move forward."

That includes giving employees ample warning—at least a year—to quit smoking before the workplace goes smoke-free, with a big push to boost participation in smoking cessation programs. "We don't see a real high utilization of our current smoking cessation program. We are looking at a more intense program, delivered in a different model, either phone or on site," says Moon.

Currently, an on-line smoking cessation program is available and prescription medications covered. The company is considering covering over-the-counter nicotine replacement therapy and offering flexibility in the workplace to make it easy for employees to attend programs onsite.

In 2008, employees who smoke pay $30 a month extra for medical premiums. The same charge applies for an adult dependent covered under the plan, so if an employee and their spouse both smoke, they pay up to $720 extra

annually.

The goal is to help employees kick the habit and be able to sustain that over the long term, says Moon.

"Some companies make a decision and implement this in 30 days, but we think it's critical to give a really long lead time," says Moon. "If employees are not successful on their first try, they will still have time to attempt it again—and hopefully be successful before the policy would go into place."

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Do you suspect FMLA fraud? Don't assume hands are tied

You don't have to ignore abuse of intermittent leave

If you are charged with administering the Family and Medical Leave Act (FMLA), you probably find it difficult to effectively monitor intermittent leave. "Occupational health nurses (OHNs) are concerned about employee abuses," says **Rose M. Matricciani**, RN, JD, partner at the law firm of Whiteford, Taylor & Preston in Baltimore. "However, they want to be sure that they do not violate any of the provisions of the FMLA. Certainly, litigation and lawsuits are possible, and avoiding these situations is a paramount concern."

EXECUTIVE SUMMARY

Although employee abuse of intermittent leave under the Family and Medical Leave Act is a common problem, occupational health nurses are concerned about the possibility of litigation if they take action. If you suspect abuse:
- Verify that the employee's condition interferes with his or her ability to do her job.
- Require a second opinion or determine whether the physician's opinion is justified.
- Track patterns, such as leave taken during holidays or when school is not in session.

If you are concerned that an employee is abusing intermittent leave under FMLA, take the following actions:

Request medical certification for a serious health condition.

"All too often, a 'serious health condition' as defined by the FMLA, can include almost anything," says **Howard M. Sandler**, MD, president of Sandler Occupational Medicine Associates in Melville, NY.

Determine that the physician knows the essential job functions, that the employee has indeed been evaluated appropriately, and that the condition really does interfere with the person's ability to be at work and do the job, Sandler recommends.

In addition, ask for recertification if you have doubts about the employee's reason for his absence, advises Matricciani.

Request a second opinion if you suspect the validity of a medical certification.

However, requiring the employee to get a second or third opinion examination often "isn't really worth it," according to Sandler. "Relatively few clinicians, especially those not in occupational or environmental health, have an understanding of what the medical standards are for the essential job function requirements," he says. Without this information, the second or third evaluators rarely provide essential information.

Still, you can verify the physician has some way of justifying his medical opinion, such as generally accepted practice guidelines. "This helps to make sure that the doctor isn't simply being told by the patient, 'Look, I have this problem, I need to have this form filled out, and here's

how much time I need off,'" says Sandler.

Identify trends in use of leave.

"For example, is the employee taking leave during the same time of year, around a holiday, birthday or, for parents, when school is not in session? Does the use of leave appear to be increasing and indicative of a chronic condition?" asks Matricciani.

A tracking system can help you spot patterns of change or abuse. "With chronic intermittent leave, which is where you get the most problems, employees may be taking Mondays and Fridays off all the time. No disease is a weekend oriented disease," says Sandler. "This gives you the ability to red flag certain people."

Follow procedures religiously and document thoroughly.

OHNs are the "eyes and ears and documenters," and can determine how well the employee is performing on the job, then communicate this information to their corporate medical director or the physician service provider, says Sandler.

"You might see that a pattern doesn't make sense. Or if the employee indicates they aren't taking their medication, you can get back to the treating physician and say, 'We have evidence they're not taking their medication so you might want to have them come back to your practice,'" he says.

If you can identify potential fraud, then you can put a stop to it—but you can't do that with just a feeling or opinion. "Ask the employee how they are doing, what they are finding difficult, and what you can do to help," Sandler suggests. "You can certainly offer them participation in disease management programs. If you suspect fraud of any sort, you are not required to just ignore it, but you do need an objective basis."

Require updates on the employee's status.

Employees may not go to their physician for six months, and then show up right at the time they are required to, in order to be maintained as a "serious health condition," says Sandler.

One problem is it's almost impossible for OHNs to determine the amount of time off needed for a given individual. "There are rough guidelines for how long somebody should be off for an acute event, but there are no published guidelines out there for any of the chronic diseases such as asthma or depression," says Sandler.

It's necessary to follow an employee for a period of time to establish whether the person is getting better, getting worse, or is noncompliant with their medications, says Sandler.

Hire an investigator if necessary.

"Certainly, hiring an investigator is not the first thing that an employer thinks about when trying to determine if FMLA leave is being abused," says Matricciani. "However, in situations where there is a serious concern about the use of FMLA leave, an investigator can be key in ascertaining abuses." ■

SOURCES

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Measles returns: Know worker immune status

Improve recordkeeping, immunize older workers

Make sure you know the measles immune status of your employees—and have ready access to the information. That is the message to employee health professionals contained in a recent public health advisory from the Centers for Disease Control and Prevention in Atlanta.

The advisory was prompted by an outbreak of measles in Arizona, which led hospitals on a paper chase and vaccination blitz as they sought to ensure the immunity of employees.

Optimally, vaccination information should be contained in an electronic database, not just in paper records, says **Jane Seward**, MD, MPH, deputy director of CDC's Division of Viral Diseases. "If they don't have records that can be immediately provided when an exposure occurs, it's a huge amount of work to round up that information," says Seward.

Meanwhile, the CDC may be on the verge of changing its recommendation for people born before 1957. While measles was a ubiquitous childhood disease for that generation, a small proportion remains non-immune. It would be prudent to conduct serologic testing or to give them one dose of the MMR (measles, mumps, rubella) vaccine, Seward says.

That is what would be recommended in the case of an outbreak. The 1998 recommendation states: "...although birth before 1957 is generally considered acceptable evidence of measles immunity, measles has occurred in some unvaccinated persons born before 1957 who worked in health-care facilities. Therefore, health care facilities should consider recommending a dose of MMR vaccine for unvaccinated workers born before 1957 who lack a history of measles disease or laboratory evidence of measles immunity."[1]

"It is a bit of a double message," she says. "You're considered immune, but if there's an outbreak, you're not. It's better to have the immunity status of everybody, including those born before 1957, with serological testing or physician-documented history of disease."

Testing employees during an outbreak often isn't practical, says Seward, because the employees need to be vaccinated as quickly as possible. A change in the recommendation will likely be proposed when two expert panels convene in June to discuss immunization and health care policy—the Advisory Committee on Immunization Practices and the Healthcare Infection Control Practices Advisory Committee, Seward says.

Sick tourist from Switzerland

A tourist from Switzerland triggered an outbreak this winter when she came to the emergency department at Northwest Medical Center in Tucson. As of mid-April, 11 exposed people ranging in age from 10 months to 50 years had contracted measles. That included one susceptible health care worker.

Measles is airborne, and anyone in the same room with a measles patient could be infected, says Seward. "It's very, very highly infectious," she says. "It's a serious disease. People who get it typically do end up in health care settings—in emergency rooms, in outpatient [clinics] or likely hospitalized. Once that occurs, then there are a number of health care personnel who are exposed."

As many as 1,800 hospital employees were considered potentially exposed, and the hospital ultimately gave about 400 vaccinations, she says.

In another case, a hospital had electronic employee records only for those hired after 1990. They had to determine immune status for hundreds of other employees.

Employees are not the only ones who need verified immunity. Contract workers, volunteers, and any others who come into contact with patients should be vaccinated or have immunity against measles, she says.

It's important to take swift action by isolating patients with known or suspected measles. CDC advises health care providers to suspect measles in anyone with a "generalized maculopapular rash" that lasts three or more days, and who has a fever of 101 or greater and a cough, nasal congestion or conjunctivitis. The incubation period can range from 7 to 18 days, and immunocompromised patients may not exhibit the typical rash, CDC cautions.

Complications of measles can include encephalitis and pneumonia. The World Health Organization reports that an estimated 242,000 people died of complications from measles in 2006.

Although measles is not endemic in the United States, importations continue to occur. Ongoing outbreaks in Switzerland and Israel led to cases in New York, Virginia, Michigan and California.

"We need to be prepared until there's no measles in the world, and that's not likely to occur," says Seward. "Health care settings need to be prepared, and they need to remember that measles still exists."

Titering employees to check immune status

By requiring evidence of measles immunity at hire, the Marshfield (WI) Clinic avoids the difficulty of reviewing employee records each time a measles case occurs in Wisconsin, says **Bruce Cunha**, RN, MS, COHN-S, manager of employee health and safety.

"We titer all new employees. Any new employee that doesn't have a documentable immunity, we vaccinate again. Then we don't have to go through a hassle every time we have an outbreak," he says.

That is true even for employees who report previous two-dose vaccination or for those born before 1957, who are presumed to have had exposure to measles.

After the extra dose of vaccine, fewer than 10% fail to develop immunity, says Cunha. Those employees are considered to be non-responders.

"We send them a notice that we consider them non-immune and they have to be careful not to work with patients with measles," he says.

The titering of all employees is not a CDC recommendation, but it is a precautionary measure, says Cunha." Immunization does not equal immunity," he notes.

[Editor's note: A copy of the CDC Health Advisory on measles is available at www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00273.]

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Preventing measles transmission

This is an excerpt from the CDC Health Advisory related to health care workers:

To prevent transmission of measles in healthcare settings, airborne infection control precautions (available at http://www.cdc.gov/ncidod/dhqp/gl_isolation.html) should be followed stringently. Suspected measles patients (i.e., persons with febrile rash illness) should be removed from emergency department and clinic waiting areas as soon as they are identified, placed in a private room with the door closed, and asked to wear a surgical mask, if tolerated. In hospital settings, patients with suspected measles should be placed immediately in an airborne infection (negative-pressure) isolation room if one is available and, if possible, should not be sent to other parts of the hospital for examination or testing purposes.

All healthcare personnel should have documented evidence of measles immunity on file at their work location. Having high levels of measles immunity among healthcare personnel and such documentation on file minimizes the work needed in response to measles exposures, which cannot be anticipated. Recent measles exposures in hospital settings in three states necessitated verifying records of measles immunity for hundreds or thousands of hospital staff, drawing blood samples for serologic evidence of immunity when documentation was not on file at the work site, and vaccinating personnel without evidence of immunity. ■

Declinations boost HCW flu vaccine rates

Yet some nurses complain of 'coercion'

Education alone will not boost your influenza vaccination rates, but a dogged campaign that includes declination statements can produce higher rates.

That is the conclusion of recent research published in *Infection Control and Hospital Epidemiology (ICHE)*.

The Wisconsin Division of Public Health compared hospitals that vaccinate at least 50% of their health care workers and those with vaccination rates below 50%. "We found that declination forms were significant in getting more people vaccinated," says **Gwen Borlaug**, CIC, MPH, infection control epidemiologist. "The declination forms appear to be the single most important factor."

Borlaug reported that finding in ICHE,[1] and then found the relationship between declination statements and higher vaccination rates to be even greater during the subsequent influenza season. The Wisconsin Division of Public Health is encouraging hospitals to track their rates and to use declination statements, which require employees to sign a form saying they were offered the vaccine and understand its benefits to patients and employees but chose not to have the vaccine.

Other factors, such as delays or shortages in vaccine supply, influenced vaccination rates, Borlaug reported. The Wisconsin Division of Public Health also recognizes hospitals that achieve high rates. Hospitals and nursing homes with a rate of 80% or greater become part of the "80 Percent Club."

Almost all of the Wisconsin hospitals used an education campaign to promote flu vaccination or employees. Yet education alone does not seem to have a consistent impact on vaccination rates,

according to a study at the Mayo Clinic in Rochester, MN.

Despite extensive education programs, 19% of nurses still incorrectly stated that the influenza vaccine contains live viruses that can cause disease. More than a third (37.5%) confused the symptoms of the "stomach flu" with influenza. And only 68% of nurses who said they had all the information they needed about influenza and the vaccine said they intended to be vaccinated.[2]

"Education as a strategy to achieve and maintain high rates of immunization does not work," says **Gregory Poland**, MD, professor of medicine and infectious diseases, director of the Mayo Vaccine Research Group, and an author of the article. "People sometimes misinterpret me when I say that. It's not that I don't believe education is helpful. The problem is that for many organizations they rely solely on education and they never get past the 40% to 60% rate."

In general, people are reluctant to change their habits based on education alone, notes Poland. After all, almost everyone knows that it's unhealthy to smoke or to be obese—and yet both remain a significant cause of disease in the United States.

A push-back from declinations?

However, the path to higher influenza vaccination rates isn't so simple. Hospitals that boosted rates by using declination statements combined them with other measures, such as incentives, better access to vaccination, and high-profile administrative support.

That sort of multipronged approach enabled Emory Healthcare in Atlanta to raise vaccination rates from 43% in 2005-2006 to 66.5% in 2006-2007. Nurses had the lowest rate of declination (13.2%).

However, almost half of the nurses who declined (47.8%) wrote a comment about the reason for declination; a majority of those mentioned feeling "pressured" or "coerced," the authors stated.[3]

William Buchta, MD, MPH, medical director of the Employee Occupational Health Service at the Mayo Clinic, urges employee health professionals to act with caution when considering the use of declination statements. He conducted a pilot test of a declination statement sent by email; in a subsequent survey, 22% of the nurses indicated they had been irritated by the request to complete a declination statement.

"I think people need to think strongly about what they're doing when they're going to twist people's arms," he says. Mayo decided against using declination statements—and has a vaccination rate of 79%.

Flu vaccination should become a part of the institutional culture, he says. Mayo also puts extra resources into an Enhanced Flu Vaccine Program, targeting units with vulnerable patient populations, such as the bone marrow transplant unit and intensive care unit.

However, for hospitals that have struggled to move their vaccination rates beyond 40%, declination statements may provide a much-needed boost, he acknowledges.

Pandemic drill also boosts rates

Another strategy emerged from the University of Iowa Hospitals and Clinics in Iowa City. The hospital system conducted a pandemic influenza drill that coincided with the annual influenza vaccine campaign.

A peer vaccination program created a vaccination "blitz" as part of the 2005 drill. Nurses vaccinated each other, allowing most vaccinations to occur within a six-day period. The vaccination rates for nurses rose from 39% to 63%.[4]

Although the drill wasn't repeated in 2006, hospital administrators had a greater appreciation for the resources needed to improve flu vaccination rates, and the peer vaccination program kept rates at a higher level, the authors reported.

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Will poor match hurt vaccine efforts?

CDC: Overall effectiveness was 44%

This past winter, influenza vaccine expert **Gregory Poland**, MD, director of the Mayo Vaccine Research Group at the Mayo Clinic in Rochester, MN, got the flu. Yes, he had the flu vaccine. But this year, the vaccine was not a good match with the prevailing strains.

In fact, the Centers for Disease Control and Prevention in Atlanta reported that two of the three strains in the 2007-2008 vaccine were "sub-optimally matched," and that the overall effectiveness of the vaccine was 44%.

Will this season's poor vaccine match impact future health care worker influenza vaccination? What do you tell health care workers about the vaccine if use the poor match as an excuse to remain unvaccinated?

"It's imperfect, but it's the best that we have," says Poland. "It's significantly effective when you look across years and across populations."

The effectiveness of the vaccine was tested among patients with influenza who came to Marshfield (WI) Clinic facilities between January 21 and February 8. The influenza B strains detected were antigenically distinct from the B strain included in the vaccine. Seven of nine influenza A viruses had drifted from the A strain used in the vaccine. Two influenza A (H3N2) viruses were similar to the vaccine strain.

Just 19% of the patients who tested positive for influenza had been vaccinated.

"In this analysis, preliminary vaccine effectiveness results indicated that, despite the antigenic differences between vaccine and circulating H3N2 strains, the effectiveness of vaccine in preventing medically attended respiratory illnesses from influenza A infections was 58%," the researchers concluded. "In contrast, no vaccine effectiveness could be demonstrated against influenza B."[1]

While in some years, the flu vaccine has been even less effective than this year's vaccine, in general the match is significantly better, says **Dan Jernigan**, MD, MPH, deputy director of CDC's influenza division. "In the last 20 seasons, 16 have had good matches and there have been four that were less than optimal matches," he said in a press briefing.

Anticipate comments

Bruce Cunha, RN, MS, COHN-S, manager of employee health and safety at the Marshfield Clinic, is already anticipating the comments he will get during the next vaccination season. His spin: The vaccine worked well for the A strain that was a better match.

"We would have had a lot more hospitalizations and fatalities. That's the message we have to get out," he says. "It still does give you protection."

That also was the message from CDC. "The measurable benefit demonstrated in this study supports existing public health practice of continuing to recommend influenza vaccination even when there is indication of a sub-optimal match between the vaccine viruses in circulating influenza viruses," Jernigan said in the briefing.

Meanwhile, Marshfield Clinic emphasized its respiratory etiquette ("Cover your cough") program, masking patients and employees with respiratory symptoms, Cunha says.

While it is discouraging to have a vaccine that is less than optimally effective, Poland notes that employees may realize how important it is to prevent the disease with both vaccination and infection control practices.

Poland said he suffered from a "bacterial superinfection" after getting the flu and took two sick days—his first in the past 20 years. "It impresses it upon you in a more personal way," says Poland. He imagines how severe it could be for an elderly person with other health problems. "I understand why people die of it," he says.

Reference

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Smokeout: OR nurses fight to remove hazard

AORN calls for smoke evacuation

OR nurses want to clear the air in the operating room. The Association of periOperative Registered Nurses (AORN) in Denver issued a position statement in April urging hospitals and

other health care providers to reduce exposure to surgical smoke and bio-aerosols released in laser and electrosurgical procedures.[1]

About 39 noxious chemicals as well as infectious particles and viable tumor cells have been identified in smoke plumes. Exposure leads to eye and respiratory irritation, headaches, and an increased risk of asthma among OR nurses, according to health hazard evaluations conducted by the National Institute for Occupational Safety and Health (NIOSH). Researchers have determined the potential for viral or bacterial transmission from viable particles.[2]

Yet an online survey of 623 AORN members by Duke University researchers indicated that local exhaust ventilation is not routinely used in electrocautery or electrosurgery procedures. The regular use of local exhaust ventilation ranged from 8% to 59%, the study found.[3]

"On the front door of the hospital, it says 'This is a smoke-free facility.' We need that same sign on the door of the OR," says **Kay Ball**, RN, MSA, CNOR, FAAN, an educator and consultant who is a past president of AORN and a longtime advocate for addressing surgical smoke. Ball is conducting research on surgical smoke evacuation for a doctoral dissertation and chairs the AORN Surgical Smoke Task Force.

The AORN position statement is just the first step toward building awareness of the hazards of surgical smoke. The OR nurses plan to create a "toolkit" that will help them educate their colleagues about surgical smoke. It will include a Powerpoint presentation with a test that can be used by OR staff to obtain continuing education credits as well as sample policies, posters, a bibliography and other information.

Too often, nurses and other OR employees suffer from headaches or respiratory problems after a shift in the OR but don't connect the symptoms with the continual exposure to surgical smoke, says **Mary Ogg**, RN, MSN, CNOR, perioperative nursing specialist with AORN's Center for Nursing Practice. "This will be a way to get [the message] out to all the members of the perioperative team," she says.

How bad is surgical smoke? NIOSH investigators visited operating rooms in three hospitals in 2000 and 2001 to measure its impact. They detected formaldehyde, acetaldehyde and toluene, though not above recommended or permissible exposure limits. Yet even at low levels, compounds in the surgical smoke could cause irritation of the eyes and mucous membranes, especially among sensitive individuals, the investigators concluded.

References

1. Association of periOperative Registered Nurses. Statement on surgical smoke and bio-aerosols. Available at www.aorn.org/PracticeResources/AORNPositionStatements/SurgicalSmokeAndBioAerosols/. Accessed on April 21, 2008.

2. Ulmer BC. The hazards of surgical smoke. *AORN J* 2008; 87:721-734.

3. Edwards BE and Reiman RE. Results of a survey on current surgical smoke control practices. *AORN J* 2008; 87:739-749. ■

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.

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 the June issue and return it in the reply envelope provided in order to receive a letter of credit. When your evaluation is received, a letter of credit will be mailed to you. ■

COMING IN FUTURE MONTHS

- ■ Learn the surprising costs of depression in your workplace
- ■ Use a novel program to dramatically cut diabetes costs
- ■ How to use videogames for rehabilitating injured workers
- ■ The pros and cons of Internet-based weight loss programs

CE *questions*

21. Which is recommended for identifying top health care cost drivers?
A. Do not involve other departments in your data collection efforts, to ensure that occupational health receives credit for cost savings.
B. Maintain objectivity by using data from sources other than risk management or human resources.
C. Work with the department that negotiates your company's healthcare benefits contract to obtain data on cost per illness.
D. To demonstrate your department's cost effectiveness, avoid asking for additional resources such as personnel.

22. Which is recommended when assessing a program's return on investment (ROI)?
A. Determine the expected value of a program before it's implemented.
B. Demonstrate ROI only in terms of dollars, as opposed to reduced turnover or improved morale.
C. To obtain buy-in from senior managers, inflate savings when costing out prevention programs.
D. Wait until health program programs have been successfully implemented before assessing return on investment.

23. Which occurred after a smoke-free workplace was implemented in Indiana's Monroe County?
A. Hospital admissions for heart attacks decreased for nonsmokers.
B. Heart attack risk decreased, but only for smokers.
C. Secondhand smoke was found to be less hazardous for nonsmokers than expected.
D. There was not much of an impact on the health of either smokers or nonsmokers.

24. Which is recommended if you suspect an employee is abusing intermittent leave with the Family and Medical Leave Act?
A. Ask for recertification if you have doubts about the reason for the absence.
B. Identify patterns such as taking leave around holidays or weekends.
C. Determine that the condition really does interfere with the person's ability to do their job.
D. All of the above.

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