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Business-oriented approach can offset rising occ-med costs

Inflationary pressures not insurmountable

Recent headlines scream the discouraging news: Rapidly rising health care costs are back with a vengeance. Occupational health professionals certainly are not immune to these pressures, but industry leaders are doing a lot more than just complaining; they're combating these pressures with a no-nonsense, business-based approach to cost efficiency.

Nevertheless, they concede, the ongoing pressures can be daunting. "Some of the greatest costs are associated with a necessary first step — setting up your unit," says **Annette B. Haag**, MA, RN, COHN-S/CM, FAAOHN, president of the Simi Valley, CA-based firm Annette B. Haag & Associates. "There's the equipment, of course, but the largest component is staff costs," she says. "And they will go up with salary inflation."

Christine M. Kalina, MBA, MS, RN, FAAOHN, COHN-S/CM, of Chicago-based Christina M. Kalina and Associates, Global Consultants in Occupational Health and Safety, also cites the rising cost of resources — staff, materials, and time. "People forget time," she notes. "We are so stressed, with fewer resources, yet we are expected to do *more.* In other words, are you paying for time-and-a-half? How are you attracting staff? What does your overall package look like?"

In addition, she says, regulatory pressures affect the way you use your resources. "There are an increasing number of processes associated with regulations — steps added in drug testing, or in the Occupational Health and Safety Administration's

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(OSHA's) record-keeping requirements, for example," Kalina observes.

Highly qualified and experienced professionals are the most important resources identified in building and maintaining quality, cost-effective, and cost-efficient occupational health services to deal with high-pressure workloads, says Kalina. "High-level managers need to understand this. Furthermore, occupational health professionals need to understand this and market themselves as the *best* resource. Remember to let management know 'you get what you pay for' when negotiating a raise or added dollars for continuing education."

When it comes to hard dollars, however, "There is no way to limit our outlay," says **William B. Patterson**, MD, FACOEM, MPH, medical director at Occupational Health and Rehabilitation in Wilmington, MA. "The insurance companies are pushing up their charges to employers, but I'm not aware that provider payments have increased meaningfully, especially in the workers' comp area." It may be that the costs are going up for insurers in the states in which fees are not regulated. "I'm skeptical about where the need to increase the fees comes from in the other states," says Patterson. "In many cases we continue to be under-reimbursed; providers are caught in the middle."

He agrees that the number one source of rising costs is staffing. "The other piece is that we find that some of the hospitals, despite their financial crunch, are successfully recruiting some of our staff because they can offer meaningfully better salary and benefits," Patterson notes.

Business solutions for business problems

Perhaps the greatest key to getting rising costs under control — or at least operating at the highest levels of efficiency and productivity — is to approach the management of your occupational health facility as you would any business.

It's critical, Kalina says, to understand that the company or hospital has a business strategy, and that you have to run your unit as a business supporting the overall corporate business strategy. Your goals and objectives must support the goals and objectives of the corporation; you must positively impact the bottom line. "Good occupational health is good business," says Kalina. "Understanding the language of business allows articulation of the business benefits of good occupational health in business terms.

"Occupational health nurses, physicians, and

professionals have to understand the tools upper management is using to measure and critique them; they must have a basic understanding of business," Kalina continues. "For example, one of the tools managers commonly use is the break-even analysis. Why do managers use this tool so frequently? Everybody talks about ROI [return on investment], but what about the internal rate of return? You have to understand the basic language of business in order to speak to management."

Don't compromise your credibility with the customer/client by using terms without understanding their strategic business meaning and use, Kalina warns. "Don't use a buzz word such as 'net present value' if you don't understand what it means and *how* it is used. If you are speaking to an accountant about the budget and you don't understand how a figure was obtained, *ask*. Remember, the accountant, while skilled in his or her field, will surely be calling you with medical questions."

Unfortunately, says Haag, many occupational health professionals are unaware when it comes to that language. "In my Q&A sessions I ask the participants to tell me the top three costs for their company — from an occupational health and nonoccupational health standpoint. The nurses cannot tell me that," she observes. At a lot of companies, she notes, high-risk pregnancies are in the top three in nonoccupational sector costs, but often there is no program to address the problem.

"You need to identify the most serious health conditions and prioritize them," she continues. "What does your company pay out in workers' comp? What kind of health plans does it offer?"

For Kalina, the first step is a business basic: the business plan. "I operate from two premises that an MBA and high-level business managers know: Budgets drive operating decisions, and if you can measure it, you can manage it," she asserts. "Build your business plan and use of resources with those axioms in mind."

But in order to do it right, you have to have the right resources and tools, she adds. "For example, an information technology system will most probably be the most efficient and accurate means used to track what you're doing in order to get measurable outcomes," she says. "When I talk to customers, they want to know how much bang they are getting for the buck. The only way to know that is to know how much work you are doing and what the outcome is."

The proper system will enable you to present your outcome to upper management in a more meaningful way, which in turn can save money. "Once you've measured what you've done, you can sit back and look and determine whether the outcomes are acceptable, whether some processes should be fine-tuned, or whether they should be managed differently," Kalina says. "For example, if your disability management program is staffed by an RN and an MD, and the boss wants to reduce employee days away from work, you've got to determine if you are using them to their optimal strength, or if you need to tweak your scheduling patterns."

Patterson agrees. "The most important thing providers can do is track their outcomes and results in terms of the number of visits, average costs per case, time out of work, and so on," he says.

However, he adds, there are some obstacles to getting the most accurate numbers possible. "Providers can only track the cases they follow and close; they don't have access to the actual total costs of cases, because we miss the cases that are referred out. And in my experience, insurers are very slow to give providers that type of total claim information."

Ability to measure and market

You not only need to be able to measure, but you need to be able to market, adds Kalina. "Even before you create your plan you must sit down and talk with your customer," she advises. "See what he expects from you; you have to know what he needs from you in order to deliver it."

The type of product/service delivered must be a joint decision with the customer, Kalina continues, and it can be tricky. "What you think the customer needs may not be what they actually want or need. Also, what the customer thinks he or she needs may or may not actually be the best use of resources to attain clinical and business objectives. The challenge is to bring these two lines of thought together through really good joint communication."

How does this translate into efficient use of money? Break-even analysis can help determine this, and competitive analysis can tell what is being offered and charged by other occ health services, says Kalina. "Complete your break-even analysis, determine the profit margin, share this with your customers, and than determine where to expend some of the profit and associated freed resources on bells and whistles such as wellness programs — something that is almost always discarded."

You can demonstrate the worth of these programs to management by reviewing insurance

costs associated with certain preventable disease states. "Smoking cessation programs are another example," Kalina offers. "You can give employees patches, seminars, or both. You must determine what's more cost efficient. Remember, a process must be in place to measure a planned, agreed upon, measurable outcome. This will not happen overnight; an occupational health professional knows that good data takes three to four years to obtain. The challenge is explaining to the customer why this is so; that's where the use of good business and marketing strategy comes into play."

Strategy before structure

What it comes down to, says Haag, is that the structure of your operation must be determined by a sound overall business strategy. "When people start up a unit, they look at the number of employees they have and decide how many nurses they need. That's a *reverse* approach," she claims.

"You need to hire occupational health nurses when workers comp costs go out of sight, yet we've seen a lot of downsizing across the board," she continues. "Many times these positions are terminated because management doesn't realize that by letting their most seasoned employees go it actually costs them *more*."

Staffing shortages could be avoided through strategic planning, says Haag. "You probably won't see the savings in a new unit for the first six months because of start-up costs," she notes, "But you will eventually see costs that are 50% to 75% lower than they would be if you outsourced the positions."

As part of the strategic planning process, both Haag and Kalina recommend using a SWOT (strengths, weaknesses, opportunities, and threats) analysis. "It's important to do a really good assessment," says Haag. "Don't be afraid to name your weaknesses; they're often not your fault. But it might enable you to show your manager that if he buys you a new computer or hires another nurse you could move into a new area, like case management or health promotion, where cost savings can be illustrated."

"A SWOT analysis looks at the internal and external environment, clinical and business processes in the occupational health service," adds Kalina. This may be done by an individual business consultant, or the consultant may coach a team of no more than five people who are mutually committed to attaining a common goal. "If you identify a lot of strengths, few weaknesses, a lot of opportunities and few threats, you know you have the strength to go forward and seize those opportunities; you are in a growth mode," says Kalina. "If you have more weaknesses than strengths, more threats than opportunities, you may have to revitalize or reinvent your business, or perhaps even harvest or eliminate that component of your occupational health service."
(See story on p. 29 for a real-world example of the impact of a SWOT analysis.)

Haag recommends the following strategies to further enhance the financial well being of your occupational health program:

- Conduct a time study of your main activities and tasks; know where your time is going, i.e., how many physicals you do each day and how long they take. Then, put a dollar value on those services; in other words, what might they have cost had they been referred out?
- Try to get your nurses and physicians to look at an integrated approach to care.
- Practice absence-management strategies. The cost of an employee absence is much more than just direct expenses such as wages and sick pay, Haag notes. Some industry sources put indirect costs at five to 15 times as high as direct costs.
- Examine the life cycle of your products and services. Which ones are critically needed? Which continue to show value? If your staff spends much of the day performing audiograms, you might consider bringing in a technician and having your nurse spend her time analyzing programs and evaluating outcomes.
- Regard your nurses as part of the safety-health management team; make sure they coordinate with the other safety-related and medical departments.
- Encourage your nurses to take more business courses.
- Benchmark; i.e., research best practices.

"It's no longer business as usual," says Haag. "These strategies may even have a positive impact on share value."

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SWOT analysis leads to turnaround

A SWOT analysis can be a powerful tool for turning a run-down occupational health facility into a growth opportunity. **Christine M. Kalina**, MBA, MS, RN, FAAOHN, COHN-S/CM, a Chicago-based occupational health and safety consultant, recalls the experience of one such facility that was located within a steel mill.

"The building was 105 years old, and you could immediately see the facility was neglected. It was dirty, unkempt, the magazines were old, the couches torn, and the walls needed painting. It was located next to the furnace — a clear indication it was not valued," she remembers. "They had hired an occupational health nurse to help them reinvent the facility, and her first recommendation was to get it out of the basement."

But the problems went deeper than that. The facility staff included one physician and two occupational health nurses, none of whom was board certified. After completing competitive analysis, this was identified as a clear weakness, especially as the clinic down the street had marketed and advertised its "board-certified occupational health professional staff."

The nurses job-shared, the doctor worked part time, and there was no real staff cohesion, which had led to the nurse being brought in to manage the facility. There were no professional journals available, and staff had not been encouraged to go back and get additional credentials.

The nurse started tracking volume, and found that record keeping was poor. "There was no indication of what the actual work done was — which was another weakness," says Kalina. "You could not do an accurate break-even analysis. In addition, there was no computerized system for maintaining records."

The physician-staffed urgent care center, or "Doc in the box," was a real threat; it was operated more efficiently. "The people in the steel mill facility did not know what their budget was — which, unfortunately, is not unusual in occupational health — so they didn't know how to price out their services to give management competitive pricing vis-a-vis the 'Doc in the box,'" says Kalina. "Budgets are supposed to drive operating decisions, but they couldn't do that."

The facility did have some strengths. It had the trust of management and employees, which was significant. And it had a location no one else could match, so it had the "home-court advantage."

"There was an opportunity for a turnaround; they just needed a strategy," says Kalina. The first issue addressed was the disjointed staff; it was realigned so that it now had two full-time employees.

"They looked at the current pricing, and that of different freestanding clinics around them, and then asked management for a budget. They investigated the cost of an IT system and made the purchase part of the budget," says Kalina. A year later, the facility became a competitive occupational health service in the local market. ■

Stress management: We need it more than ever

Combination of events weigh on workers

It's been around for quite awhile, but we may never have needed it more. Today, says one health promotion expert, occupational health professionals should place stress management near the top of their programming list.

"A set of unique stressors has come together," says **Lewis Schiffman**, president of Atlanta Health Systems. "Our belief systems about how life in the world is have been turned upside down, and have caused us to re-evaluate our values and the foundation of our society.

"Specifically, our country is no longer 'safe' from the threats of war," he continues. "And although there were downsizings in the early '90s, we've been living in an era of prosperity and a stock market boom. People believed their jobs were secure; they're not. People believed that investing in the company they worked for was a solid investment and that their company's retirement plan would take care of them for the future; it may not."

Beyond the disillusionment of Sept. 11, the recession, and Enron, teenagers are becoming more alienated from society, couples continue to get divorced at a better than 50% rate, and more than 54% of the population is overweight, says Schiffman. "That [obesity] number is rapidly expanding and health care costs continue to rise as we discover managed care is not the answer we thought it was," he adds. "And people are working more hours and have less free time."

This combination of forces is enough to make

any employee feel stressed out. Of course, workers have the option of going into denial — just trying to "tough it out." This, however, is not a healthy choice.

"Denial puts you at risk of insomnia, headaches, depletes your immune system, makes you more vulnerable to respiratory infections, gastrointestinal problems, depression, high blood pressure, stroke, heart disease, and probably cancer," says Schiffman.

Stress management programming can break through denial, and give employees tools to deal with the stressors they're facing, says Schiffman. Occupational health professionals must recognize that "the adverse effects of stress is an issue all of us confront, from the moment we begin fighting traffic during rush hour to dealing with difficult customers or patients, to trying to help the employer stay ahead in a competitive market, to doing more with less, to trying to stay flexible to deal with the inevitability of change, and to deal with other people's stress — which too often they want to take out on you," he asserts. In fact, he suggests, the ability to manage stress should now be considered an essential business skill.

There's stress, and then there's *stress*

Apparently, not all stress is created equal. It seems, according to a recent study, that engaging in stressful tasks like trying to meet a deadline may actually strengthen the immune system, while exposure to stress that must be endured passively — like watching violence on TV — may weaken it.

This conclusion is based on a study by an Ohio State University researcher that was designed to draw out the different effects that active and passive coping might have on the body's defenses, and represents some of the strongest evidence yet that certain kinds of stress can promote good health.

"Our findings lend scientific truth to the idea that a hassle a day keeps the doctor away," says **Jos A. Bosch**, a postdoctoral fellow in oral biology and lead author of the study. Bosch and his colleagues conducted their experiments on a group of 34 volunteers. The male undergraduates were exposed to a timed memory task that required them to memorize some given material and take a subsequent 12-minute test. In the second activity, they were shown a gruesome 12-minute video on surgical procedures.

The researchers found that the memory task caused an increase in the salivary concentration of a major immune factor, the SigA or secretory immunuglobulin A. The video had the opposite effect. ■

Making an impact

With this philosophy in mind, Schiffman recommends these high-impact components that should be part of any stress management program:

- **Managing stress in times of uncertainty:** Such modules help workers to cope specifically with the changes our society is going through, and prepares them to accept and deal with change as part of the natural order of things.
- **Learning balance:** Most people, Schiffman says , are out of balance and need reminders and better skills to manage home, work, and personal life. "Failure to maintain balance adversely impacts personal and work relationships and increases vulnerability to illness and injury," he observes.
- **Developing better self-management skills:** This can include how to relax or stay calm in heat-of-the-moment situations, as well as nutrition and fitness strategies to maintain resiliency, high energy, and the ability to concentrate. "Such courses incorporate rational thinking strategies to help people recognize that stress is often a matter of perception — what we think and what we tell ourselves a situation means," Schiffman explains.
- **Effective communication:** We must recognize that we are surrounded by people who are experiencing the adverse effects of stress, and that all of us would benefit from communication strategies to deal with difficult people and to actively focus on maintaining a positive attitude.
- **Self-care strategies:** It is extremely important that employees learn not to become overwhelmed by a stressful situation. "We need to utilize effective self-care strategies rather than immediately reaching for mind-altering drugs or engaging in self-destructive behavior," Schiffman says.

In addition, he concludes, managers and supervisors would benefit from learning more effective coaching skills, to address the needs of the overstressed employee.

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Orthopaedic surgeons launch CAM web site

Change is driven by market pressures

You can't beat 'em, so you may as well join 'em — advocates of Complimentary and Alternative Medicine (CAM), that is.

With a growing number of their patients turning to healing philosophies, approaches and therapies not found in conventional medicine, the Rosemont, IL-based American Academy of Orthopaedic Surgeons (AAOS) has launched an online CAM information site. The site is part of AAOS's commitment to educate the public on the common usages of some herbs and their interactions with drugs.

"There is a recognition that CAM has become overwhelmingly important in the marketplace to our patients," explains **John W. Wickenden**, MD, an orthopedic surgeon in Camden, ME, and chair of the academy's CAM committee. "We know that in the most recent year it was measured, 1997, almost twice as many visits were made in the U.S. to CAM providers as to primary care physicians."

Wickenden readily admits this move is market-driven. "Our patients and our clients — insurance company programs, organized labor, all of the occupational health care units that use us as well as many employers — are looking seriously at CAM. Increasingly, some modalities are being covered by insurance," he notes. From an orthopedic standpoint, he adds, about half of the visits to CAM providers are for musculoskeletal problems — primarily neck and low-back complaints.

A further motivation, says Wickenden, was the recognition that the great majority of the CAM utilization by patients were not being shared with the MD, setting the stage for potential self-medication problems. "It's highly likely this holds true with patients in occupational health clinics," he adds.

Meeting an important need

The prevention of such complications is one of the most important functions of the web site, which is designed to be accessible to the public. Occupational health professionals, as well as 'orthopods,' can benefit from the content.

"The site includes data about our committee, the charge to the board, an herb/drug interaction chart, and several pages of references," says Wickenden. "In addition, there are 12-15 Frequently Asked Questions and a page of useful web links." **(The herb/drug interaction chart can be found on p. 32.)**

Many of the supplements and herbal medications used by the public have potential interactions, notes Wickenden. "Six or seven of them prolong bleeding, which is really important information — not only for cutting surgeons, but for those who use anti-inflammatory medications," he says.

Doctors need sufficient knowledge of these potential interactions to properly advise patients. "Outside of orthopedics, one substance that has gotten great recognition in peer-reviewed journals is St. John's Wort," Wickenden observes. "One of the major concerns is that it inhibits the efficacy of many anti-viral drugs. So you immediately think of people with HIV disease. Many of them are taking, or were taking, St. John's Wort, yet it shows a very significant inhibition of antiviral meds."

There are also herbal meds and supplements that enhance bleeding, so it's important to counsel patients to stop taking them two weeks before surgery.

Knowledge is power

Of course, in order for a physician to counsel the patient properly about CAM, they have to know the patient is using alternative treatment therapies.

"The major message our committee is trying to pass on to doctors is simply to ask," says Wickenden. "We will always get the meds they take as part of a medical history, but we need to explicitly ask what over-the-counter drugs, herbals or supplements they are taking as well."

This is particularly important because an overwhelming majority of patients do not use CAM to the exclusion of traditional medicine, which sets up the possibility of complications. "Many of our patients realize the historical attitudes manifested by doctors about CAM," Wickenden observes, "so many are reluctant to discuss CAM because of the negative feelings they assume their doctor has. My own attitude is that to enhance our interpersonal relationships with patients, we need to acknowledge — if not respect — their choices. They will use CAM whether we agree

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CAM Herb/Drug Interactions

Herbal Supplement	Common Uses	Potential Problems	Potential Interactions With
Dong Quai *(Angelica)*	To treat menopausal symptoms, PMS, dysmenorrhea	Enhances bleeding	Anticoagulants
Echinacea	To treat colds, flu, and mild infections, especially upper respiratory infections	Hepatotoxicity; Intestinal upset	Other Hepatotoxic drugs; Anabolic steroids; Methotrexate
Ephedra *(Ma Huang, Ephedrine, Pseudoephedrine)*	To treat asthma, cough, and to induce weight loss	Seizures; **Adverse cardiovascular events**	Cardiac glycosides; General anesthesia; MAO inhibitors; Decongestants, stimulants
Garlic	To decrease cholesterol and blood clot formation	Enhances bleeding	Anticoagulants
Ginger	To relieve nausea	Enhances bleeding; CNS depression; Hypotension; Cardiac Arrhythmia; Hypoglycemia	Anticoagulants; Enhances the effects of barbiturates; Antihypertensives; Cardiac drugs; Hypoglycemic drugs
Ginkgo Biloba	To improve circulation, especially to brain, For memory loss, dizziness, and headache	Enhances bleeding; Cramps, muscle spasms	Anticoagulants
Ginseng	To increase energy and reduce stress	Enhances bleeding; Tachycardia and hypertension; Mania	Anticoagulants; Stimulants; Antihypertensives; Antidepressants/Phenelzine; Digoxin; Potentiates the effects of corticosteroids and estrogens
Goldenseal	Used a mild antibiotic to treat sore throats and upper respiratory infections	Increases fluid retention; Hypertension; Nausea; Nervousness	Diuretics; Antihypertensives
Kava Kava	To treat anxiety, nervousness, and insomnia	Upset stomach; Allergic skin reaction, yellow discoloration of skin, Central nervous system depression	Potentiates the effects of antidepressants, barbiturates, and benzodiazepines; Skeletal muscle relaxants; Anesthetics
Licorice	To treat hepatitis and peptic ulcers	Hypertension; Hypokalemia; Edema	Antihypertensives; Potentiates the effects of corticosteroids
SAM-e *(Sadenosyl-L-methionine)*	To treat depression or osteoarthritis	Mimics serotonin; Nausea, upset stomach	Drugs that can increase or mimic serotonin, such as antidepressants
St. John's Wort	To treat mild depression, anxiety, seasonal affective disorder	Enhances bleeding; hastens metabolic breakdown of drugs; contraindicated for organ transplant recipients	Anticogulants; Antidepressants; Decreases the effectiveness of cyclosporine, antiviral drugs; Digoxin; Dextrometorphan; Prolongs the effects of general anesthetics; MAO inhibitors
Valerian	To treat insomnia, anxiety	Sedation; Digestion problems	Potentiates the effects of barbiturates

The AAOS Committee on Complementary and Alternative Medicine (CAM) has compiled the following chart of commonly used herbal supplements and the potential hazards they pose. The information in this chart is based upon literature searches conducted on July and August of 2001, and may not be exhausted. User physicians should rely on their own judgement concerning the care of specific patients and use this chart for general guidance only. Common medical practice is that patients cease using most of these preparations at least 2 weeks prior to surgical interventions.

Sample Questions From The Hand Center Risk Survey

- I am in good health (Yes or no.)
- I started a new hobby this year.
- I am motivated to improve my work.
- My hobbies or leisure activities have more physical activity than my work.
- Do you have painful swollen joints?
- Do your hands feel cold?
- Have you had surgery for tendonitis?

with them or not, and it can't enhance our relationships with our patients if we don't approach it in a nonjudgmental manner — in fact, it can be counterproductive to react emotionally."

Besides, he adds, some CAM therapies do have potential medical value. "Not that many of them have evidence-based data in peer-reviewed publications, but one that does is acupuncture, for some focused purposes," he says. "Efficacy is indicated in some limited contexts like postoperative nausea, as well as in a handful of other narrow uses, like tennis elbow and carpal tunnel syndrome."

Then, there's Chiropraxis. "Most orthopods don't like it, but if you look at the [National Institute of Health] data you will see it's useful in some contexts," says Wickenden. "And again, our patients are doing it anyway."

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Tool helps target worker injury risk

Primary prevention presents greatest challenge

Everyone loses when workers are injured or disabled for long periods of time. For example, a bilateral carpal tunnel syndrome surgery can cost as much as $75,000 in direct and indirect costs," notes **Mark Melhorn**, MD, an orthopedic hand surgeon at The Hand Center in Wichita, KS.

The high costs of injury, both in treatment and in lost time and productivity, are what drive Melhorn and his colleagues to focus on injury prevention. In reality, he notes, there are three prevention formats:

• **Primary prevention:** Keeping injuries and illnesses from occurring.

• **Secondary prevention:** Traditional healthcare; diagnosis and treatment.

• **Tertiary prevention:** Designed for injuries that have reached advanced stages and threaten to produce significant side effects and complications.

Of the three, says Melhorn, primary prevention is the most cost-effective. It is also the most difficult, however, requiring an instrument or a tool to measure risk.

To that end, Melhorn and his colleagues developed a questionnaire to help determine risk levels. Based on the responses, a score of 1-7 is assigned. Those at a level of five or higher are considered high risk.

"The biggest challenge is actually preventing something that may not occur," Melhorn admits. "Let's say you come to me and we test you and find that based on your risk characteristics you are more likely to have muscle pain with physical activity than your co-worker, and we assign you a relative value of six. Then, we start you on an exercise program, we look at the workstation and make changes, and you never develop a problem. Now the question is, is identifying you as 'at risk' what prevented you from ever having a problem, or would you not have had one anyway?"

Worth the effort

Despite the inherent uncertainty, says Melhorn, the benefits of early detection argue in favor of identifying at-risk employees. "If you're overweight for one year and then decide to lose weight, it will not have a long-term effect," he poses. "If you are overweight for five or 10 years, you are more likely to have negative cardiovascular components. In our scenario, the longer you perform physical activities in an awkward position, the more likely you are to have muscle pain in the future. If we identify people who are at risk early and make some small changes, we are more likely stop injuries down the road. If we find out too late, we may run into problems that require, say, carpal tunnel surgery."

It is precisely the avoidance of such expensive — and painful — complications that led to the creation of the questionnaire. It is, says Melhorn, like an HRA (Health Risk Appraisal) for musculoskeletal pain. It includes 85 questions, covering everything from the employee's age and gender

to their genetic makeup (diabetes, arthritis, and so on). Questions are asked about current symptoms, such as muscle pain. **(For a look at some of the survey questions, see the box on p. 33.)**

"These pieces are statistically analyzed, and we come up with a risk score of 1-7. If you are at higher risk, you could benefit from primary prevention in the form of education, awareness, physical exercise and conditioning and modification of tasks," says Melhorn.

The questions are asked in a confidential manner, he says. "We only send back composite scores for the individual."

Such screenings are rare in occupational medicine, Melhorn asserts, "We do cancer, diabetes and stroke protection screenings, but very few companies do musculoskelatal pain prevention," he says. "A physical exam tells you where a person is today, but a symptom survey gives you a better idea of predicting the future."

The management challenge

Convincing upper management that such a screening is necessary can be difficult, Melhorn admits. "Most people in health care management come from a traditional management background that does not include a broad exposure to the concept of prevention — even in a hospital situation," he says.

Nevertheless, Melhorn adds, they sit up and take notice when presented with survey results. "We've done research with a local hospital, where most employees have jobs they considered to be low risk, like unit clerks. However, when they scored high risk on the survey, that spurred them into a desire to do prevention on a wide-scale basis."

Melhorn says his group is interested in sharing its tool with occupational health professionals who want to start using primary prevention; in fact, they will allow participants to use it for a period of one year to see how beneficial it is for them. "We want to increase our database," he explains. "We are willing to offer the use of our instrument for one year for free. In exchange, we ask only that the facility share their costing data to help us demonstrate the value of the survey."

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Bioterror requires targeted disaster plan

Stanford initiative draws nationwide attention

In the wake of September's tragic events, when it comes to protecting your hospital staff and patients it's not enough to merely update the bioterrorism component of your current disaster preparedness plan; you must create a detailed bioterrorism response plan that stands on its own.

That's precisely the philosophy behind the Stanford Hospital and Clinics (SHC) Bioterrorism Response Preparedness Plan, which is gaining widespread recognition as a model for such plans. In fact, several Kaiser Permanente facilities in California have already adopted the plan.

"You need a separate [bioterrorism] plan," asserts **Eric A. Weiss**, MD, assistant professor of emergency medicine at Stanford, associate director of trauma at Stanford University School of Medicine and chairman of the disaster committee and bioterrorism task force. "During most disasters, for instance, you don't rely on the microbiology lab to identify pathogens. Also, infectious disease and infection control staff take on a major, heightened role."

In disasters such as an earthquake, Weiss notes, you don't have to worry about the quarantine of patients or the spread of infectious agents — you do not have to put on protective clothing or worry about cross-contamination through existing patients who may be immunosuppressed.

The plan, which is available on the Stanford web site (www.stanfordhospital.com), is incredibly detailed, including links such as:

- The Bioterrorism Response Preparedness Plan;
- Emergency Department Triage Guideline;
- Suspected Exposure to Bioterrorism Agent Clinic Triage Guideline;
- Specimen Collection for Suspected Bioterrorism Agent Diseases;
- Bioterrorism Agent Exposure Epidemiology Tracking Form;
- Anthrax Information Sheet;
- Summary of Laboratory Resources Related to Bioterrorism Agents;
- Infection Control Precautions for Suspected Bioterrorism Agent Disease;
- Clinical Pathways for Cutaneous Anthrax,

Inhalational Anthrax and Smallpox.

There had been a bioterrorism plan in place prior to 2001, says Weiss, "but it was really just a skeleton plan — not very comprehensive. It was part of a larger disaster preparedness plan, but a plan to deal with mass casualties from bioterrorism is very different."

When you have a major disaster such as the collapse of the World Trade Center, Weiss notes, local health care providers are likely to come to the hospital and offer to chip in and help wherever they can. "But what happens when the word goes out that patients are walking around with smallpox?" he poses. "Are providers going to want to stream down to the hospital and potentially infect themselves and their families? You need a response plan to address the safety of health care providers, so they will feel comfortable and want to show up for work."

In order to create such a plan, the Bioterrorism Planning Task Force was created about 18 months ago, incorporating personnel from 30 or more different departments at both facilities, including infectious diseases, infection control, emergency medicine, pediatrics, critical care, intensive care units, nursing and hospital administration, dermatology, psychology, social services, environmental health and safety, among others.

"We began putting the plan together when we identified the fact that the current plan was not adequate," notes Weiss. "We accelerated our activities after Sept. 11. After Sept. 11, *everybody* wanted be part of it."

Weiss and his task force set out three major goals:

- Develop a comprehensive plan that would protect both the staff and patients.
- Develop a plan to provide appropriate care for the people in the surrounding community.
- Develop a plan that would potentially mitigate the spread of infectious diseases related to the event.

The entire committee had input into the structure of the plan — i.e., which clinical pathways should be included, what guidelines and tracking forms were needed. "Then, we developed subcommittees to deal with the specific pathways," Weiss says. "We brought their recommendations back to the task force for approval."

While anthrax was a logical choice for inclusion, it was also determined that smallpox should be addressed. "Anthrax is a good example of a pathogen that is not contagious, but we also wanted address one that is," Weiss explains. "The two are markedly different, and each is a quintessential example. When we have a mechanism in place to deal with both, we have all the bases covered."

Looking to the future

Weiss anticipates additions to the plan in the near future. "We are now dealing with nuances with other diseases like plague and tularemia," he notes. "But having addressed two of the major components [anthrax and smallpox], we'll just have to tweak the existing plan."

The task force is also planning a drill for February. "We're trying to coordinate with representatives from the CDC, who we hope will come out and participate, as well as with state and local officials," Weiss says. "To test the plan, you have to test the response of state and federal agencies in conjunction with the hospital."

Weiss suggests this would be a good model for hospitals throughout the United States. "Every

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hospital will require input from these organizations," he notes.

He said it was not originally his plan to share the task force's work with other facilities. "Originally that was not our mission," he says, "but once we got pretty far into it we started to receive calls, word had gotten out, and people asked if they could use it or see it." Now, he says, the plan is not only available on the web site, but in a printed, bound version as well.

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Web site helps ID bioterror agents

A new web site funded by the Agency for Healthcare Research and Quality (AHRQ) in Rockville, MD, is designed to teach physicians and nurses how to diagnose and treat rare infections and exposures to bioterrorist agents.

Designed by researchers in the Center for Disaster Preparedness at the University of Alabama at Birmingham (UAB) under contract from AHRQ, the site is the first of its kind to offer free continuing education credits in bioterrorism preparedness to clinicians. It currently offers five on-line courses through the UAB Office of Continuing Medical Education for emergency department clinicians, including physicians, nurses, radiologists, pathologists, and infection control practitioners. The web site address is www.bioterrorism.uab.edu.

"This web site is an important new tool to help doctors and nurses identify rare infections that also could be potential bioterrorist threats," says AHRQ director **John M. Eisenberg**, MD. "The evidence-based information will help frontline clinicians in our nation's hospitals be better prepared in the event of another bioterrorist event." ▼

New study: Hospitalists help reduce costs, LOS

A new study from the *Journal of the American Medical Association* contends that the use of hospitalists in acute care facilities helps "improve inpatient efficiency without harmful effects on quality or patient satisfaction."[1]

The report examined data from studies conducted between 1996 and September 2001 that compared hospitalist care with a control group in terms of resource use and other factors. According to the report, "most studies found that implementation of hospitalist programs was associated with significant reductions in resource use, usually measured as hospital costs (average decrease, 13.4%) or average length of stay (average decrease 16.6%)." Some of the studies also found improved clinical outcomes as well, but the researchers noted that "these results were inconsistent."

Reference

Wachter RM, Goldman L, The hospitalist movement 5 years later. *JAMA*, 2002; 287:487-494. ■