

Evidence-Based Guidelines Help Create a Solid Foundation for Practice Decisions in Occupational Medicine

The past year has seen significant movement across the country in developing scientifically based guidelines to address problems within workers' compensation systems. In December 2003, the American College of Occupational and Environmental Medicine (ACOEM) set forth specific guidelines, backed by scientific findings, for treatment of injured workers. These guidelines were developed by occupational medicine physicians and other specialists involved in the medical care of workers to guide health care providers. Also in December 2003, the Work Loss Data Institute released the second edition of the Official Disability Guidelines (ODG), which make recommendations for care based on literature reviews and organized by ICD-9 codes (diagnosis codes). And, in April 2004, the State of California passed massive workers' compensation overhaul legislation that defines standard of care as treatment in accordance with the ACOEM guidelines.

Both the ODG and ACOEM guidelines drew heavily on work begun in 1992 by the State of Colorado, which was the first state to develop evidence-based workers' compensation practice guidelines. In the following article, Kathryn Mueller, MD, MPH, and Edward Whitney, MD, MSPH, who have been involved in developing evidence-based practice guidelines, share information about the process they used; and how these guidelines can improve care to workers.

The value of creating practice guidelines for the treatment of workers has been recognized for some time. But prior to 1990, guidelines were likely to be based on general medical opinion. More recently, the trend has been toward developing evidence-based guidelines.

Kathryn Mueller, MD, MPH, has witnessed this trend first-hand. As a member of the Board of Directors of the American College of Occupational and Environmental Medicine (ACOEM), she was involved in the development of the occupational medicine guidelines published by ACOEM earlier this year. These guidelines were based on a scientific literature review conducted by the Work Loss Data Institute, an independent research organization and publisher of the Official Disability Guidelines. With the state of California having recently led the way in giving regulatory status to the ACOEM guidelines, several other states are considering adopting them as well.

As Medical Director of the Colorado Division of Workers' Compensation, Mueller also served on a taskforce that was mandated in 1992 to develop evidence-based practice guidelines. One of the key steps taken by the Colorado taskforce, which developed 10 guidelines, was to create multidisciplinary teams. Mueller stresses the importance of using such an approach. "In an ideal world, you would look at all the pertinent literature and select the highest quality, evidence-based studies that address a given guideline. In reality, you often find that there are not any high-quality studies in the specific area you are reviewing," she says. "Given these limitations, you need the involvement of all of the relevant specialists for each guideline. They can bring a well-rounded perspective to the discussion of the available evidence in order to make an appropriate recommendation."

In 2000, the Colorado Division of Workers' Compensation enlisted the expertise of an epidemiologist, Edward Whitney, MD, MSPH, to assist in making revisions to the guidelines. (Revisions are to take place approximately every 10 years.) "Dr. Whitney brings the dual perspective of a scientifically trained researcher who is also a medical professional, which has been extremely valuable to our work," says Mueller. Whitney is not a voting member of the taskforce; his role is to gather, analyze, and grade relevant studies and report his findings to the group.

In updating the guidelines, the taskforce has focused on adding statements of evidence whenever possible; as well as a notation on the level of evidence: "Some" (at least one adequate scientific study), "Good" (multiple adequate scientific studies or one high-quality scientific study), or "Strong" (multiple relevant and high-quality scientific studies).

If relevant studies are not available, recommendations are made by consensus; defined by the guidelines as "the opinion of experienced professionals based on general medical principles." Consensus recommendations are designated in the guidelines as "Generally well accepted," "Acceptable," or "Well-established." Finally, procedures that do not meet the standard of reasonable care are labeled "Not recommended."

Gaining sponsorship

Mueller advises that when it comes to implementing guidelines, the goal should not be for insurers to monitor doctors on an ongoing basis, but for the majority of practitioners to shift to a practice pattern that fits the guidelines. To effect this kind of change, Mueller recommends developing advocates among the medical leaders in the community; which she believes can best be done by involving them in some aspect of the development process.

She also recommends getting a good picture of practice patterns in the community by gathering input from practitioners. "They can identify the hot spots; those areas where health care providers really aren't following the best practice patterns," she says.

Most important, the underlying principle in developing guidelines must be to determine what's best for the patient; and this motivation must be made very clear to everyone involved in the process, says Mueller. "If people have the impression that the goal is to cut costs, they aren't going to trust the recommendations," she says. Even in dealing with legislators who are likely to be looking at the bottom line, Mueller advises taking "the high road." "It can be difficult," she acknowledges, "but I think you simply need to say: 'All we want to do is practice good medicine. We're presenting you with information about what's best for the patient; so that you can make an informed decision.'"

Addressing common issues

While no two workers' compensation systems are alike. Mueller notes some critical areas that states are likely to face; and that practice guidelines can help address.

"A serious problem that many workers' compensation systems face is that cases are not managed correctly from the outset.

If you do not correctly assess the patient's condition and educate the patient at the start of the case, it's almost impossible to rectify the problem later." To address this issue, the ACOEM guidelines provide a step-by-step outline of initial procedures in an easy-to-read format that may serve as a good model for other workers' compensation systems.

Another issue workers' compensation systems may encounter is the lack of specific diagnoses. A study of the California system conducted by the Colorado Workers' Compensation Institute, for example, found that approximately 30 percent of claims did not have specific diagnoses. "This is completely inappropriate in workers' compensation cases," says Mueller. "Guidelines need to be very clear about what physical findings and/or test results are required to establish a diagnosis."

In addition, many states may find value in developing guidelines that underline the significant role psycho/social factors can play in a worker's response to treatment. "The concept of identifying psycho/social issues is something providers frequently ignore, especially in high-volume practices," she notes. Both the Colorado and California guidelines specify conducting a psycho/social evaluation with patients experiencing delayed recovery. "While we don't yet have full compliance with the guidelines, they have helped raise awareness. We are seeing practitioners addressing psycho/social issues more quickly than they were before."

Improving the practice of medicine

Mueller has found that providers in Colorado are very pleased with the workers' compensation practice guidelines developed by the taskforce. "Many doctors have told us they can provide better care now within the workers' compensation system than they can within the general health care system," she says.

As a clinician, Mueller also has discovered the guidelines to be helpful in communicating with patients. As an example, she relates her interaction with a patient suffering from low back pain. "The patient questioned me on why I was not putting her on bed rest for a week. She believed the only reason I was sending her back to work was because her employer had told me to do so. But I was able to reassure her by showing her the actual guideline. I could point to it and say: "Here is the recommendation of doctors, not insurers or employers. Bed rest is simply bad treatment for you."

In addition, creating scientifically based guidelines performs a useful service for practitioners in this "information age," Mueller says. "As health care providers, our professional duty is to be using scientific standards. You should always be saying 'What does science tell me?', not 'What did I do with the last 20 patients and how did my patients like that treatment?' But the difficulty for practitioners is that it's nearly impossible for an individual to read and analyze the vast amount of material available on a given medical topic. Evidence-based guidelines provide the scientific foundation that individual practitioners can't develop for themselves."

Whitney points to another benefit of producing evidence-based guidelines. "One of the issues we are concerned with is adherence," he notes. "Scientific support is one of the variables that gives guidelines credibility; making it more likely that practitioners will implement them."

Making the Case for Evidence-Based Medicine

As defined in 1996 by one of its founders, David Sackett, evidence-based medicine is "the integration of individual clinical expertise with external evidence from systematic studies." Edward Whitney, MD, MSPH, notes that while the concept had been around for years, evidence-based medicine did not emerge as a formally recognized approach until the early 1990s when opinion leaders began making the case for it. Their position was strengthened when several widely accepted treatments, which were based on general medical and biological principles, were scientifically disproven by random trial studies.

Whitney gives the following example to illustrate: Before 1990, medical experts theorized that premature ventricular contractions, if left untreated, could increase one's risk for sudden cardiac death, which accounted for thousands of fatalities per year in the United States. To address this concern, many practitioners supported the use of a particular drug therapy that was shown to be effective in suppressing the contractions.

It seemed to be a reasonable approach; so much so that some experts argued it would be unethical to conduct a random trial to test the theory, since such a study would assign some patients to receive placebos rather than the drug therapy. Despite these protests, a randomized trial was conducted in 1990; and it found that, far from helping reduce the risk of sudden cardiac death, the drug therapy actually increased it. The research made national news; and became a watershed event in gaining acceptance for evidence-based medicine.

Guidelines Help Emphasize Value of Psychological Evaluations in Workers' Compensation Arena

A review of several recently published practice guidelines suggests that the use of psychological tests in evaluating workers' compensation patients is gaining increased support. The [American College of Occupational and Environmental Medicine \(ACOEM\) guidelines](#) recently adopted in California, for example, specifically recommend that patients who are not showing normal recovery within the expected timeframe receive a psychological evaluation. The [State of Colorado's Division of Workers' Compensation guidelines](#) and the [Official Disability Guidelines](#) also support the use of psychological assessments.

Kathryn Mueller, MD, MPH, associate professor at the University of Colorado Health Sciences Center, has been involved in developing both the ACOEM and Colorado guidelines; and has observed the influential role guidelines can play in raising awareness among practitioners on the benefits of psychological evaluation (see [main article above](#)). She also notes the importance of ensuring that practitioners use solidly researched tools, such as the [BBHI™ 2 \(Brief Battery for Health Improvement 2\)](#) test, a brief psychomedical inventory designed for use by medical practitioners.

"The BBHI 2 instrument is well-supported; and it's well-suited for use with workers' compensation cases," Mueller says. "Unlike assessments that measure a single factor such as depression, the BBHI 2 test evaluates a number of additional factors that are particularly relevant in treating workers, such as functionality, level of pain, emotional distress, and defensiveness." The BBHI 2 test is derived from the widely used [BHI™ 2 \(Battery for Health Improvement 2\)](#) instrument, a comprehensive assessment that can be used for in-depth follow-up evaluations.

For more information:

- Official Disability Guidelines (ODG). See www.disabilitydurations.com
- State of Colorado Division of Workers' Compensation Practice Guidelines
See www.coworkforce.com/DWC/Ruleshtm/rulescontents.asp
- Occupational Medicine Practice Guidelines published by American College of Occupational and Environmental Medicine (ACOEM) See www.acoem.org/whatsnew/pracguide.asp
- An evaluation tool designed by Kathryn Mueller, MD, MPH, to assess how providers are using ACOEM guidelines. Can be used as a medical record that providers fill out to gather quality improvement feedback; or by case managers to do chart reviews. See www.umassmed.edu/workerscomp/Tool_Box/treatment_guide/index.cfm or contact Kathryn.Mueller@uchsc.edu

- A report on evaluation of users' responses to ACOEM guidelines. Mueller KL, Harris JS, Low P, Koziol-McLain J, Peplowski B. Acceptance and self-reported use of national occupational practice guidelines. *Journal of Occupational and Environmental Medicine*, 1999, 42:362-369.

Kathryn Mueller, MD, MPH, is an associate professor at the University of Colorado Health Sciences Center, an attending physician at National Jewish Medical and Research Center, and residency director for the University of Colorado occupational medicine residency program. She is also medical director of the Colorado Division of Workers' Compensation and secretary/treasurer of the American College of Occupational and Environmental Medicine (ACOEM). Dr. Mueller received her MD from the University of Nebraska Medical School and her Masters in Public Health from the Medical College of Wisconsin. She is board-certified in Occupational Medicine.

Edward Whitney, MD, MSPH, is a graduate of the University of Colorado School of Medicine who practiced adult ambulatory medicine in Colorado and in California until 1995, when he returned to the University of Colorado Health Sciences Center to study epidemiology and public health. Since 1999, he has worked full time at the Colorado Division of Workers' Compensation, where he has conducted studies of adherence to the division's Medical Treatment Guidelines. To support the goal of including evidence statements in the revised guidelines, Dr. Whitney has conducted critical reviews of published medical literature.

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