

Occupational Health Management™

A monthly advisory for occupational health programs

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Employers must work out ways to pump up fitness program participation

Low participation undermines value to employers, research shows

The latest research on workplace fitness programs suggests they often are just a high-profile way to spend money and help the company look like it is committed to improving fitness, with only a small fraction of the work force utilizing the programs on a regular basis and achieving significant results. But even with that discouraging analysis, experts still say occupational health professionals should continue to encourage fitness programs in the workplace.

Rather than giving up on the idea because the track record is less than exemplary, experts suggest focusing more on increased participation than on other aspects like the specific configuration of the program and the equipment. It is more beneficial to provide a modest fitness facility that has high participation than to have a world-class gym, which serves only a few members of the work force, says **Nicholas DiNubile**, MD. DiNubile is an orthopedic surgeon in Havertown, PA, and director of sports medicine and wellness at the Crozer-Keystone Healthplex in Springfield, PA.

“Only a small percentage of employees usually will get involved in a workplace fitness program, and that may discourage some employers and providers,” he says. “That’s a problem, but we know the benefits of fitness. We have to concentrate on how to get more people involved.”

That idea is supported even by those whose research has demonstrated the low levels of participation in most workplace fitness

EXECUTIVE SUMMARY

Recent research suggests that workplace fitness programs do not yield the health or financial benefits employers and occupational health providers expect. Low participation is the biggest problem.

- Participation usually falls sharply after the first few months.
- Spending more money on the programs doesn’t solve the problem.
- The lack of major, measurable benefits is no reason to discourage workplace fitness programs.

programs — for example, **Roy Shephard**, MD, PhD, DPE, professor emeritus of applied physiology at the University of Toronto. His recent research confirms the benefits of workplace fitness programs but also documents that the level of participation and the measurable benefits probably won't be what employers and occupational health professionals expect.¹

Nevertheless, Shephard tells *Occupational Health Management* there is no reason for occupational health professionals to discourage employers from creating or continuing workplace fitness programs.

"There is a benefit to those who participate, even if it is not at the level we would desire," Shephard says. "My research may not be what a lot of people would like to hear about workplace fitness programs, but it only shows that expectations were unrealistic in some cases. It doesn't mean that fitness programs are not worthwhile, only that it may be time to look at ways to improve the results we achieve from them." (For advice on increasing participation in workplace fitness programs, see related story, p. 51.)

Low participation, modest results for most

Workplace fitness programs have long been a staple of occupational health management, and there is little doubt they are beneficial to those who participate consistently. The latest research, however, suggests that the overall benefits are more modest and affect fewer employees than employers might expect.

Shephard's research, for instance, indicates that workplace fitness programs chiefly attract employees with a favorable attitude toward work and health. It's not likely that the obese, chain-smoking employee with a bad work attitude is going to become an enthusiastic, long-term participant in the fitness program.

"Only a fraction of employees avail themselves of work site facilities, a very small fraction, especially after the first few months in which interest is high," Shephard says. "You usually start off with about 60%, and after six months you're

down to 20%. So when you see health benefits in those 20% and compare them to the time and expense you put into the program, you have to remember that you should divide those benefits by five to apply it across the work force."

For those participating, workplace fitness programs do result in decreased body fat; increases in aerobic power, muscle strength, and flexibility; enhanced mood state; reduced medical insurance claims; decreases in absenteeism; and increases in productivity. Shephard analyzed 26 previous studies of workplace fitness programs and found definite, but relatively small health benefits. The statistical analysis found there was a mean effect of 0.11 standard deviations when measuring the improvements in fitness.

"This is equivalent to increasing the success rate from the chance expectation (an improvement of physical activity in 50% of subjects and a worsening in the remaining 50%) to an increase in 56% and a worsening of 44%. [That is] a benefit that remains far from significant despite the use of 8,800 subjects," he says.

The analysis found no significant effect from offering or not offering incentives, duration of the intervention, or the average age of the participants. Fitness program participants typically experienced a 1% to 2% decrease in body mass, but the companywide impact was negligible. Body fat typically decreased 13% for participants, but the companywide impact was only a 2% decrease. Aerobic power could increase up to 20% over three months for enthusiastic participants, but companywide benefits were more likely to average 7.4% for women and 4.4% for men.

Medical claims typically decreased \$100 to \$400 per year for participants, but notably, back education programs did not seem to reduce the number of back injuries.

Another interesting finding of both Shephard's and DiNubile's research is the benefits of a workplace fitness program do not rise proportionately with the money invested in the program. "Neither program participation nor wellness response rises in direct proportion to the capital invested in

COMING IN FUTURE MONTHS

■ NIOSH testing for N-95 mask

■ Alternative therapies in occupational health

■ Privacy concerns in confirming workers' comp

■ Pitfalls in contracts with clients

■ Sales approaches that work, some that don't

Get executives involved, make sure program is flexible

Key ideas for improving participation in workplace fitness programs include making sure employees see the CEO sweating on the treadmill, and allowing them to take longer lunch hours.

Look for ways to make employees more comfortable participating in the program, rather than ways to make the program larger or fancier, says **Nicholas DiNubile**, MD, an orthopedic surgeon in Havertown, PA, and director of sports medicine and wellness at the Crozer-Keystone Healthplex in Springfield, PA.

These tips come from DiNubile; **Judy Colby**, RN, COHN-S, CCM, program director of The Workplace at Simi Valley (CA) Hospital and Healthcare Services; and **Roy Shephard**, MD, PhD, DPE, professor emeritus of applied physiology at the University of Toronto:

✓ Get the executives involved.

It's almost a cliché that you need "upper management support," but this point is especially true with workplace fitness programs. Without executives working out alongside other employees in the fitness center or exercise class, the program can be seen as a benefit that the company only begrudgingly provides. That can lead to the impression that bosses don't really want employees spending time working out when they could be toiling away at their desk or work station. "If senior management has a positive attitude and demonstrates by their participation, that filters down to other people," Shephard says. "If you're trying to increase participation, focus on the executives. Get them in there, and it will be easier to get others in there."

✓ Make the program very flexible.

Don't forget that workers will have many different concerns and demands on their time, not all of them work-related. If you set up a fitness program that only allows them to participate at certain times of the day, you may be forcing some workers to not participate. Work demands can prevent some workers from being in the gym first thing in the morning, for instance, and carpools or public transportation schedules can prevent some workers from hanging around after work.

The ideal situation would be a fitness center that is available 24 hours a day, or nearly that much, so that individuals can visit at whatever time makes ongoing participation most feasible. Keep this problem in mind

when scheduling exercise classes, also. "The more flexible a program is, the more it is going to be used," Shephard says.

✓ Eliminate subtle discouragement.

All your hard work in encouraging fitness program participation can be undermined by one supervisor's nasty comment questioning why an employee was late returning from lunch. If it was because he worked out in the gym after grabbing a quick sandwich and couldn't make it back in exactly 60 minutes, the message is that he shouldn't try that anymore. Supervisors should be urged to make allowances for workers participating in the fitness program, even though that can be a hard sell. The easiest way to convince them might be getting them to participate themselves.

"It's one thing for management to say they encourage participation and another for them to actually allow employees the flexibility to use the program," DiNubile says. "If you ask someone to work through lunch and make one more deadline instead of going to the gym today, you're sending the wrong message."

✓ Provide different levels of participation.

Some fitness programs fail to consider that workers will vary significantly in terms of their starting fitness levels and their interest levels. The fitness program should provide for their different needs, rather than assuming that one size fits all. "For some enthusiasts, the program won't provide enough, and at the other end of the spectrum, some will find that it is too demanding," Shephard says. "The program should be designed so that it is flexible enough to accommodate both groups' needs. Otherwise, you're going to lose one end of the spectrum."

✓ Provide incentives but not just for athletic prowess.

Incentives can be a good way to encourage participation, but DiNubile cautions that they must involve more than just team or individual athletic competitions. Not all of your work force will be athletically oriented, so that type of incentive can have no effect or even discourage participation if you give the impression that the fitness program is intended for jocks.

"A big goal is to involve those who are sedentary, so it's not helpful if your incentives only target the type of worker who is starting at a high level of fitness and is oriented to athletic competition," DiNubile says. "Those rewards are fine for those workers, but the program needs other incentives for consistent participation, for instance." ■

wellness personnel, programs, facilities, and equipment," Shephard says.

DiNubile's research also suggests that the way you solicit participation in a work site fitness program is more important than whether you bought

the latest computerized gizmo for the gym.²

"It's a wise investment for any employer to somehow encourage the work force to be more fit and active," he says. "It doesn't have to be a health club at the workplace, though that's

Reader Questions

New standard could include keyboard workers

Question: With all the talk about the proposed ergonomics standard that has been released by the federal Occupational Safety and Health Administration (OSHA) in Washington, DC, I'm confused about whether it would cover computer workers and other keyboard operators. Would they be covered?

Answer: There is some confusion about this because keyboard operators are generally thought to be at relatively high risk of musculoskeletal disorders such as carpal tunnel syndrome, yet the proposed ergonomics standard does not directly address them. The latest word from those involved with developing the standard is that keyboard operators could be covered by the proposed ergonomics standard in some workplaces, but not all.

If that's not clear enough for you, here's an explanation from **David Cochran**, PhD, PE, CPE, professor of industrial engineering at the University of Nebraska in Omaha and special assistant for ergonomics at OSHA:

The ergonomics proposal applies only to manufacturing and manual handling jobs, giving it a very narrow scope. Office and retail workers are not covered. The proposal is limited to job types in which there is a clear risk and those in which research has shown that intervention efforts are most effective.

As written, computer users as a group are not specifically covered by the proposal. But if an employee works with a computer and his or her job description falls within the manufacturing and manual handling job categories, that computer user still could be covered by this proposed standard.

"If a keyboard operator is working in a manufacturing or manual handling job, then he or she could be covered by this rule even though the injury is traced to a task involving computer work. If they're in that manufacturing or manual handling category, they're covered by this proposal regardless of the specific task," he says. "I would

(Continued on page 54)

ideal. But even then, it's a mistake to get carried away with all the money you're spending on the equipment and surroundings. Provide a good workout center and then concentrate on encouraging participation."

One occupational health provider suggests that a precise determination of how much benefit comes from money invested in a workplace fitness program may miss the point of why some employers implement them. While they certainly desire a healthier work force and all the financial benefits that would entail, some employers see a workplace fitness program more as a general employee benefit, says **Judy Colby**, RN, COHN-S, CCM, program director of The Workplace at Simi Valley (CA) Hospital and Healthcare Services.

"Sometimes they're implemented from an employee relations perspective rather than as a pure aspect of health benefits," she says. "That often tempers their expectations in terms of real, tangible financial benefits, so I don't see any reason that this research should discourage an occupational health provider from recommending a fitness program and advising the employer about how to best set up one."

Shephard also points out that low levels of participation don't have to be accepted. There are ways to increase participation, and he suggests that participation may increase as the general population starts to pay more attention to health needs.

"I liken it to the campaign to end smoking," he says. "It's taken 50 years to get across to even 70% of the population that smoking is a bad thing. There has been consistent propaganda on smoking, and it took a very long time to get the message across. It may take as long to get across to the population that exercise is a good thing."

[For more information, contact:

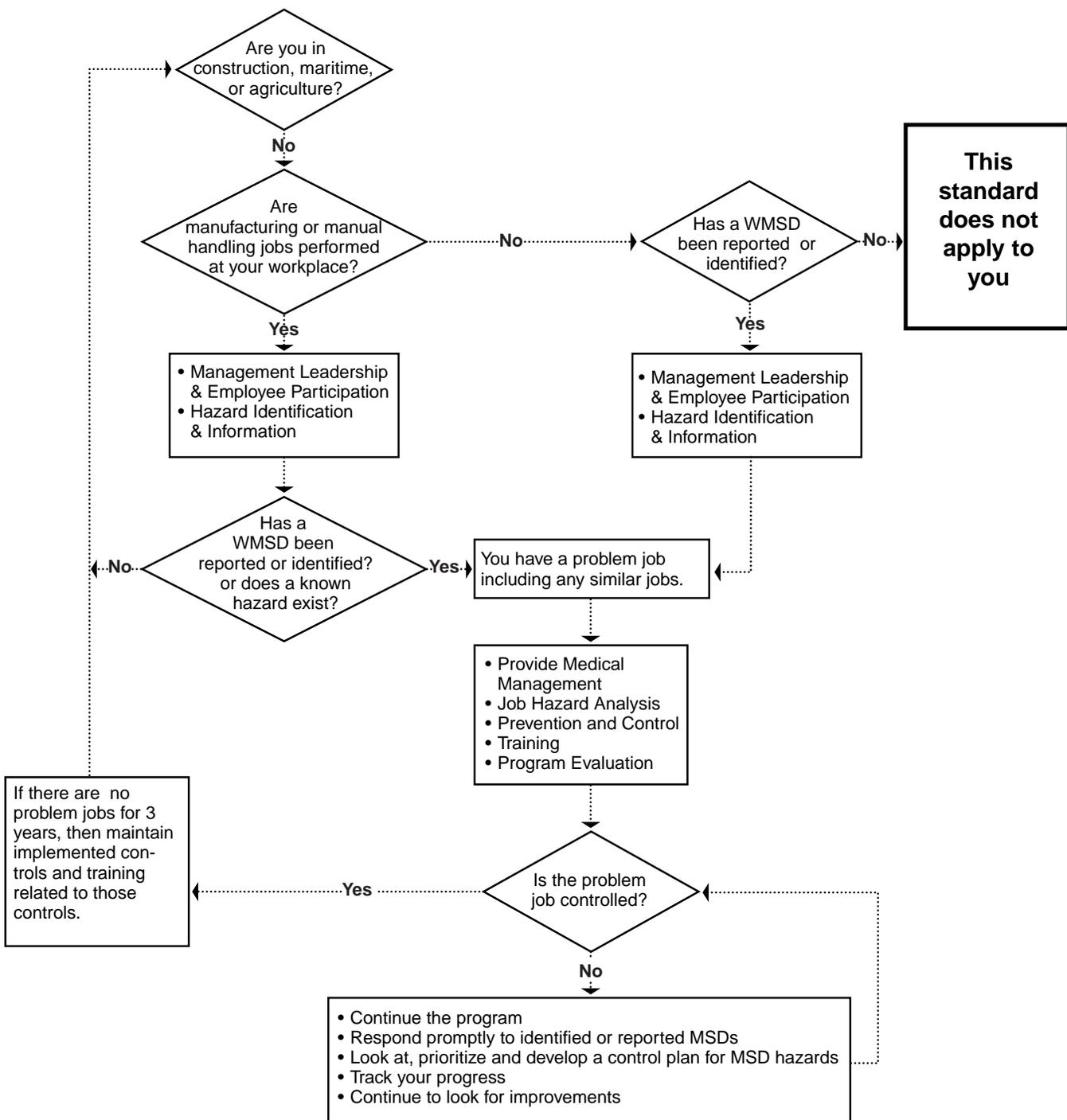
Roy Shephard, P.O. Box 521, Brackendale, BC V0N 1H0, Canada. E-mail: Royjshep@mountain-inter.net.

Judy Colby, P.O. Box 801164, Santa Clarita, CA 91380. Telephone: (805) 583-3200.]

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1. Shephard RJ. Do work-site exercise and health programs work? *The Physician and Sports Medicine* 1999; 27: 48-70.
2. DiNubile NA, Sherman C. Exercise and the bottom line: Promoting physical and fiscal fitness in the workplace: A commentary. *The Physician and Sports Medicine* 1999; 27: 37-46. ■

Ergonomics Standard Flowchart



* WMSD = Work-related musculoskeletal disorder
 Only production jobs in manufacturing and only manual handling jobs that are routine and require substantial effort.

Source: David Cochran, OSHA Special Assistant for Ergonomics, Occupational Safety and Health Administration, Washington, DC.

expect some significant percentage of the computer workers in the United States to fall into that category, but not a majority of keyboard users.”

Cochran says OSHA still is evaluating how many employers would be covered by the proposed ergonomics standard. The proposed rule would require employers to have a system for recording ergonomic-related injuries and illnesses, and to respond to musculoskeletal disorders when they are detected. **(See flowchart, p. 53, for help in deciding whether a particular employer would be covered by the proposed rule.)**

(For more information, contact: David Cochran, OSHA Special Assistant for Ergonomics, OSHA, N3718, 200 Constitution Ave. N.W., Washington, DC 20210.

The proposed ergonomics standard can be found on the Internet at <http://www.osha-slc.gov/SLTC/ergonomics/ergoreg.html>.) ▼

Advise clients up front that claims are their obligation

Question: Recently a workers’ compensation insurance carrier denied payment for multiple visits on one patient. This patient was seen about eight times and released to full duty after an apparent work-related injury. About one month after release, we were notified the carrier had declared the condition nonwork-related. We didn’t know the work relatedness of this case was ever in doubt until receiving the letter. The patient has no general health insurance and has not made payment on the bill.

With a tight budget for our clinic, situations like this are very frustrating. How much financial responsibility should the employer and insurance carrier bear when they send me a patient for treatment? I believe it is unfair for my clinic to assume total liability in such cases, but how can I resolve this with employers?

Answer: Your question struck home with the *Occupational Health Management* board members consulted for advice. They’ve all been frustrated by the same situation you describe.

Pat Stamas, RN, COHN, president of Occupational Health and Safety Resources in Dover, NH, says she has faced this situation many times,

especially in a previous position when she was director of a hospital-based occupational health program. Her initial reaction was to just write off the bad debts as uncollectible and consider the loss an unfortunate part of providing occupational health care. But the amount of the bad debts soon became intolerable, so her program hired a collection agency. New Hampshire law specifies that the injured worker is ultimately responsible for paying the medical bills, so the collection agency was a reasonable response after the insurer refused payment.

“But we soon realized that the return from the collection agency was minimal,” Stamas says. “It turned out not to be worth the effort and expense.”

Instead, Stamas tried a different tactic. She began adding a clause to the contracts her program used that made the employer responsible for all medical costs when treatment had been provided already but the insurance claim was denied. In her experience, most employers agree to take on that responsibility once you explain that you are providing immediate treatment to their workers on good faith, trusting that either the insurer or employer will pay. And since employers already are motivated by financial concerns to avoid sending non-occupational injuries to you for treatment, they generally understand that their risk of liability is low.

To further reduce the chance that you could be left holding the bag, Stamas says there also is the option of requesting a “retainer” from the employer who is new to your program. Similar to a retainer given to an attorney, the employer posts a sum of money, which is held by the occupational health program for use in covering uncollected debts. She notes this option is a bit more aggressive than simply asking the employer to agree to pay denied claims but explains it is a reasonable option if you have a particularly bad history of denied claims and uncollected debts.

However, the likelihood of getting clients to provide a retainer is questionable. **Melissa Tonn, MD, MBA, MPH,** medical director of occupational health services at Memorial Hermann Healthcare System in Houston, says a retainer would solve much of the problem, but she doubts many clients would agree to provide one. Instead, she advises clients upfront that they are responsible for paying for visits to her clinic if the workers’ comp carrier does not cover the debt. Some small companies resist the idea, she says, but most larger companies understand they must pay when they authorized the clinic visit.

"We've seen this problem most often with first or second visits, when the employee is being sent over to determine if the injury is work-related," Tonn says. "We don't bother trying to get the bill paid by the employee because that's just like trying to get blood from a turnip."

(For more information, contact: Pat Stamas, Occupational Health and Safety Resources, 1515 Surrey Run, Dover, NH 03820. E-mail: Pstamas@Celestica.com.) ■

Postcards used to remind employers, patients

Simple postcard reminders can be an effective way to remind clients about occupational health needs and to keep your name in front of them, according to a program that uses a dozen different reminders to stay in touch with local employers.

MGRyan & Co., an occupational health program in Oxnard, CA, has used 12 different postcards or other types of mailings to remind

clients of upcoming deadlines or to alert them to changes in regulations that may affect them. Executive director **Mary Gene Ryan**, MPH, RN, COHN-S, says the mailings serve two purposes. They not only alert employers to concerns that might be overlooked, but they also serve as subtle marketing for the program.

"They're informational, but they also remind the clients that they can use our services if they need to," Ryan says.

"We might send an alert that there's been a change in a federal regulation, or we might remind them that it's time to prepare their OSHA 200 report, for instance," she explains. (For a sample of the postcard sent to clients reminding them about the OSHA 200 deadline, see box, below.)

Computer narrows mailings

In February, the OSHA 200 reminder was mailed to all 500 clients of the program because it pertained to all of them. Other types of alerts are sent only to those clients affected, such as when the respirator standard was recently changed.

Using the program's database in which clients' specific concerns are flagged, only those clients

Sample Reminder Postcard



Don't forget...

You must post CAL/OSHA or OSHA Form 200 "Log and Summary of Occupational Injuries and Illnesses" at your facility from Feb. 1 thru Mar. 1

Your partner for health & safety



MGRyan & Co., Inc.

805.384.1169 877.757.MACI
POB 5145, Oxnard, CA 93031

using respirators received that mailing.

More alerts are added as the need arises. Ryan says the program has received follow-up calls from clients who received mailings, but she has not studied how much business the effort may have generated.

“We think it’s important just to keep our name out there and gently prompt them to call if they need anything,” she says. “This is a good way to do that without any pressure.”

[For more information, contact: Mary Gene Ryan, MGRyan and Co., P.O. Box 5145, Oxnard, CA 93031. Telephone: (805) 384-1169. E-mail: Maci6224@aol.com.] ■

Employee health costs total \$8,000 per year

The typical employer spends about \$8,000 each year on each employee’s health care costs, with workers’ compensation accounting for about 5% of that total, according to the most recent findings of a landmark study.

The study involved a survey of 17 major firms, with these results:

□ The median cost for health and productivity was \$8,621 per employee in 1997.

□ The largest expenditure was \$5,003 for health care expenses, including insurance, which accounted for 58%.

□ Turnover expenses were \$1,897 or 22%.

□ Unscheduled absences were \$698 or 8%.

□ Non-occupational disability costs were \$630 or 7%.

□ Workers’ compensation expenditures were \$393 or 5%.

□ The total cost for all health care-related expenses for the 17 firms, which had 600,000 employees, was \$4.9 million in 1997.

Employers can reduce those costs by using health management programs in the workplace, especially those applying “best practice” strategies, the researchers conclude. Such workplace wellness programs can reduce per-employee costs by \$1,567 or 18%, they say. Also, the researchers note that simply tracking employee health costs can spur cost savings.

The ongoing study is being conducted by the Medstat Group, a health care consulting group in Ann Arbor, MI, and the American Productivity

and Quality Center, a nonprofit quality improvement organization in Houston.

[For more information, contact:

Ron Webb at the American Productivity and Quality Center. Telephone: (713) 685-4634. E-mail: Ronw@apqc.org.

Ron Goetzel, Medstat Group. Telephone: (202) 686-7750. E-mail: Ron.goetzel@medstat.com.] ■

Lead exposure continues as hazard for workers

Occupational lead exposure is a continuing hazard for many U.S. workers, even though workplace exposure appears to be decreasing, according to a report from the Centers for Disease Control and Prevention (CDC) in Atlanta.

CDC researchers report a 14% decline in the number of adults with reported blood lead levels of at least 25 mcg/dL, compared with the same quarter in 1997 (See *MMWR* 1999; 48:213-223). The data come from the CDC’s Adult Blood Lead Epidemiology and Surveillance Study, an ongoing study of exposure to lead. The data also show a 12% decline for the first quarter of 1998, and an 11% decline for the second quarter.

The researchers note that “the testing level has remained relatively constant, indicating that the decrease probably is not caused by the performance of fewer tests.” About 4,000 adults with elevated blood levels were reported to the CDC each quarter in 1997 and 1998, prompting the researchers to warn about the “continuing hazard of lead exposure as an occupational health problem in the United States.” ■

Workers’ comp payments fall steadily over 4 years

Workers’ compensation benefit payments have fallen steadily for four years now, according to a new report issued by the National Academy of Social Insurance (NASI) in Washington, DC.

Benefit payments fell 2.4% between 1995 and 1996, from \$43.4 billion to \$42.4 billion, according to the report. Employers’ workers’ comp costs fell 3.3%, from \$57 billion to \$55.2 billion.

In a statement accompanying the study report, NASI chairman John Burton said the decline probably stems from a variety of factors, including fewer workplace accidents, improvements in the operations of workers' comp programs, and "a reduction in the generosity of these programs."

The study determined that medical payments accounted for about 41% of workers' compensation benefits in 1996 — about \$16.8 billion.

[For more information, contact: NASI, 615 Massachusetts Ave., Washington, DC 20036. Telephone: (202) 452-8097.] ■

Occupational injuries down for 5th straight year

Whatever OH professionals are doing seems to be working. Occupational injuries and illnesses were down for the fifth straight year in 1997, according to a recent report from the Bureau of Labor Statistics in Washington, DC.

Labor Secretary Alexis Herman, in a recent press release, praised the decline and noted that it was particularly good news in light of the booming economy. Employment is up, yet the number of injuries and illnesses has continued to drop steadily for five years, she said.

Same number of injuries, more work hours

There were a total of 6.1 million injuries and illness reported in private industry workplaces in 1997, which amounts to 7.1 cases per 100 full-time workers.

That is about the same number of injuries and illnesses as in 1996, but work hours increased 3% in 1997, resulting in a decrease in the rate of injuries from 7.4 per 100 full-time workers in 1996 to 7.1 in 1997.

Most of the reported incidents were serious enough to affect work performance. Of the 6.1 million incidents, 5.7 million resulted in lost work time, medical treatment, loss of consciousness, or transfer to another job. Manufacturing accounted for three-fifths of the 430,000 new occupational illnesses reported in 1997, and 64% of those cases involved repetitive stress or hearing loss. Of the repeated trauma cases, 72% were in manufacturing. ■

Contractor fined \$329,000 for safety violations

Federal safety inspectors are taking a hard line on trenching violations. After safety inspections at pipeline installation sites in seven communities in Coos County, NH, the federal Occupational Safety and Health Administration (OSHA) in Washington, DC, has cited a Texas-based pipe-laying contractor — which was working on the northern New Hampshire portion of a multistate natural gas pipeline — for alleged willful and serious violations of the Occupational Safety and Health Act. OSHA has proposed \$329,000 in fines against H.C. Price Co. of Dallas.

The fines are for alleged hazards posed to the contractor's workers by inadequately guarded trenches, improper operation and maintenance of pipe-laying cranes, and allowing its employees to ride unauthorized machinery.

According to **David May**, OSHA area director for New Hampshire, the alleged violations were discovered during OSHA inspections conducted between September and December 1998, at excavation sites in Milan, Stark, Columbia, Stewartstown, Stratford, Colebrook, and Groveton, NH.

Some of the inspections were spot checks conducted under OSHA's trenching safety initiative, and others were the result of complaints or calls from the general public alleging the company's unsafe working conditions. In addition, one inspection was in response to an Oct. 12, 1998, fatality at a work site in Stark.

Inadequate cave-in protection

The common hazard found at most of these work sites was the lack of adequate cave-in protection for employees working in trenches five feet or more in depth, May reports.

OSHA standards require that effective collapse protection be in place and in use before employees enter a trench. The absence of such protection leaves workers vulnerable to being struck by and buried beneath tons of soil before they have a chance to react or escape.

May explains that the considerable size of the fines proposed against H.C. Price Co. reflects the classification of its trenching citations as willful, the most severe category of OSHA violation.

OSHA issues such citations only when the

agency concludes, based on its inspection, that the employer knew what safeguards were required to protect workers yet apparently elected not to provide them.

Twenty-five U.S. workers died in trenching-related cave-ins last year, and OSHA has vowed to take strong action against employers who continue to disregard trenching safety measures. May says the severity of the fine reflects the seriousness of Price's willful disregard of the safety of its employees.

Fatal accident involving crane

The Oct. 12, 1998, accident occurred when a Price employee was struck and killed by the boom of a pipe-laying crane that was pulling the equipment sled on which he was riding. OSHA cited H.C. Price Co. for two alleged serious violations: making unauthorized modifications to the pipe layer and allowing employees to ride on the sled.

This is a breakdown of the total \$329,000 in penalties proposed against H.C. Price Co.:

- Five alleged willful violations, with \$290,000 in proposed fines, for five instances of failing to adequately guard trenches against possible collapse.

- Thirteen alleged serious violations, with \$39,000 in proposed penalties, for failure to provide a place of employment free from recognized hazards likely to cause death or serious physical harm. The particulars were:

- Employees were, on different occasions, permitted to ride on metal equipment sleds, on the superstructure of an excavator, and in an excavator bucket.

- An employee riding a four-wheel vehicle did not wear required head protection.

- There was water accumulation hazard in a trench, an inadequately guarded trench, and a trench without a ladder or other means of exit every 25 feet as required.

- Excavated spoils were placed too close to the edge of two excavations.

- Unauthorized modifications were made to a pipe-laying crane.

- A custom-made lifting device had not been load-tested or had its load-lifting capacity marked.

- Damaged crane slings were in use.

- A sling was not marked with its load rating.

- A forklift truck was not inspected for defects.

H.C. Price Co. can contest the fines.

Calls to the company were not returned. ■

OSHA fines company \$130,200 after worker dies

An alleged violation of the confined-space standard has led the federal Occupational Safety and Health Administration (OSHA) to cite Protein Products for safety violations found during an inspection of a worker fatality at the company's Sunflower, MS, plant. The citations carry proposed penalties totaling \$130,200.

The accident appears to be a classic case of workers being overcome unexpectedly by a toxic atmosphere in a confined space. **Clyde Payne**, an OSHA area director in Mississippi, reports that one worker was killed and several others injured during repair of a broken chain in the "chain pit." The chain is used to operate a conveyor in the processing of fish oil and fish-meal products.

Employees overcome by fumes

Payne says two employees involved in a chain repair were overcome by a toxic gas, probably created by decaying fish parts caught in the chain pit. One worker was pronounced dead of asphyxiation on arrival at a local hospital, and the other was seriously injured. Several workers who attempted to rescue the two also suffered injuries from toxic fumes.

OSHA's inspection revealed that the company failed to identify the chain pit as a confined space containing potentially toxic gases. As a result, atmospheric testing was not done; danger signs were not posted, and confined-space training was not conducted. Failure to implement confined-space entry procedures, failure to establish an adequate respiratory protection program, and failure to comply with lockout/tagout safety standards resulted in 14 serious citations with proposed penalties totaling \$88,200.

Protein Products also was cited for one willful safety violation in connection with lockout requirements. A penalty of \$42,000 was proposed for the company's failure to require each exposed employee to place a lock on power sources to ensure that hazardous machinery is turned off and remains inoperative, or locked out, during maintenance.

The employer was aware of the importance of locking out equipment during servicing and, in fact, was cited by OSHA in 1990 for deficiencies in its lockout/tagout program, Payne says.

Lifelines, harness equipment, and self-contained breathing apparatus were available, but rescuers hadn't been trained to use them, Payne says.

Calls to Protein Products were not returned. The company has the option of contesting the fines. ■

Lack of guardrails, other fall hazards result in fines

The federal Occupational Safety and Health Administration (OSHA) in Washington, DC, has cited Suffolk Construction Co. of Boston for alleged repeat, serious, and other than serious violations of the Occupational Safety and Health Act following an inspection at a Boston construction site and has proposed penalties totaling \$53,700. Most of the citations were related to fall hazards.

Brenda Gordon, OSHA area director for Boston and southeastern Massachusetts, reports that the alleged violations were discovered during an inspection initiated Nov. 25, 1998, after OSHA was informed of possible fall hazards at a construction site located at the Regal Bostonian Hotel on North Street in Boston.

Suffolk Construction is the general contractor overseeing renovation of and construction of an addition to the hotel.

In that role, Suffolk has overall responsibility for ensuring compliance with all applicable construction safety standards for the project.

The inspection identified several instances of inadequate or nonexistent fall protection on the second through seventh floors which left various subcontractor employees exposed to falls from locations as high as 70 feet above the ground, Gordon reports. She notes this is the third time in the past two years that OSHA has cited Suffolk under OSHA's fall protection standard.

No falls occurred, but "that good fortune in no way relieves an employer of the responsibility of ensuring that required safeguards are in place and in use," she says.

The citations and proposed penalties include an alleged repeat violation, with \$35,200 in proposed penalties, for failure to equip unprotected exterior wall openings on the second through seventh floors with guardrails to prevent falls of up to 70 feet.

The other alleged repeat violation involved tripping hazards posed by uncovered floor holes. The company has previously been cited by OSHA for substantially similar violations.

There are seven alleged serious violations, with \$18,500 in proposed penalties. The particulars of the violations are:

□ Employees working on tubular welded scaffolds on the seventh and fourth floors were exposed to falls greater than 10 feet due to a lack of proper fall protection.

□ Midrails were not installed at exterior wall openings on the sixth floor.

□ There were inadequate wire rope guardrails on the seventh and fourth floors.

□ Ladder access openings on the second through seventh floors were not equipped with required guardrails.

□ Perimeter floor openings on the second through seventh floors lacked toeboards to prevent materials or tools from falling to lower levels where people were working.

□ Piles of materials, scrap lumber, and metal

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Editorial Questions

For questions or comments, call **Valerie Loner** at (404) 262-5536.

studs were strewn throughout the seventh and fifth floor working area creating tripping hazards near passageways and unguarded open floor edges.

□ The company's designated competent person (one with both the knowledge to spot hazards and the authority to correct them) did not conduct frequent and regular safety inspections of the job site.

There was one alleged other-than-serious violation with no cash penalty. It involved masons and laborers accessing a scaffold platform by climbing onto it rather than by the use of ramps, ladders, or stairs.

The company can contest the fines and did not return phone calls seeking comment. ■

AAOHN announces research priorities

Health promotion and hazard prevention in the workplace top the list of research priorities recently announced by the American Association of Occupational Health Nurses (AAOHN) in Atlanta.

The AAOHN developed the list of research priorities by surveying 15% of its 13,000 members. They were offered 37 research topics compiled by the AAOHN Research and Ethics Committee and asked to rate each one.

For each item, they were asked how important the items were in regard to worker health and the value to the occupational and environmental health nursing profession. Thirty-four percent responded to the first round, and 62% of that group responding to the second round of questioning.

These are the research priorities determined by the survey:

1. effectiveness of primary health care delivery at the work site;
2. effectiveness of health promotion nursing intervention strategies;
3. methods for handling complex ethical issues related to occupational health;
4. strategies that minimize work-related health outcomes, such as respiratory disease;

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5. health effects resulting from chemical exposures in the workplace;
6. occupational hazards of health care workers, such as latex allergy and bloodborne pathogens;
7. factors that influence workers' rehabilitation and return to work;
8. effectiveness of ergonomic strategies to reduce worker injury and illness;
9. effectiveness of case management approaches in occupational illness and injury;
10. evaluation of critical pathways to effectively improve worker health and safety and to enhance maximum recovery and safe return to work;
11. effects of shift work on worker health and safety;
12. strategies for increasing worker compliance and motivation to use personal protective equipment. ■