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AHC Media

CMS flu shot reporting will allow patients to compare hospital rates

New measure puts pressure on EH and IC

This influenza immunization season may be one of the most challenging for the nation's hospitals as they face a new requirement to track every employee, licensed practitioner, student and volunteer.

Beginning in January 2013, the Center for Medicare & Medicaid Services (CMS) will require hospitals to report their influenza immunization rates based on a standard measure. The information will be available to the public through the website, www.hospitalcompare.hhs.gov.

The measure, which was certified by the National Quality Forum, counts employees, licensed independent practitioners (doctors, nurse practitioners and physician assistants) and students/trainees/and volunteers. Hospitals will report the percentage that received the vaccine, declined, or received religious or other exemptions. If an employee doesn't receive the shot but doesn't actively decline vaccination, they are included among the "unknown." (*For more details, see story, page 99.*)

The new measure will enable hospitals to compare their vaccination rates with other hospitals in their region or of a similar size. It also becomes one of several quality measures that consumers can use when selecting a hospital.

Special issue: Total Worker Health

The health of your employees at home affects their health and safety at work. This is the premise behind a new movement for "Total Worker Health," integrating health promotion and health protection in the workplace. In this special issue, we explore ways to integrate worker health programs, including model programs from Dartmouth-Hitchcock Medical Center in Lebanon, NH, and the Veterans Health Administration. See stories pages 100-105.

"The infection control and occupational health people will be under a certain amount of pressure because this will be publicly released data," says **William Schaffner**, MD, chairman of the Department of Preventive Medicine at Vanderbilt University in Nashville, TN, and past president of the National Foundation for Infectious Diseases.

At the same time, public reporting may bring greater clout and resources to both infection control and employee health, he says.

Hospitals have already been preparing for greater scrutiny of their influenza immunization program. The Joint Commission influenza immunization standard (IC.02.04.01) became effective as of July 1, 2012. It requires hospitals to set annual goals and to work toward a vaccination rate of 90% by 2020.

An eye on the burden

How burdensome will the new reporting requirement be? That depends on the existing data collection systems related to human resources and employee health, says **Melanie Swift**, MD, medical director of the Vanderbilt Occupational Health Clinic.

To calculate the denominator for the measure, hospitals need to include individuals who have worked 30 days or more. For non-employees, such as students and volunteers, including only those who were on site for at least 30 days may be difficult, Swift says.

"An easier approach is to define the denominator of people who may have been in the institution for 30 days or more, and report vaccination status for that entire group," she says.

Many hospitals already have occupational health software to track immunizations. But those that need to update their technology may find some additional opportunities with the new rule, says Swift.

"For organizations who will be adding support to their occ health programs to track this, it's a good opportunity to look at the other things they need to track, such as TB testing and other vaccines, and be sure to build in the capacity to track and monitor these programs and services as well," she says. "This will require an investment of resources, but if done thoughtfully, you can gain value and efficiency by addressing more than just flu vaccine."

Measure designed for ease

Ease of reporting was a major consideration in the design of the measure, says **Megan Lindley**, MPH, epidemiologist with the National Center for Immunization & Respiratory Diseases at the Centers for Disease Control and Prevention.

Lindley and her colleagues conducted pilot tests of the measure at hospitals around the country and altered the specifications based on the feedback. For example, initially, the measure would have counted everyone who worked at least one day in the hospital.

"We just learned that was incredibly challenging for hospitals to track," she says.

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Breaking down the new flu shot measure

Developed by the Centers for Disease Control and Prevention, the following National Quality Forum measure will be used to report health care worker influenza immunization rates to the Centers for Medicaid & Medicare Services (CMS).

Description: Percentage of health care personnel (HCP) who receive the influenza vaccination.

Setting: Health care settings include acute care hospitals, nursing homes and other long-term care facilities, dialysis facilities, ambulatory surgery centers, outpatient clinics and physician offices.

Denominator Statement: Number of HCP who are working in the health care facility for at least 30 working days between October 1 and March 31 of the following year, regardless of clinical responsibility or patient contact.

Denominators are to be calculated separately for:

(a) Employees: all persons who receive a direct paycheck from the reporting facility (i.e., on the facility's payroll).

(b) Licensed independent practitioners: include physicians (MD, DO, MBBS), advanced practice nurses, and physician assistants only who are affiliated with the reporting facility who do not receive a direct paycheck from the reporting facility.

(c) Students/trainees and volunteers: include all students/trainees and adult volunteers who don't receive a direct paycheck from the reporting facility.

Numerator Statement: HCP in the denominator population who during the time from October 1 (or when the vaccine became available) through March 31 of the following year:

(a) received an influenza vaccination administered at the healthcare facility, or reported in writing (paper or electronic) or provided documentation that influenza vaccination was received elsewhere; or

(b) were offered but declined the vaccination; or

(c) were determined to have a medical contraindication/condition of severe allergic reaction to eggs or to other component(s) of the vaccine, or history of Guillian-Barré Syndrome within 6 weeks after a previous influenza vaccination; or

(d) Unknown: Persons with unknown vaccination status or who do not otherwise meet any of the definitions of the above-mentioned numerator categories.

Numerators are to be calculated separately for each of the above groups.

Exclusions: None.

Data Source: Medical or administrative records.

Denominator Codes:

1. Include all HCP in each of the three denominator categories who have worked at the facility between October 1 and March 31 for at least 30 working days. This includes persons who joined after October 1 or who left before March 31, or who were on extended leave during part of the reporting period. Work for any number of hours a day should be counted as a working day.

2. Include both full-time and part-time persons. If a person works in two or more facilities, each facility should include the person in their denominator.

3. Count persons as individuals rather than full-time equivalents.

4. Licensed practitioners who receive a direct paycheck from the reporting facility, or who are owners of the reporting facility, should be counted as employees.

5. The denominator categories are mutually exclusive. The numerator data are to be reported separately for each of the three denominator categories.

Numerator Codes:

1. Persons who declined vaccination because of conditions other than those specified in the 3rd numerator category above should be categorized as declined vaccination.

2. Persons who declined vaccination and did not provide any other information should be categorized as declined vaccination.

3. Persons who did not receive vaccination because of religious exemptions should be categorized as declined vaccination.

4. Persons who deferred vaccination all season should be categorized as declined vaccination.

5. The numerator categories are mutually exclusive. The sum of the four numerator categories should be equal to the denominator. ■

Tracking contractors and vendors also was too difficult for some hospitals, she says. Hospitals may voluntarily report those vaccination rates.

The measure also sidesteps the need to collect written documentation. Employees can decline the vaccine through a written or online declination or verbally. And they are not required to show documentation if they state that they were vaccinated elsewhere.

"We found there were a lot of problems with

requiring written declination," says Lindley. "Not all facilities use declination forms. For the measure now, verbal declination is acceptable."

The data will be reported through CDC's National Healthcare Safety Network (www.cdc.gov/nhsn), which is the same surveillance system used to report hospital-acquired infections.

Even with the efforts to make the new influenza immunization measure user-friendly, hospitals still will be ramping up their immunization programs and tracking efforts. Managers and hospital leadership will need to be onboard to ensure success, says Schaffner.

"I do believe that the occupational health service and infection control people will not be able to do this on their own," he says. "They're going to have to rely on the managerial structure of the institution to help them."

For example, managers will need to help with the follow up of employees who have not been vaccinated or declined, he says.

To mandate – or not?

It's a well-known adage that "what is measured gets done." With public reporting and greater scrutiny of flu vaccination rates, hospitals are looking for ways to boost their participation. A growing number of hospitals have opted for mandatory vaccination.

Last year, about 78% of hospital employees were vaccinated by early November, a rate that had almost doubled in five years. Yet the Joint Commission requires hospitals to work toward a HealthyPeople 2020 goal of 90% vaccination.

As a result, some hospitals have adopted controversial mandatory flu immunization policies as a condition of work. Whether or not your hospital uses a mandatory approach, it is important to address the reasons that employees choose not to be vaccinated, says **Suzette Bramwell**, DNP, RN, COHN-S, assistant professor of the College of Nursing at Brigham Young University in Provo, UT, who studied influenza vaccination and behavior change as part of her doctoral research.

Those reasons will differ and so you may need to tailor your message, she says. For example, employees with a fear of needles need to know about needleless options, such as the nasal version. Those without direct patient care, such as cafeteria workers, need to understand the potential benefits of vaccination.

Hospitals also may want to link the messages of their flu vaccination campaign to the overall mission of the organization, even using the same phraseology, Bramwell says. "Don't make it a totally different program," she says. "Show everyone how this fits with whatever you're trying to do every day."

The Veterans Health Administration is planning to use motivational interviewing to help promote influenza immunization. That technique, used for health issues such as smoking cessation and weight management, coaxes individuals to make changes by addressing their barriers and incentives to change. (*See related article, page 104.*)

"We're hoping that this proves to be a good alternative to mandating flu vaccines," says Ebi Awosika, MD, MPH, director of VHA's Employee Health Promotion Disease and Impairment Prevention program.

Editor's note: More information about the flu immunization tracking measure, including frequently asked questions, is available at www.cdc.gov/nhsn/hps_Vacc.html. ■

Bring a culture of health to health care

An opportunity to lower costs, improve health

The quest to reduce both injuries and medical costs is leading hospitals to turn their health-driven mission toward their own employees.

A growing body of research shows that it's more effective to integrate the dual goals of occupational health and health promotion rather than have separate programs for injury prevention and wellness. "Total Worker Health" is now the focus of the National Institute for Occupational Safety and Health (NIOSH).

"The health of workers is not something that is clearly delineated between work and home," says **L. Casey Chosewood**, MD, senior medical officer for the Total Worker Health initiative. "When you improve someone's health away from work, they're going to perform better at work. If you improve their work environment, they're going to have a better health and lifestyle away from work."

Employers have a financial stake in keeping their workers healthy, whether to lower workers' compensation costs or medical claims. They can address those issues jointly, Chosewood says.

"It can improve productivity. It can lower injury

and illness rates," he says. "We have evidence that when you integrate programs, you have higher engagement and participation in both programs."

The American College of Occupational and Environmental Medicine (ACOEM) also promotes integration in a guidance document issued last year. "Today's best evidence indicates that the aims of both health protection and health promotion interventions are best achieved when they are working in concert," ACOEM stated.[1]

Using hospital resources

Despite high rates of musculoskeletal disorders and other injuries, health care has traditionally lagged behind other sectors in its focus on worker safety. But when it comes to integrating occupational health and wellness, hospitals are leading the way.

"Health care, like any other business, is suffering from increased health care costs [of employees]," says **Robert McLellan**, MD, MPH, chief of Occupational and Environmental Medicine for Dartmouth-Hitchcock Medical Center in Lebanon, NH. "Health care organizations also have resources that they can immediately turn inwards and apply to themselves."

Some hospitals are trying to reform the work environment to make it easier to make healthy lifestyle choices. They are revising their cafeteria choices, stocking vending machines with healthy foods, and creating walking paths.

At Dartmouth-Hitchcock, programs that address workplace hazards also incorporate personal health. For example, an ergonomics program that promotes safe patient handling also encourages employees to be more physically active. It looks at work schedules and other elements of the work environment, says McLellan, past president of ACOEM and a member of the workgroup that developed the ACOEM guidance. (*See related story, page 103.*)

"If you've got a lot of back injuries, the traditional safety approach is that you need lift equipment," says McLellan, who is also medical director of the LiveWell/WorkWell program. "The integrated approach says, 'Let's do a 360-degree assessment and see all the things going on here. What are the shifts? What's the nutritional environment? How is work organized? What's the social environment? How engaged are they in the work? How do they feel about leadership?"

Research shows that integrated programs result in better worker engagement in safety and better health behaviors.[1] There are also more subtle interactions at play, notes **Glorian Sorensen**, PhD, MPH, principal investigator of the Harvard School of Public Health Center for Health and Wellbeing, a research center funded by NIOSH.

"I may feel if I'm working really hard and I'm hurting my back, it's going to be hard to be physically active," says Sorensen, who is also professor of society, human development and health at Harvard University in Cambridge, MA, and director of the Center for Community-based Research at the Dana Farber Cancer Institute in Boston. "Those changes in ergonomic practices that may be likely to reduce the potential for pain might actually result in feeling like you can be more physically active."

SafeWell guides health care

The change in perspective may begin by coordinating employee health and health promotion and placing them in the same organizational group. A comprehensive approach builds support from leadership and supervisors, engages employees, and monitors effectiveness.

The new approach will likely require policy changes. For example, hospital leadership may look at break policies to make sure employees are taking adequate breaks and at scheduling to give employees some flexibility to maintain a work-life balance, says Sorensen. Work scheduling can affect diet and exercise, she says.

The SafeWell Practice Guidelines provide a roadmap specifically for health care organizations. Created through collaboration between the Harvard School of Public Health Center for Work, Health and Well-being and Dartmouth-Hitchcock Health Care, they provide implementation steps and tools to build a program. (*See checklist, page 102.*)

SafeWell recommends creating an employee advisory board, which would meet once a month and provide input from various departments and employee groups. The key is "making sure across the different groups of workers there is a sense of representation and having a voice," says Sorensen.

The guidance includes an assessment of safety and compliance with U.S. Occupational Safety and Health Administration regulations as well as personal health assessments for employees.

Creating a healthier workplace becomes even more important as the workforce ages, says Chosewood. The physical changes of aging have an impact on injury risk as well as personal health.

"Half of all workers over the age of 40 come to

SafeWell Integrated Management System Checklist

This checklist was developed as part of the SafeWell Practice Guidelines by the Harvard School of Public Health Center for Work, Health and Well-being at the Dana Farber Cancer Institute in Boston. The center is funded by the National Institute for Occupational Safety and Health.

System	Yes	No
1. Have integrated decision-making systems been developed?		
a. Is there interdepartmental collaboration, coordination, and decision-making around developing, implementing, and evaluating programs and policies to promote and protect worker health?		
b. Have the health and safety management program and worksite health promotion program been integrated where possible?		
c. Are adequate human and fiscal resources allocated to implement SafeWell? Does the program have a budget?		
d. Are resources allocated to support interdepartmental collaboration and coordination?		
e. Do vendors and their staff have the experience and expertise necessary to coordinate with and/or deliver the SafeWell approach?		
f. Are staff trained in explaining and conducting the SafeWell approach?		
g. Has a SafeWell Steering/Leadership Committee been appointed and activated?		
SafeWell Practice Guidelines: An Integrated Approach to Worker Health / Version 1.0		
Chapter 1: Providing the foundation / page 34		
h. Does the Steering Committee have representation (management and employee) from occupational health, health promotion, and human resources?		
2. Do integrated program planning, implementation, and evaluation occur?		
a. Is there knowledge about what data are already collected?		
b. Is there knowledge about who collects, analyzes, stores, and communicates about data?		
c. Have discussions occurred regarding the use of integrated data systems?		
d. Has it been possible to integrate data systems across the organization to coordinate data gathering, management, and analysis?		
e. Have the data been analyzed and interpreted by members from OSH, WHP, and HR?		
f. Has consensus been reached on integrated priorities?		
g. Has a consensus program plan been developed that integrates OSH, WHP, and HR to help achieve goals?		
h. Has the integrated SafeWell approach been implemented? i. Has evaluation and corrective action occurred?		
3. Is there a multilateral communications program?		
a. Are different communications vehicles used?		
b. Are communications appropriate for the various types of employees and management that exist?		
4. Are all levels of employees engaged?		

Source: Harvard School of Public Health Center for Work, Health and Well-being
Center for Community-Based Research, Dana-Farber Cancer Institute, February 2012.

work with muscular and joint pain," he says. "If you look at workers over the age of 55, almost half have clinically diagnosed arthritis. They've had the symptoms long enough or severe enough to have a diagnosis."

Arthritis may put employees at greater risk of injury, he says. "Imagine an ergonomics program that doesn't just look at risk in the workplace but addresses joint pain and arthritis prevention tips," he says.

VHA tests new approach

Some models for integrating occupational health and health promotion are emerging, and they are showing signs of success.

The Veterans Health Administration (VHA) launched a three-year pilot program in 14 Midwest hospitals, with programs that focused on personal health issues and coordinated with occupational health.

"We want to create an environment where health is nurtured and to provide the tools and the resources that our employees need to make the right choices regarding their health," says **Ebi Awosika**, MD, MPH, director of the VHA Employee Health Promotion Disease and Impairment Prevention Program in the Occupational Health Strategic Healthcare Group.

For example, some employees who spend much of their day at their desks were given treadmill desks to improve their physical activity, says Awosika. They were able to walk while they worked. Some hospitals made stairwells more attractive and created walking groups. Trained coaches also provided exercises for injured employees with a goal of helping them return to work more quickly, she says.

The Employee Assistance Program worked together with the violence prevention team, with an emphasis on stress management. A 12-week weight management program resulted in an average weight loss of five pounds, Awosika says. The smoking cessation program, which included nicotine replacement therapy, had a 20% quit rate after one year.

"When you think about total worker health, it's not just integrating with occupational health but looking at the whole environment, the total health of the employee," she says.

The health promotion efforts led to lower absenteeism and fewer personal health risks. The hospitals developed effective and innovative programs with mini-grants, she says. "I continue be amazed with what people can do with a small amount of dollars," Awosika says.

Integrated health programs also can lead to better retention and recruitment of employees, says Chosewood. "Folks are ready for solutions that lower costs and improve health," he says. "We believe this is an opportunity to do both."

Editor's note: More information about NIOSH's Total Worker Health initiative is available at www.cdc.gov/niosh/twh. T*he SafeWell Practice Guidelines are available from the Harvard School of Public Health Center for Work, Health and Well-being at* http://ow.ly/d2lgD

REFERENCE

1. Hymel PA, Loeppke RR, Baase CM et al., Workplace health protection and promotion: A new pathway for a healthier – and safer – workforce. *J Occup Environ Med* 2011; 53:695-702. ■

Eat, drink and be healthy (if not wealthy) at work

Health affects your work — and vice versa

Dartmouth-Hitchcock Medical Center in Lebanon, NH, wants its employees to live well and work well. What does that mean? The answer is visible throughout the hospital.

The cafeteria doesn't sell any fried foods. That equates to 21,250,000 fewer fat calories in a year. It doesn't sell any sweetened beverages, either. That eliminated 33,700 sugary drinks, or 4,754,000 calories, in the first quarter of 2012 alone.

Beyond those "wow" metrics, many other changes were designed to boost the health of employees. Preventive care is free under the hospital's self-insured medical plan. Health coaches help with sleep, exercise, tobacco-cessation and weight management.

In the fall, Dartmouth-Hitchcock is launching a full-service primary care practice specifically for employees. "We're going to provide the right kind of care with the right kind of staffing and not worry about volume. We're going to worry about outcomes," says **Robert McLellan**, MD, MPH, chief of Occupational and Environmental Medicine for Dartmouth-Hitchcock Medical Center in Lebanon, NH, and medical director of the Live Well/Work Well program.

This isn't just another wellness program. Dartmouth-Hitchcock is committed to fully integrating health promotion with occupational health and safety, he says.

"The name of the program is meant to telegraph the fact that there's a relationship between living well and working well," he says. "Health affects your work and work affects your health. That can be true in negative ways — but it also can be positive. We want a virtuous cycle, not a vicious cycle."

Blurring of work, lifestyle

There has always been some uncertainty in occupational health about the cause of injuries. A hobby, such as tennis or bowling, could affect a person's joints or muscles as could repetitive motion or awkward postures at work.

Dartmouth-Hitchcock embraces that overlap. The Safety Committee is now called Partners in Health, Environment, Wellness and Safety. "The conversation is an integrated agenda on work environment, [with] interventions to improve safety and wellness in the workplace," McLellan says.

Investigations of injuries encompass an integrated assessment from a Safety Wellness Action Team. Workplace accommodations take into account both personal health issues as well as work-related injuries.

The payback is in healthier employees who feel more engaged in their work, he says.

"The evidence became overwhelming that in fact lifestyle issues have a huge impact on health care utilization and measures of productivity, like absenteeism, disability and presenteeism," McLellan says. "This is not simply trying to prevent a heart attack or cancer. There is a financial benefit for businesses to invest in lifestyle."

There are, of course, limits to integration. Employee health retains important privacy considerations, he says.

Because of the electronic medical records, "there are some special sensitivities to the issue of confidentiality in the health care workforce," he says.

"The occupational health clinic is distinct from the primary care clinic," he says. "The occupational health providers don't have access to your personal health record without your permission. Your primary care doctor is not going to do your fitness for duty or preplacement exam."

The new paradigm of integrated health protection and promotion fits with the emphasis on prevention in the Affordable Care Act, McLellan says. He expects employers to increasingly embrace the integration of occupational health and health promotion.

"The only way to go at this is comprehensively," he says. "You can't have a brown bag lunch and expect to get there. That doesn't mean you need to start with a million dollar program. But ... you get synergy by integrating these types of programs." ■

Take a new path to help employees change

'Motivational' interviewing

It takes a small step to make a big change. That is the essential truth behind a motivational method that is reshaping wellness promotion.

Changing unhealthy behavior is always difficult, whether you're trying to convince people to quit smoking or to increase their physical activity and improve their diet. The Veterans Health Administration is focusing on a coaching program that seeks incremental change that stems from the employee herself.

"Motivational interviewing is like a dance," says **Ebi Awosika**, MD, MPH, director of the VHA's Employee Health Promotion Disease Prevention program. "You're leading the person to make the changes themselves. They think it's their idea but you're really leading them down this path."

Here's how it differs from the traditional counseling approach. Let's say you want to convince an employee who is a longtime smoker to quit. You might initially offer smoking cessation classes and a financial incentive, such as insurance discounts for non-smokers.

Some smokers might take the bait – but eventually still fail to quit. "There's no doubt that incentives have been found to be useful," says Awosika. "But there is more literature now that incentives may not necessarily bring about long-term change in behavior."

Counseling typically focuses on the harmful effects of smoking. But most health care workers are already well aware of the health impact of smoking.

Motivational interviewing takes a different tack. Coaches seek to guide, not dictate to the employee. "What would it take for them to take a step forward? You're not telling them what to do. Everything is going to be coming from them," says Awosika.

The coach might ask, "Where would you rate yourself on a scale of one to 10 on quitting?

What would it take for you to shift your number? There's that dance that goes on, leading the person to the stage where they realize I could do a little bit to make a change. They take that step," she says.

Practice 'reflective listening'

Motivational interviewing is a technique developed by psychologists **William R. Miller**, PhD, and **Stephen Rollnick**, PhD. They describe it as "a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence."[1]

Acknowledging ambivalence means addressing the reasons that a patient might choose to continue a behavior they know to be harmful. For example, some people are reluctant to quit smoking because they believe they will gain weight.

Rather than directing the patient to take steps to change, motivational interviewers encourage clients to talk about their ambivalence. "Direct persuasion, aggressive confrontation, and argumentation are the conceptual opposite of motivational interviewing and are explicitly proscribed in this approach," Rollnick and Miller wrote. "More aggressive strategies, sometimes guided by a desire to 'confront client denial,' easily slip into pushing clients to make changes for which they are not ready."

Motivational interviewing uses "reflective listening" to help people resolve their ambivalence to change. It asks people to take ownership of their problem — and the solution, says Awosika.

The VHA uses the technique in its employee health promotion program. "We've incorporated motivational interviewing as the preferred way of coaching with really great results," she says.

In coaching sessions, employees identify their own goals, timeline and barriers to achieving their goals. Here are some steps the coach would take to guide employees to better health habits:

Explain the concepts of motivational interviewing (MI): building motivation and commitment to change.

• Express understanding of the participant's perspective.

• Explore the discrepancy between the participant's current behavior and what they want their lives to be like.

• Accept that resistance to change is natural.

• Support the participant's self-efficacy and self-responsibility for change.

• Help set goals and strengthen the commitment to change.

Evaluate barriers and motivations for change.

• Review each goal and help the participant understand their own mind set.

• Ask the participants open-ended questions, for example:

What type of support do you have at home for improving how your family eats? How can your family help with improvements to the family diet? Are there ways to involve your spouse or partner in your exercise program?

• Active listening – the most important aspect of coaching might be how well the coach listens.

• Help the participant summarize their feelings and consolidate their goals.

Understand the participant's learning needs. Are knowledge gaps creating a barrier to the participant?

• Examples might include:

Does the participant understand how to manage their diabetic diet? Does the participant recognize different portion sizes? Is the participant familiar with different forms of exercise?

Provide information or appropriate referrals to the participant.

• Examples might include:

Referral to a dietician to review nutritional parameters for diabetes. Referral for a stress test if the participant has cardiac disease and is concerned about complications. Written information on portion sizes.

Editor's note: For more information see the VA/VHA Employee Health Promotion Disease Prevention Guidebook: http://ow.ly/d2mCb ■

Long hours linked to nurse obesity

Lack of sleep affects health habits

Nurses who work long hours are more likely to be obese, as stress and sleep deprivation affect their health habits, according to researchers at the University of Maryland.

"Long work hours and shift work adversely affect quantity and quality of sleep, which often interferes with adherence to healthy behavior and increases obesity," **Kihye Han**, PhD, RN, postdoctoral fellow in the University of Maryland School of Nursing in Baltimore, told *HEH*.

This bolsters the link between long work hours, inadequate sleep, and obesity that has been found in other studies, as well, notes **Claire Caruso**, PhD, RN, research health scientist at the National Institute for Occupational Safety and Health (NIOSH). Caruso, who specializes in work schedules and work-related sleep loss, was not involved in this study.

"Substantial scientific evidence supports [the finding] that short sleep duration and poorer quality sleep is linked to increased body-mass index," says Caruso.

Han analyzed the responses of about 2,100 nurses in the Nurses' Worklife and Health Study, a longitudinal study of the impact of nurses' work schedules led by University of Maryland professor Alison Trinkoff.[1]

Long work hours were defined not just as 13 or more hours in a shift, but the average number of hours worked per day, the number of weekends worked per month, shift rotation, working with less than 10 hours off between shifts, and working on scheduled days off or vacation days. "We think that various aspects of nurses' work schedule should be considered simultaneously," Han said.

Nurses with long work hours were more likely to report poor sleep than nurses with favorable work schedules, the study found.

Rest breaks, napping

Twelve-hour shifts are common in hospitals, but employers can take steps to reduce the impact, say Han and Caruso.

"Hospitals should offer strategies for adapting work schedules and educational interventions about sleep," says Han. "A favorable organizational climate that supports napping in the workplace can help to prevent work-related sleep deprivation, reduce fatigue, and increase energy for healthy lifestyle behaviors."

Employees need adequate time off between shifts and frequent rest breaks, says Caruso. "Frequent rest breaks and meal breaks during work shifts would allow workers to spread their daily calorie intake across the day and eat at regular times during the day," she says. "Rest breaks also give workers the opportunity to exercise or take a short nap, which are both strategies to reduce risks from long work hours." (*For more NIOSH recommendations see related article, this page.)*

While the Maryland study found an association between obesity and poor sleep, it didn't address causality. Han says she hopes to continue researching the relationship between work schedules, health habits and obesity among nurses.

About 55% of nurses in the survey reported being overweight or obese, which is slightly lower than the national average of 65%. The lower number could be the result of under-reporting or could be related to the higher education level of nurses, says Han.

Other factors related to obesity among nurses include:

- Age. Older nurses were more likely to be obese.
- Work activity. Nurses whose jobs required less physical exertion were more likely to be obese.
- Health habits. Having better health behaviors, such as exercise and adequate sleep, decreased the risk of obesity even among nurses with long work hours.

REFERENCE

1. Han K, Trinkoff A, Storr C, et al. Job stress and work schedules in relation to nurse obesity. *Jrl Nurs Admin* 2012; 41:488-495. ■

The declicate balance between sleep and work

In a Science blog on "Sleep and Work," the National Institute for Occupational Safety and Health recommended employers consider these issues:

Regular Rest: Establish at least 10 consecutive hours per day of protected time off-duty in order for workers to obtain 7-8 hours of sleep.

Rest Breaks: Frequent brief rest breaks (e.g., every 1-2 hours) during demanding work are more effective against fatigue than a few longer breaks. Allow longer breaks for meals.

Shift Lengths: Five 8-hour shifts or four 10-hour shifts per week are usually tolerable. Depending on the workload, 12-hour days may be tolerable with more frequent interspersed rest days. Shorter shifts (e.g., 8 hours), during the evening and night, are better tolerated than longer shifts.

Workload: Examine work demands with respect to shift length. Twelve-hour shifts are more tolerable for "lighter" tasks (e.g., desk work).

Rest Days: Plan one or two full days of rest to follow five consecutive 8-hour shifts or four 10-hour shifts. Consider two rest days after three consecutive 12-hour shifts.

Training: Provide training to make sure that workers are aware of the ups and downs of shiftwork and that they know what resources are available to them to help with any difficulties they are having with the work schedule.

Incident Analysis: Examine near misses and incidents to determine the role, if any, of fatigue as a root cause or contributing cause to the incident.

Editor's note: The NIOSH Science Blog on Sleep and Work is available at http://ow.ly/d2s0m ■

The hidden dangers of patient lifts

Pushing and pulling lead to injury

Are your patient lifts injuring your employees? Lift equipment is designed to prevent back injuries, but when you select floor-based lifts, you also should consider the impact of shear force as health care workers push or pull the lifts to transport patients, advises **William Marras**, PhD, CPE, professor and director of the Biodynamics Laboratory at Ohio State University in Columbus.

Marras and his colleagues tested floor-based lifts with large and small wheels, on carpeting and hard surfaces. They found significant risk of injury from shear forces in pushing and pulling, especially when making a sharp turn in a confined space.[1]

"As soon as you turn, you saw huge differences, especially if you're making turns into a confined space, such as a bathroom," he says. "The nature of the risk is very different from [patient] lifting."

The risk of injury is at a higher level on the spine — at lumbar disc 3 and above — while the risk of patient lifting typically is found in the low back at L5 and below. These gradual injuries may not be apparent until there is significant damage and pain, says Marras.

"It's not until you start affecting the outer layers of the disc that you even know you have a problem, and then it's too late," he says.

It actually takes about a third as much shear force to cause damage as that caused by lifting, he says. "The tolerance of the human body is much, much reduced," he says.

Marras advises employee health professionals to look at their patient needs, equipment, and other risk factors when evaluating lift equipment. Ceiling lifts are most effective at preventing patient handling injuries. Even when used with heavy patients, they were not associated with shear forces sufficient to cause disc damage, Marras found.

A study by the National Institute for Occupational Safety and Health found that the rotational movement of floor-based lifts required 10 times as much force as ceiling lifts, increasing the risk of injury.[2]

Floor lifts vary in the risk associated with moving patients. Self-propelled lifts remove most of the effort required in pushing or pulling. Floor lifts are also safer if they have larger wheels, if the turning radius is wider, and if they are used on a hard surface, he says.

Yet patient weight also plays a role. Marras found that even with larger wheels on a hard surface, the shear forces were high enough to damage spinal tissue when moving the heaviest patients (360 pounds) in a confined space using a floor lift.

Floor-based lifts are clearly safer than manual lifting, notes Marras. But hospitals should consider the risks associated with turning and moving the lifts. "[W]hile patient handling systems do have the potential to minimize risk of low back pain, using the

CNE INSTRUCTIONS

Nurses participate in this CNE/ CME program and earn credit for this activity by following these instructions.

1. Read and study the activity, using the provided references for further research.
2. Log on to **www.cmecity.com** to take a post-test; tests can be taken after each issue or collectively at the end of the semester. *First-time users will have to register on the site using the 8-digit subscriber number printed on their mailing label, invoice or renewal notice.*
3. Pass the online tests with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%.
4. After successfully completing the last test of the semester, your browser will be automatically directed to the activity evaluation form, which you will submit online.
5. Once the completed evaluation is received, a credit letter will be e-mailed to you instantly. ■

CNE OBJECTIVES

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

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

COMING IN FUTURE MONTHS

- Pertussis outbreak raises stakes for vaccination
- Are HCWs at risk for MRSA?
- Strategies for an aging workforce
- Protecting lab workers from infection
- OSHA cites on workplace violence

floor-based systems under certain conditions can still represent a significant risk to the caregiver," Marras and his colleagues concluded.

REFERENCES

1. Marras WS, Knapik G, Ferguson S. Lumbar spine forces during maneuvering of ceiling-based and floor-based patient transfer devices *Ergonomics* 2009; 52:384-397.

2. Rice MS, Woolley SM, Waters TR. Comparison of required operating forces between floor-based and overhead-mounted patient lifting devices. *Ergonomics* 2009; 52:112-120. ■

CNE QUESTIONS

1. In the new CMS reporting measure for influenza immunization of health care workers, what is the definition of an employee?
   A. People on the hospital payroll for 30 days or more.
   B. People on the hospital payroll for at least one day.
   C. People on the payroll who have patient care responsibilities.
   D. People who work at the hospital for pay or as a volunteer.

2. What is "Total Worker Health"?
   A. Occupational safety guidance from NIOSH.
   B. A wellness program with smoking cessation and weight management.
   C. Integrated occupational health and wellness programs.
   D. Occupational health that includes non-employees.

3. According to a study at the University of Maryland School of Nursing in Baltimore, long work hours were associated with what health habit that increases the risk of obesity?
   A. Poor diet
   B. Inactivity
   C. Smoking
   D. Sleep deprivation

4. According to William Marras, PhD, CPE, professor and director of the Biodynamics Laboratory at Ohio State University in Columbus, what contributes to the risk of injury from pushing or pulling floor lifts?
   A. Size of the lift
   B. Improper pushing of the lift
   C. Sharp turns on carpeted surface
   D. Design of the lift

Hospital Employee Health

Confidential Salary Survey

This confidential salary survey is being conducted to gather information for a special report later in the year. Watch in coming months for your issue detailing the results of this survey and the overall state of employment in your field.

Instructions: Select your answers by filling in the appropriate bubbles **completely.** Please answer each question as accurately as possible. If you are unsure of how to answer any question, use your best judgment. Your responses will be strictly confidential. Do not put your name or any other identifying information on this survey form.

1. What is your current title?

- O A. employee health nurse
- O B. employee health manager
- O C. employee health director
- O D. infection control practitioner
- O E. occupational health director
- O F. other _____

2. What is your highest degree?

- O A. LPN
- O B. ADN (2-year)
- O C. diploma (3-year)
- O D. bachelor's
- O E. master's
- O F. PhD
- O G. MD
- O H. other _____

3. What is your sex?

- O A. male
- O B. female

4. What is your age?

- O A. 20-25
- O B. 26-30
- O C. 31-35
- O D. 36-40
- O E. 41-45
- O F. 46-50
- O G. 51-55
- O H. 56-60
- O I. 61-65
- O J. 66+

5. What is your annual gross income from your primary health care position?

- O A. Less than $30,000
- O B. $30,000 to $39,999
- O C. $40,000 to $49,999
- O D. $50,000 to $59,999
- O E. $60,000 to $69,999
- O F. $70,000 to $79,999
- O G. $80,000 to 89,999
- O H. $90,000 to $99,999
- O I. $100,000 to $129,999
- O J. $130,000 or more

6. In which area is your facility located?

- O A. urban
- O B. suburban
- O C. medium-sized city
- O D. rural

7. In the last year, how has your salary changed?

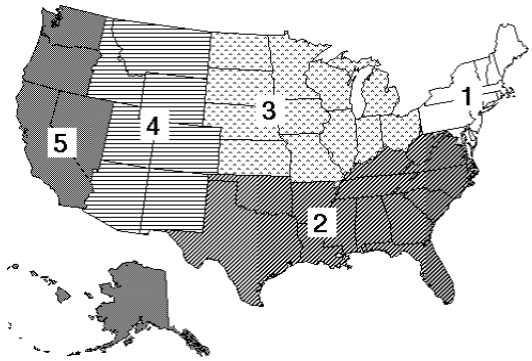
- O A. salary decreased
- O B. no change
- O C. 1% to 3% increase
- O D. 4% to 6% increase
- O E. 7% to 10% increase
- O F. 11% to 15% increase
- O G. 16% to 20% increase
- O H. 21% increase or more

8. What is the work environment of your employer?

- O A. academic
- O B. agency
- O C. health department
- O D. clinic
- O E. college health service
- O F. consulting
- O G. hospital
- O H. private practice

9. Please indicate where your employer is located.

- O A. region 1
- O B. region 2
- O C. region 3
- O D. region 4
- O E. region 5
- O F. Canada
- O G. other



10. Which best describes the ownership or control of your employer?

- O A. college or university
- O B. federal government
- O C. state, county, or city government
- O D. nonprofit
- O E. for-profit

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11. How long have you worked in employee health?

- O A. less than 1 year
- O B. 1-3 years
- O C. 4-6 years
- O D. 7-9 years
- O E. 10-12 years
- O F. 13-15 years
- O G. 16-18 years
- O H. 19-21 years
- O I. 22-24 years
- O J. 25+ years

12. How long have you worked in health care?

- O A. less than 1 year
- O B. 1-3 years
- O C. 4-6 years
- O D. 7-9 years
- O E. 10-12 years
- O F. 13-15 years
- O G. 16-18 years
- O H. 19-21 years
- O I. 22-24 years
- O J. 25+ years

13. Which certification best represents your position?

- O A. RN
- O B. COHN-S
- O C. NP
- O D. CIC
- O E. FACOEM
- O F. LVN
- O G. CCM
- O H. Other_____

14. How many hours a week do you work?

- O A. less than 20
- O B. 20-30
- O C. 31-40
- O D. 41-45
- O E. 46-50
- O F. 51-55
- O G. 56-60
- O H. 61-65
- O I. 65+

15. If you work in a hospital, what is its size?

- O A. <100 beds
- O B. 100 to 200 beds
- O C. 201 to 300 beds
- O D. 301 to 400 beds
- O E. 401 to 500 beds
- O F. 501 to 600 beds
- O G. 601 to 800 beds
- O H. 801 to 1,000 beds
- O I. >1,000 beds
- O J. I don't work in a hospital

Deadline for Responses: Oct. 15, 2012

Thank you very much for your time. The results of the survey will be reported in an upcoming issue of the newsletter, along with an analysis of the economic state of your field. Please return this form in the enclosed, postage-paid envelope as soon as possible. If the envelope is not available, mail the form to: Salary Survey, AHC Media, P.O. Box 105109, Atlanta, GA 30348.