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 Editor), 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.

APRIL 2007
VOL. 17, NO. 4 • (pages 37-48)

RTW myths can hurt employers, impair employees' recovery

Set end date for return period, work closely with physician

When it comes to getting injured or sick employees back to work, there are some accepted truths. Chief among them is that the sooner an employee can come back to work safely, the better his or her recovery will progress and the greater the likelihood of a return to full duty.

But there are also plenty of myths about return to work (RTW) that have become accepted as truth, to the detriment of some RTW efforts, according to **Elayne Preston**, RN, DOHS, COHN(C), COHN-S/CM, president of Employee First Health and Safety Services, a British Columbia, Canada-based occupational health service that provides training, program development, and individual disability case management to clients in the United States and Canada.

"Disability management practices should be evidence-based, founded on the reproducible results of research studies," says Preston. "Practices should be amended to reflect new evidence as it becomes available," she says.

However, this foundation is not always used, Preston says. "Often, decisions are made based on misinformation, negative stereotypes, and single past experiences that were less than positive — beliefs that could be classified as return-to-work myths."

EXECUTIVE SUMMARY

Some misconceptions about return to work (RTW) plans can negatively affect their benefit and should be avoided:

- Always set an expected end date for any RTW plan. Communicate with the treating physician about expectations and details of the employee's job duties as necessary.
- Provide physicians with a synopsis of what the employee's job duties and demands are, including physical, cognitive, and behavior details.
- Avoid "one-size-fits-all" forms that do not apply to the employee's limitations.
- If the physician's diagnosis is stress, look deeper to determine what the root cause is and how the employer's leave policy applies.

• "RTW plans can be open-ended" myth.

A graduated RTW plan, which is a step-by-step plan that brings the employee back to full duty gradually, is often the best choice for returning workers. "To have a graduated return to work, you have to graduate," Preston says. "But a lot of my clients have found they have gotten into a never-ending return to work, one that's not evidence-based, and it sure puts a lot of strain on both the employer and the employee."

The open-ended — or neverending — RTW plan begins with the treating physician who, rather than specifying how long the RTW plan should last, leaves the return period undetermined. "Rather than saying the return to work should be four weeks long, the physician says he can't set a time, and to check back in two weeks," Preston explains. "Then it's two more weeks, and two weeks after that."

The worst-case scenarios can be so bad that the employee and employer lose sight of the original goal: to get the employee back to his original duties. "I spoke with an employer last week who had an employee whose return to work had extended three years," she says. "After that long, the employee doesn't have a goal to work toward anymore."

When RTW extends over months or years, the employee carves out a new niche within the company that supplants the original job he or she was supposed to be returning to. The occupational health nurse can intervene to help the physician set boundaries for the return and to keep the employee focused and on pace to return to full duties. "What the nurse can do is to set an end date, even if it is only a tentative or anticipated one," Preston advises. Remember, it's the employer's *offer* to accept a return-to-work plan, she says. "The employer doesn't have to accept everything in the physician's recommendation," she says. In terms of length, the average return to work is three to four weeks in duration, Preston says. "The most I'll ever go is 12 weeks, and that has to be pretty unique circumstances," she says.

"We don't have 'return to work when able' here," says **Shelly A. Arntson**, RN, COHN, an occupational health nurse at Allen Memorial Hospital in Waterloo, IA. "We have restrictions [on the length of RTW periods], and usually it is that the employee has scheduled RTW physician visits until they are released [to return to work]. They have a plan signed and with an end date, not 'return when able.'"

A goal date gives employees two benefits, nurses explain. One, it lets them know that the evidence suggests they will be feeling better and able to do more by that time (thereby encouraging them). It also defines that they have that much time in which to graduate to full duty, so they don't feel they have to do it all in the first week, says Preston.

If an employee doesn't have enough recovery of function that a successful RTW can be forecast in a three- to four-week window, the return period might need to be delayed until the worker has made more progress in recovery, Preston says.

• "The doctor knows my job" myth.

In the six minutes that are allotted to patients in an average doctor visit, it is very likely that the treating physician doesn't get the whole picture of an employee's duties. This limited time can mean the physician concludes the job duties are more rigorous or less demanding than they really are. "The information physicians can get in those visits is sketchy at best and may not provide the full pic-

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.

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.

ture in terms of physical and cognitive-behavioral demands or the workplace environment," Preston says. Many employers ask physicians to complete a catch-all checklist that the company has prepared, which lists do's and don'ts that might not apply to everyone.

The occupational health nurse usually knows the rigors of the jobs quite well and knows what information to include in a brief summary that gives the physician the pertinent information needed to set a realistic RTW. "We put doctors in these positions of knowing everything, and I think the physicians get sort of uncomfortable with some of the questions we ask them," says Preston. "[Occupational health nurses] can take the nature of the medical condition and, knowing what the treatment plan is and applying some nursing judgment, come up with an idea of how long we think the return to work should be."

Arntson goes a step further: She brings local primary care physicians to the workplace, to let them see what the employees do on the job. Assuming a physician knows what a nurse's job is can be a mistake, says **Julie Miehe**, RN, BSN, COHN-S, CM, employee health nurse at St. Mary's Hospital Medical Center in Madison, WI. Some physicians have misconceptions about nursing jobs and hospital jobs, "and sometimes it's up to me to make sure that they have that information," says Miehe.

She usually makes a phone call to the employee's doctor after he or she has seen the employee. "I will tell them that in addition to what the employee has said, here is that person's job description, and more importantly, here's what his or her supervisor expects," Miehe says. "Expectations vary from one shift to another, even, so I make sure I let the physician know that."

- **The "stress leave" myth.**

If an employee's treating physician says that the worker needs time off for "stress," the occupa-

One-size-fits-all approach hinders RTW in depression

Occupational health nurse **Elayne Preston**, RN, DOHN, COHN-S/CM, COHN(C), president of British Columbia, Canada-based Employee First Health and Safety Services, was called by one of the employers she advises — a municipal fire department — to help untangle a breakdown in communications between the employer and the treating physician for a firefighter who was off work due to a depressive disorder.

The firefighter was sent to his doctor with a form the employer wanted completed. The form asked about functional abilities and not about cognitive/behavioral deficits. "The firefighter and his doctor both look at this form, and it has nothing to do with the depressive disorder he is suffering, so the doctor scrawls 'Not Applicable' across the form and sends it back," Preston recalls.

Her experience has been that employers have a form that works well for physical types of limitations, like lifting, stooping, bending, she says. "These forms are restricted to physical limitations; they don't apply to depressive conditions, so the physician is unsure of what to write, and the employer was really frustrated when the form came back with 'Not Applicable' written in," Preston says.

Too often, Preston says, companies have one standard form that is used to gather functional abilities information, regardless of the medical condition. These forms are restricted to physical limitations and do not account for cognitive-behavioral deficits. When one of these forms is delivered to the treating physician with the expectation that he or she sign it, it's not unusual for the physician to return it with a "not applicable" message attached. "Functional limitations resulting from mental illnesses are really quite different from physical limitations," says Preston. "Thus, a one-size-fits-all form does not work."

The occupational health nurse should be on the lookout for these "one-size-fits-all" checklist forms, especially when the employee is off work for a mental illness rather than a physical one, Preston says. The form the employer wanted completed dealt with physical limitations, but that was not the issue in this case. His limitations far outweighed anything he could do physically," Preston says. "For him, it was cognitive-behavioral things: confrontation, conflict, short-term memory, dealing with the public," she says. The doctor finally got the information that applied, and Preston could go back to the employer and say "he's not ready to come back yet." "For him, [difficulties lay in] dealing with the public and being overwhelmed by multitasking," she says.

Unfortunately, his job was doing presentations and education for the public, Preston says. "So we eventually brought him back on a return to work plan, and I discussed with his manager about what tasks to assign him and which ones not to, and what to watch for as far as improvement."

After a RTW period in which the firefighter was assigned one task at a time, with each task done to completion before another was assigned, he was able to gradually work his way back to multitasking again, Preston reports.

The lesson from this example is that the occupational health nurse should consider providing a sick employee's treating physician with a list of several cognitive-behavioral limitations commonly associated with mental illnesses, such as ability to concentrate, ability to make decisions, short-term memory, ability to handle confrontation, and the ability to supervise others, she says.

tional health nurse needs to dig deeper, Preston advises.

"Stress leave" is not an accepted benefit for most companies, so finding out the source of the stress will be necessary to determine whether the employee is ill or qualifies for an accepted form of leave. "Stress might be a factor contributing to illness, but is not itself a medical condition," says Preston. "And in fact, it is the employer's responsibility — not the physician's — to approve or grant benefits such as leaves based on information received from the employee."

If an employee is stressed by an event or situation at work, or stress is caused by something occurring outside work, that factor needs to be considered in crafting a RTW plan, Preston says. However, the nurse needs to ensure the company "isn't granting leave for a complaint that doesn't really exist." Chronic stress can cause someone to become ill, she continues, and the nurse's role is to find out what the root problem is and what the employer's leave policies can do to help.

• **The "accommodation is forever" myth.**

Special accommodation of a disability, through modified work schedule or tasks, are intended to be temporary, but employees often expect them to be permanent, Preston says. While some accommodations — wheelchair-friendly desks, for example — are not meant to be temporary, permanent accommodations often unnecessarily restrict the employer and the employee. Because many medical conditions improve over time, keeping accommodations in place in those cases does not encourage return to capacity, Preston adds. "I always recommend that accommodation of disability be reviewed on a regular basis, with a review of updated medical information and a determination of whether the nature of the workplace accommodation is still appropriate," she says.

Miehe says updates are an important part of the "psychological game" that is part of RTW. "The employee sometimes is thinking 'Will I ever get better?' and wanting to just get out of the house and get back to work, so helping them see that they will get back to work, back to using their nursing skills, plays a huge role in people working their way back from an injury or illness," she says.

[Editor's note: One additional myth is that one form fits all conditions. See story, p. 39.] ■

With aging workforce, is health care ready?

'Double whammy' of retiring nurses, shortage

All employers are witnessing the "graying" of their workforces, as the median age of American workers continues to creep up. Health care as an industry appears to be facing the effects of the aging labor pool sooner than others, one expert says, and as a result, the rest of the nation's employers are looking to health care to show them how to make the most of a mature workforce.

So far, however, health care hasn't done as much as it should to set the standard, according to **Marcie Pitt-Catsouphes**, PhD, director of the Center on Aging & Work/Workplace Flexibility in Chestnut Hill, MA. "We consider health care to be early adapters to the aging labor force, and while we're finding health care employers are aware of the aging labor force, by and large they aren't doing a lot to get ready," Pitt-Catsouphes says.

It would be logical to prepare in advance, because the oldest of the baby boomers are just shy of retirement age, she says. "But employers look at it and think 'It's not today's crisis,' and they're right. But it is next year's crisis, or the year after that," Pitt-Catsouphes says.

Occupational health nurses — in addition to being a graying workforce on their own — are going to play important roles in making their workplaces attractive and accessible to older workers. According to the American Association

EXECUTIVE SUMMARY

As the U.S. workforce ages, employers look to health care to provide examples of ways to retain and attract older workers. Though the industry is not planning as well as it could, one researcher says, it is providing some innovative ideas for their older employees.

- Employee health managers should consider what incentives, in addition to flexible time and benefits, might make work more attractive to an older labor pool. Consider the benefits of a multigenerational workforce, rather than the drawbacks.
- Hospital administrators, in particular, need to think ahead. Not only are their nursing populations getting older, but the ongoing nursing shortage means retaining as many nurses as possible is crucial.

of Occupational Health Nurses in Atlanta, 28% of its membership of occupational health nurses is age 57 to 66; 39% is age 47 to 56.

But health care is getting some things right, apparently. The American Association of Retired Persons (AARP) ranks the best employers for people older than 50; in 2006, more than half were hospitals or health systems.

Pitt-Catsouphes says those singled out represent the creative thinking that health care is employing to attract and retain older employees. "We look at [the number of health care employers listed by the AARP] and say it's probably a sign that health care agencies are experiencing more organizational pain around the aging labor pool than other industries are," she suggests.

Among the reasons for that is an ongoing shortage of nurses, which makes every retiring nurse a loss more keenly felt by a hospital or health care facility, and the rigors of working in a hospital, such as musculoskeletal demands, shift work, and overtime. "As a result, health care employers aren't an institution that can afford to look the other way" in planning for an older workforce, Pitt-Catsouphes says.

Consider how to 're-engage' employees

A study Pitt-Catsouphes is undertaking at the Center on Aging &Work/Workplace Flexibility is the Age & Generations study, which will examine how the changing demographic is affecting the health care industry. Among the topics of the study is how information and knowledge is transferred between older and younger health care providers. Also to be studied is how positive interactions

RESOURCES

For more information on preparing for an older workforce, contact:

AARP Best Employees for Workers Over 50. Free complete listing, with descriptions of innovative programs, available at www.aarp.org/money/careers/employerresourcecenter. Under "Best Employers for Workers Over 50," click on "Honored in 2006."

For more information on the following low-lift products, contact the following manufacturers:

- **Hovermatt patient repositioning products**. Manufactured by HoverTech International, D.T. Davis Enterprises, 513 S. Clewell St., Bethlehem, PA 18015. Phone: (800) 471-2776.
- **EZ Lift battery/electric patient lifting systems**. Manufactured by Kinetic Concepts, 8023 Vantage Drive, San Antonio, TX 78230. Phone: (800) 275-4524.
- **Ergo Slide no-lift patient transfer systems**. Manufactured by ErgoSafe Products. 2351 Grissom Drive, St. Louis, MO 63146. Phone: (866) 891-6502.

Creativity keeps employees happy to extend careers

Some examples of hospitals and health care systems that are trying to flex with their changing employee demographics include the following:

- Mercy Health System of Janesville, WI, offers numerous flexible work options, including a weekender program (nurses work only on weekends), traveler option (nurses work six - 13 week assignments), nursing float option (nurses are guaranteed benefits while floating departments), registry pool option (they work 48-96 hours per month with benefits), 8/10/12 hour shift options, work-at-home option, and work-to-retire program (work reduced hours seasonally).
- Lee Memorial Health System in Fort Myers, FL, offers nurses and other employees a seasonal-months-off (SMO) program, which provides for up to six months off during the slow season (typically in the summer). The SMO program is available to full-time and part-time workers. During their SMO, employees are able to continue their health, dental, vision, life, and long-term care insurance at the same rate they were paying for these benefits before the SMO. Another unique program is the "reduced schedule" program, which allows workers to reduce the number of hours they work up, to six months. Employees in this program typically stay in the Southwest Florida area and are able to come to work, if needed (with at least a 24-hour notice). Employees in this program continue to receive their full benefits, as well as accrue paid time off for hours worked. Lee Memorial also uses senior placement agencies to recruit mature workers or retirees. **(See list of agencies in resource box, p. 42.)**
- MidMichigan Health in Midland has a "Retire/Rehire" program that allows retirees the opportunity to leave the health system for six months and then have the option to return to work on an 800-hour annual schedule while still collecting full retirement benefits. The health system offers up to a $500 bonus for any staff member on the program who passes a certification. Retirees often return to the health system as volunteers to stay connected, with 515 volunteers currently active.

among health care workers of different generations can contribute to health care outcomes.

"When you look at extending careers, and re-engaging people in a new way, the time to start that conversation is in midlife adults, or even younger in nurses, I think, because you want them to think of nursing as a career over their lifespan, so that they don't get to age 55 and think, 'I can't wait to leave,'" she explains.

One way to "re-engage" nurses and other health care workers, Pitt-Catsouphes suggests, is to lobby for giving them more options on how they work. Often, Pitt-Catsouphes sees nurses who would like to work longer, but don't want to work the same schedule of long hours they have throughout their careers. "Hospitals are 24/7, and it can be very demanding, so some are doing some interesting innovations, with different kinds of flexibility," she says. **(For examples of what AARP applauded in some employers' efforts to attract and retain older workers, see story on p. 41.)**

Look beyond hours and benefits

If you are looking to help your employer retain and attract older workers, it's important to consider other types of satisfaction that employees get from their jobs, outside of pay and benefits.

Javon R. Bea, president and CEO of Mercy Health System, said at a recent hearing of the U.S. Senate Special Committee on Aging that incentives that allow employers to ensure satisfactory workplaces for the aging workforce is money well-spent, as his system found when they made a major investment in lifting devices to assist employees in patient care. "Mercy Health System employs 3,856 workers, [and] of those, 28% are over the age of 50," Bea told the Senate panel. "A decade ago, when analyzing the impending shortage of health care workers, we knew we needed to put programs in place to recruit and retain older workers."

Besides the variety of flexible work schedules noted by AARP, Bea says Mercy Health invested more than $250,000 in a low-lift program and is a leader in Wisconsin's statewide safe lifting initiative. Among the equipment added to protect employees from back injury are Hovermatt patient repositioning mats, EZ Lift battery/electric patient lifting systems, and ErgoSlide no-lift patient transfer mats. **(See resources box on p. 41 for more information.)**

From a business perspective, "offering programs to retain older workers has proven to be a successful decision," Bea says. ■

RESOURCES

To learn more about recruiting older employees, contact senior placement agencies such as:

- **Experience Works**, a national agency that pairs low-income seniors with employers. 2200 Clarendon Blvd., Suite 1000, Arlington, VA 22201. Phone (866) 387-9757.
- **Operation ABLE**: Coaching and referral service; provides counseling to employers interested in retaining and attracting older workers. ABLE stands for "ability based on long experience." 131 Tremont St., Suite 301, Boston, MA 02111. Phone: (617) 542-4180. Web site: www.operationable.net.
- **Senior Community Service Employment Program (SCSEP)**, part of the AARP Foundation, helps financially eligible individuals 55 and older remain in or re-enter the workforce. Provides training for workers and referrals for employers. National office phone: (202) 434-2020; state SCSEP offices located nationwide. To find a local office, visit the AARP SCSEP Web site at www.aarp.org/scsep.

Carpal tunnel syndrome: Keyboards not to blame

Research: Typing, repetitive motion not the cause

Employees who come to you complaining of numbness in their wrists caused by their work might not have carpal tunnel syndrome (CTS). But if it is CTS, new research indicates their genes, not their keyboards, are the cause.

Work that involves hours of keyboarding or continuous use of the hands has been the popular target of blame in people who develop CTS, but the evidence is much stronger for genetics than for repetitive hand use, says orthopedic surgeon **David Ring**, MD, PhD, an assistant professor of orthopedic surgery and a hand and upper extremity surgeon at Massachusetts General Hospital in Boston. In fact, in a review of 117 published studies on CTS, Ring and his colleagues found that while the evidence supporting genetic or inherited risk factors was moderate, the quality and strength of evidence pointing to occupational risk factors was poor.

Though commonly accepted as true, Ring says,

EXECUTIVE SUMMARY

Carpal tunnel syndrome is a diagnosis that has been erroneously used to explain some workplace arm and hand injuries.

- Recent studies indicate that carpal tunnel syndrome is not caused by typing or repetitive motion, but rather is caused by genetic factors.
- There is poor evidence that activity of any kind, whether work or recreational, affects true carpal tunnel syndrome. This lack of evidence could have implications for workers' compensation and employee disability cases.

the link between hand use and CTS "is overstated, and may be inaccurate." He describes CTS sufferers as "innocent bystanders" whose activities or work likely aren't to blame for the condition.

When CTS became the focus of great attention in the 1980s and 1990s, there developed some misconceptions about what carpal tunnel syndrome is, as well as some misdiagnoses of hand and wrist pain as being CTS. According to Ring, some basics about CTS include:

- **CTS is numbness, not pain**. The numbness can be so severe that it is painful, Ring explains, but pain without numbness is not CTS.

"[A] common misconception is that patients who present with complaints of activity-related wrist pain have carpal tunnel syndrome," Ring says. "In fact, the hallmark of CTS is numbness that wakes you at night or is present when you wake in the morning."

The typical complaint is of numbness of the thumb, index, and long fingers, and the radial half of the ring finger. Most people sleep with their wrists flexed, which can cause numbness. Shaking the hand gets rid of it, and a wrist splint prevents the numbness because it prevents positioning the wrist in a way that provokes it. Other flexed wrist activities -- driving for instance -- can provoke the numbness.

Symptoms of vague, diffuse activity-related arm pains and little or no numbness are unlikely to be due to carpal tunnel syndrome. Pain-dominant complaints usually represent idiopathic (nonspecific, medically unexplained) arm pains that are strongly tied to psychosocial stressors.

- **CTS is slowly but inevitably progressive**. Ring points out that unchecked CTS can lead to permanent nerve dysfunction (numbness, atrophy, weakness), so once identified, it will need surgery eventually, although sometimes years or even decades later, to prevent permanent nerve damage.
- **CTS is idiopathic**. There appears to be genetic predispositions to CTS, but doctors don't know why it occurs.
- **Surgery stops the progression of CTS**. When the median nerve is released from the carpal tunnel (a solid ring of bones and ligaments at the wrist that the nerve passes through), the numbness and progression of CTS is stopped. Any nerve damage present at the time, however, is likely permanent, though there is a small chance of some recovery, Ring says.
- **Other treatments only address symptoms.** Surgery is the only thing that affects the course of the disease, explains Ring. Corticosteroids, splints, and other measures only address the symptoms.

Course unknown in most cases

CTS remains poorly understood. While pressure in the carpal tunnel is involved, the cause of the increased pressure is unknown in most patients. In fact, the disease is insidious and symptoms usually begin gradually, although some patients ascribe the problem to a specific injury or event. Initially, symptoms may be felt intermittently, but they may become constant in advanced stages.

Ring's research team evaluated all of the published original data regarding the etiology of CTS (117 studies) according to a quantitative measure of the strength and quality of scientific data for a causal association. Average scores for biological factors such as genetics, race, and age were double those for occupational factors such as repetitive hand use, vibration, etc.

Ring says while these findings may affect future claims of disability, workers' compensation, and personal injury, the evidence of a genetic link should be viewed primarily as reassuring news for people who have CTS.

"There's poor evidence that anything we do or don't do affects the disease process, so we can type, play music, do surgery, etc., to our hearts' content," he insists. "I hope that the main of influence of the evidence that CTS is largely genetic will be to put our minds at ease and free us from guilt and anxiety about our activities."

Grouping CTS in with idiopathic activity-related arm pain is a mistake, he says. Idiopathic hand or arm pain can be caused or aggravated by activity, but, by definition, there is no objective evidence of

any injury or disease. On the other hand, CTS is an objectively verifiable, peripheral mononeuropathy.

Whatever happened to CTS?

CTS was first diagnosed more than 100 years ago, but it was viewed by laypeople as almost an epidemic in the 1980s and '90s. Ring says he is hopeful that the misuse of the CTS diagnosis to refer to idiopathic, activity-related pain is subsiding. Sometimes, he points out, a sore arm is just a sore arm.

Our culture accepts the terms "backache" and "headache," which imply disabling pain that does not reflect danger serious pathology, he points out. "We all get headaches and backaches and know that things will turn out fine with rare exception," he says. "Why not accept the idea of an 'armache' and assume that we are healthy, in spite of occasional disabling arm pain, until proved otherwise?"

The leading journalism industry journal, *Editor & Publisher*, recently asked "Whatever happened to carpal tunnel syndrome?"[1] The magazine noted that two decades ago, CTS threatened to cripple newsrooms across the country as journalists were struck by wrist pain and numbness. Ring says the short answer is that the incidence of true CTS has not changed, but misuse of the diagnosis to refer to activity-related arm pain seems to be decreasing.

Occupational health nurses should be aware of the difference between idiopathic, activity-related pain and true CTS, and they should encourage workers complaining of hand or arm pain and numbness to seek appropriate diagnosis. The best treatment for idiopathic arm pain is probably cognitive behavioral therapy based on analogy with other similar illnesses such as back pain and hypochondriasis where there is good scientific support, Ring states.

The evidence of genetic risk factors for CTS have no bearing on treatment, he points out. The treatment of CTS is very straightforward, Ring says. "Activity does not seem to cause the disease or cause any harm," he says. "If the numbness is not controlled with splinting or [electrophysiological testing] shows more than moderate changes, it's time to consider surgery."

The good news for CTS sufferers is that surgery is very successful in those cases, he says. "When we are talking about resolving nighttime/intermittent numbness and preventing progression of nerve damage, surgery is incredibly successful — one of the most predictable surgeries I do," he says. "Surgery for pain is very unpredictable, and it's likely that many of the positive results represent the placebo effect."

Reference

1. Fitzgerald M. Sprain and Pain Wane: Carpal Tunnel Scare Over? *Editor & Publisher*, Jan. 12, 2007. Available online at www.editorandpublisher.com/eandp/search/article_display.jsp?vnu_content_id=1003531629. ■

RESOURCE

For more information on carpal tunnel syndrome, contact:

- To read "Quality and strength of evidence supporting occupational risk factors for carpal tunnel syndrome," presented at the American Academy of Orthopaedic Surgeons annual meeting, February 2007, go to www.AAOS.org. Click on "Physician Education," then, at far right, click on "2007 Annual Meeting." Under "Additional Resources," click on "2007 Education," then choose "Podium presentations," "Friday, Feb. 16, 2007," and "361."

Nanomaterials at work? Learn safe handling rules

Technology moves faster than safety knowledge

Has your hospital recently obtained new imaging equipment and materials that the radiology staff says is the latest thing on the market? If so, your employees might be among those who need to learn about safe handling of nanomaterials.

"Nanotechnology can mean so many things to so many people, but in a lot of ways, it's just a new way of doing the same old science," says **Chuck Geraci**, PhD, CIH, a scientist with the National Institute for Occupational Safety and Health (NIOSH) Nanotechnology Research Center in Cincinnati. Geraci is among scientists who contributed to NIOSH's recently released report "Progress Toward Safe Nanotechnology in the Workplace." **(Editor's note: The full NIOSH report on nanotechnology safety in the workplace is available at no cost at www.cdc.gov/niosh/docs/2007-123.)** Geraci says the first thing occupational safety and health managers need to remind themselves and their staff is that little is known about

EXECUTIVE SUMMARY

Nanomaterials are coming into the market, particularly in medical imaging technology, but it is not certain how to handle them safely.

- The effects of human exposure to nanoparticles will be seen at health care and manufacturing sites, according to National Institute for Occupational Safety and Health researchers.
- Educate yourself about where nanomaterials might soon be used in your workplaces, or whether they already are being used by employees or manufactured at your worksites. Make sure safe handling practices are obtained and distributed to anyone who might come in contact with the materials.

the effects of nanoparticle exposure to human health.

The emerging field of nanotechnology, the science of "building small," holds enormous promise in almost every field, including medicine, cosmetics, information technology, optics, electronics, and materials development. Devices measured on the nanoscale are from 100 to 10,000 times smaller than human cells, and as such can easily enter and pass through human cells. A nanometer is one-billionth of a meter; a human hair, by comparison, is about 80,000 nanometers wide.

When materials, even benign ones such as titanium oxide and gold, are engineered to the nanoscale, their properties and reactivities change. They have a large surface area, making them more reactive. "So there are a lot of questions about the safety of products arising from nanotechnology; and NIOSH is focusing on what kind of impact there might be if you have an exposure to materials made on the nanometer scale," says Geraci says.

Scientists have learned, and continue to learn, that when materials are made this small, they have a higher reactivity than larger particles do, he says. "They have a different reactivity than bigger particles, and they have the ability to move around in the body," he says. "So put that together, and it's probably a good idea for occupational health and medicine to understand the human effect this will have in the workplace, because it will happen there first."

While knowledge of what health risks may accompany exposure to nanodevices is limited, the first thing an occupational health nurse needs to know is whether his or her company is already using nanotechnology, says epidemiologist **Linda A. McCauley**, PhD, FAAN, professor of nursing and associate dean for research at the University of Pennsylvania School of Nursing in Philadelphia.

'Keep your radar up'

The technology is growing at such an explosive rate, and in so many different areas, you might be surprised at where nanoparticles are showing up, she says. "Nurses should keep their radar up about new processes, keep their ears open, and stay informed about new technologies being developed," she advises. Nurses also should stay abreast of toxicological testing done on nanomaterials used in their workplaces. **(See table for listing of materials or processes in development that use nanomaterials, p. 45.)**

Companies manufacturing nanoparticles will be the first to deal with exposures, but health care is likely to see early exposures as well, predicts Geraci. Imaging technologies already on the market are using nanotechnology. Some nanoparticles are bound into materials that make them less apt to be released to direct exposure, Geraci points out, while others can be released easily. Still others are an unknown quantity when it comes to exposure risk.

"It's very exciting to think about engineering nanoparticles to target drug delivery," Geraci says. A quantum dot particle can be tagged with an antibody that causes it to migrate to a specific receptor site, where it can release anticancer drugs right at the site or destroy a specific cell, rather than flooding the patient's entire body with chemicals

Materials or Processes in Development Using Nanotechnology

- Advanced drug delivery systems, including implantable devices that automatically administer drugs and sense drug levels.
- Medical diagnostic tools, such as cancer tagging mechanisms and lab-on-a-chip, real-time diagnostics for physicians.
- Cooling chips or wafers to replace compressors in cars, refrigerators, air conditioners, and multiple other devices.
- Sensors for airborne chemicals or other toxins
- Solar cells, fuel cells, and portable power

Source: National Institutes for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention, Atlanta.

or radiation.

In March, scientists with the University at Buffalo's Institute for Lasers, Photonics, and Biophotonics and Roswell Park Cancer Institute, both in Buffalo, NY, announced they have applied for a patent on a drug delivery system that uses nano-engineered crystals to deliver antitumor drugs. Nanotechnology allows the drug to be its own delivery system, the researchers say, which is a breakthrough. Not only does this characteristic allow the drug to target an extremely narrow group of cells, but also once a self-delivering drug is approved, no delivery method need also be approved, they say. This characteristic should get new-generation drugs on the market faster, the researchers add.

That's great for the patient who needs the nanoparticles introduced into his or her body to perform a specific function, Geraci says, but what about the nurse or physician who is exposed to nanoparticles day after day? "Does the person delivering these materials, or performing [scans with nanomaterials] need to take extra precautions? I think you'd have to say yes, at this point," he says.

While NIOSH's experience with manufacturers of nanomaterials has thus far been positive when it comes to educating users about safety, Geraci says he cautions anyone implementing technology that might include exposure to nanoparticles to take precautions and learn all they can. "If there's new training or precautions that should go with [the new technology], we would like to believe hospitals are getting that information and training from the supplier," he explains. But because the technology is so new, manufacturers and sales representatives might not know what all the safety issues are. "We basically tell people to ask lots of questions, like they would with any new product," he adds. "Get information on good handling practices, and make sure it gets into the hands of the people handling the materials." ■

Drug use at work hit all-time low in 2006

Vigilance by occ health nurses, employers credited

Drug use among workers in the United States hit a new low in 2006, in part because employers and employee health managers are so vigilant, according to annual data posted by a leading employment-related drug testing service.

The Quest Diagnostics annual Drug Testing Index shows that positive test results for amphetamine and methamphetamine fell 20% from 2005 to 2006 among federally mandated safety-sensitive workers. This is a category that includes pilots, bus and truck drivers, and workers in nuclear power plants for whom routine drug testing is mandated by the U.S. Department of Transportation and the Nuclear Regulatory Commission. **(For information on how to order the Drug Testing Index, see resource box, p. 47.)**

Positive findings for marijuana and amphetamine use among the general U.S. workforce fell, as well. The 2006 Drug Testing Index summarizes the results of more than nine million workplace drug tests.

Since the Lyndhurst, NJ-based Quest Diagnostics began performing workplace urine drug screens in 1988, the overall positive result rate has fallen from 13.6% in 1988 to 3.8% in 2006. The continued decline in positive workforce drug screens may be driven by two factors: increased employer vigilance, and workers who use drugs intentionally avoiding employment at companies that actively screen for drugs, says **Barry Sample**, PhD, director of science and technology for Quest's Employer Solutions division.

One of the focus areas for occupational and environmental health nurses for some time has been bringing attention to the hazards of workplace drug and alcohol use, says **Susan Randolph**, MSN, RN, COHN-S, FAAOHN, president of the American Association of Occupational Health Nurses (AAOHN). "Substance abuse at work, both drugs and alcohol, is certainly on the minds of employers, and that includes drug use at work and drug use at home that might cause a worker to come to work under the influence," says Randolph.

Safety issues arise not only for the employer using drugs, but for the coworkers of the employee and people he or she encounters at work. "They aren't as productive and can cause accidents for themselves and their co-workers," Randolph points out.

The occupational health nurse's involvement in drug testing can occur in several ways, whether it's collecting urine samples at hire, conducting random screens of existing employees, or in arranging off-site drug testing for an employee who is suspected of being impaired. "Some companies may have policies for testing for cause — if an accident occurs or a supervisor or coworker notices behav-

ior or symptoms, the nurse may be involved in doing an assessment of that worker, evaluating what the supervisor is seeing, whether the employee's pupils are dilated or if he is not walking steadily," she explains.

Education is a factor in declining workplace drug use, Randolph adds. Whether it's intervening to educate an employee about the dangers of drug use or training a supervisor on what to look for when impairment is suspected, the occupational health nurses is a key component to a company's drug-free environment. "

Also, nurses have a very important role if there is a no-tolerance policy, in getting to that person who is using, getting them help through the [employee assistance program], and saying to them, 'We value you and we value your work here, so you need to get help and because there is a no-tolerance policy, you have to go through this assistance program,'" she says. "Then, that is usually followed up by some monitoring by the nurse."

The 2005 National Survey on Drug Use and Health (NSDUH) presented by the Department of Health and Human Services found that individuals whose employers do not have a drug testing program reported a nearly 50% higher incidence of illicit drug use, compared to those with drug testing programs: 7.1% compared to 10.5%. ■

RESOURCES

The Drug Testing Index is available free of charge from Quest Diagnostics, Lyndhurst, NJ. Web: www.questdiagnostics.com. On the left side of the screen, click on "Employer Solutions," then from the Drug and Alcohol Testing pull-down menu, select "Drug Testing Index."

The National Survey on Drug Use and Health, 2005, can be downloaded free of charge from the Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Go to nsduhweb.rti.org and click on "Latest survey results," located on the left side of the screen.

CE Objectives

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

- The health risks of layoff stress
- What's light duty versus restricted duty?
- Pitfalls of case management
- Working for yourself — Pros and cons

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 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.

CE *questions*

13. What are employers required to do regarding acceptance of a physician's return-to-work plan for employees?

    A. Return to work is an offer made by the employer; the employer is not obligated to accept the plan proposed.

    B. If an employer requests a return to work plan from a physician, the employer is required to accept it.

    C. Employers are required to offer return to work and are required to extend that period for as long as the physician recommends.

    D. If an employer permits return to work and it extends over a long period of time, there is no risk to the employee's ability to eventually return to his or her former position.

14. According to the American Association of Occupational Health Nurses, 28% of its membership of occupational health nurses is within 10 years of retirement (age 57 to 66).

    A. True

    B. False

15. Which of the following is NOT considered evidence of carpal tunnel syndrome?

    A. Numbness at night and in the morning

    B. Pain without numbness

    C. Symptoms that progressively worsen over time

    D. Symptoms that are idiopathic, or without an apparent cause

16. According to the National Institute for Occupational Safety and Health, what area of a hospital is the most likely to be using devices or materials that employ nanoparticles?

    A. Radiology/imaging

    B. Cardiology

    C. Emergency Department

    D. Housekeeping

Answers: 13. A; 14. A; 15. B; 16. A.