The American College of Occupational and Environmental Medicine (ACOEM) recently published the second edition of its Occupational Medicine Practice Guidelines, which are hereafter referred to as the ACOEM Guidelines. These guidelines were based upon research extracted by the Work Loss Data Institute, an independent database development company focused on workplace injuries and productivity. The previous edition of the guidelines was published in 1997, leaving a seven-year gap between its publication and the 2004 second edition. The stated goal of both editions is to improve the efficiency of the diagnostic process and the efficacy of treatment in relieving symptoms and achieving a cure.

The ACOEM Guidelines are being used by third parties across the United States to direct clinical chiropractic care. In California, this use has been legislatively mandated in workers’ compensation and made "presumptively correct" (SB 899). This article offers a critical analysis of the guidelines, revealing numerous flaws and biases in its application to chiropractic treatment. Recommendations are made for correction of these flaws.

Although the focus of this article is on the relationship of the ACOEM Guidelines to chiropractic care, problematic issues with other health care professions have been identified. Of note is the failure of these guidelines to adequately address the following: construction methodology, specific referencing of articles, internal inconsistencies, classification problems, diagnostic specificity, severity issues, flare-ups, risk factors, complicating factors, chronic problems, ambiguous language, divergent interpretations of the literature, selective use of the literature, and a highly limited disclaimer. Some of these same issues have also been discussed in other research.

Chiropractic and Manipulation
The ACOEM Guidelines appear to be biased against the chiropractic profession and its primary modality: manipulation. Historically, the chiropractic profession has been the focus of discrimination by the medical profession, most notably the American Medical Association. As indicated in Wilk v. AMA, a permanent injunction was necessary in this case because of the long-term conspiracy to eliminate the chiropractic profession through such means as the suppression of scientific information, the publication of false and misleading documents, the denial of chiropractic referrals to hospitals, and rules discouraging medical doctors from associating with chiropractors. This bias extends to the research arena as well. In 2001, Terrett pointed out numerous examples in which "medical organizations, medical authors, respected peer-reviewed and indexed journals, and medical-legal journalists have on numerous occasions, misrepresented the facts regarding the identity of a practitioner of SMT associated with patient injury" (i.e., classified injury that was not chiropractic-related as being a result of chiropractic and/or a chiropractor). Such errors, especially on such a widespread basis, appear to fit the definition of professional bias and border on fraudulent misrepresentation.

Unfortunately, there appear to be signs of bias against chiropractic in the ACOEM Guidelines as well.

The Consensus Process and Chiropractic

Much of what constitutes evidenced-based protocols in health care are, by necessity, actually consensus-based protocols. This is the result of a generalized paucity of quality research. Useful research, with wide applicability, is often expensive, time-consuming, and challenging to execute in a proper manner.

Without sufficient useful research in a given area, those constructing guidelines typically turn to their "best and brightest" minds for feedback, based upon their years of clinical experience. It should be obvious that those selected for the consensus group would be specialists in that specific area. Thus, one does not turn to doctors of chiropractic to render opinions concerning the most appropriate grounds for surgery. Nor would one expect medical doctors who are not extremely well-practiced in osseous manual therapy to be part of a consensus team providing opinions on the recommended duration for a course of spinal manipulative therapy. However, this is exactly the approach that ACOEM allowed. A review of the roster of health care workers listed in the guidelines specifies only one doctor of chiropractic involved in its formation. This sole doctor of chiropractic, although a respected member of the profession, no longer actively practices as a treating doctor. Furthermore, no national or state chiropractic association is listed as having been consulted for feedback. Representatives of the American Chiropractic Association, the nation’s largest chiropractic
group, were not invited to provide feedback on any portion of the ACOEM Guidelines.\textsuperscript{17} Paradoxically, these guidelines list a variety of other types of health care associations that were contacted for input.

Because of the under-representation of DCs apparent in the development of the guidelines, its consensus-based decisions are suspect. More than that, they appear to directly contradict the recommendations of other chiropractic guidelines.\textsuperscript{8-11} The next edition of the guidelines should seek to raise its credibility by using only specialists in each area of consideration for any consensus-based protocols. Additionally, feedback should be solicited from the representative national associations before publication. If widely divergent opinions are obtained in this solicitation process, they should be noted in the guidelines.

Failure to Account for Special Needs for the Application of Manipulation

There is minimal literature supporting the use of some physical modalities for use in certain musculoskeletal conditions. However, the ACOEM Guidelines classified them as "not recommended," than action likely to inspire insurance adjustors to deny their reimbursement under any circumstance. Clinically speaking, this could be unwise. Passive therapies are often useful prior to manipulative procedures, in order to reduce the associated muscle rigidity that may accompany intersegmental dysfunction. Denying all passive therapies, regardless of whether or not they are required as a preparatory mechanism for the application of manipulation, fails to take into account the safety and comfort of the patient.

If greater manipulative force is required because of regional rigidity due to spasm or inflammation, the patient may experience unnecessary discomfort and be at greater risk for an adverse event. The lack of such preparative therapy could also decrease the overall effectiveness of the intersegmental manipulation, due to counteractive effects of regional spasm or trigger points.

The above clinical perspective is obvious to those health care professionals regularly using manipulation, but is left unaccounted for when legitimate chiropractic feedback for the ACOEM Guidelines is not obtained prior to publication. Since doctors of chiropractic are the primary proponents and providers of osseous manipulation, ACOEM should, in the future, incorporate more chiropractic feedback into its recommendation development process regarding this therapy.

Misinterpretations and Misrepresentations of the Literature Regarding Manipulation
There are numerous examples of misinterpretations and misrepresentations of the literature regarding manipulation found the *ACOEM Guidelines*. The following is not meant to be an all-inclusive list of these examples, but the items presented provide support for our contention that the guidelines are prejudiced against chiropractic methods of care.

The *ACOEM Guidelines* state (page 181) that manipulation is an "optional" choice for treatment, rather than a "recommended" one. Manipulation is classified this way in spite of the fact that the strength of the evidence presented in the guidelines for manipulation is at a "B" level. No other treatment listed in the "recommended" section of the "Summary of Evidence and Recommendations" for neck and upper back complaints has a higher level of evidence rating. In fact, most other "recommended" treatments have a "D" level of classification. Since there is no medical literature indicating that NSAIDs are more effective than spinal manipulation for the treatment of acute neck pain, one would reasonably expect to compare the relative safety of each procedure as a means of assessing which one should be recommended. Research has shown that spinal manipulation is safer by as much as a factor of several hundred times compared to the use of NSAIDs.

Even when listed under the "optional" classification, manipulation is limited in duration with the phrase “for neck pain early in care only.” What if the manipulative therapy continues to be effective in assisting the progression toward a cure, but there is incomplete resolution within this poorly defined "early phase"? Should the practitioner stop treating? Additionally, if the literature shows that manipulation is effective beyond the acute phase of care, why would this limiting clause be warranted?

Because of these inaccuracies, we suggest that a correction should be made available in an addendum to the *ACOEM Guidelines* that would reclassify manipulation into the "recommended" category for neck and upper back complaints. In addition, the clause limiting manipulative care beyond the "early phase" should be removed.

Another inaccuracy is found on page 265 of the guidelines, which states that manipulation has not proven effective for patients with pain in the hand, wrist or forearm. In fact, the study listed in this chapter’s bibliography reveals that carpal tunnel syndrome showed "significant improvement in perceived comfort and function, nerve conduction and finger sensation overall" after nine weeks of treatment with manipulation and passive care. This result was statistically equivalent to the medication group. If the guidelines listed acetaminophen and NSAIDs as "recommended," shouldn’t manipulation be listed at a
minimum as "optional" under the Summary of Evidence and Recommendation for forearm, wrist, and hand complaints? Isn’t this reclassification especially necessary for those patients who cannot take or who refuse to take medication? Accordingly, there should be an immediate reclassification of manipulation from being unlisted to at least an "optional" status. This correction should be made available in an addendum to the ACOEM Guidelines.

Page 308 of the guidelines states that manipulation is "not recommended" beyond four weeks. The strength of evidence for this opinion is "D," which is defined as the "panel interpretation of information not meeting inclusion criteria for research-based evidence." This definition, translated, appears to mean that the recommendation is based on either poor research or the opinions of the panel. Once again, with only one DC on the panel, it does not take too many other panelists to be outvoted.

Not only is this consensus-based recommendation suspect, it appears to contradict the literature showing that manipulation is effective for low back complaints in the acute through chronic phase of care. Paradoxically, the study15 that provides evidence for this position is listed on pages 318-19 (in this chapter’s bibliography) of the guidelines. This study included individuals with acute, subacute and chronic low back pain. Twenty-five randomly controlled studies were reviewed. The researchers concluded that manipulation appeared to be more effective than other interventions for treatment of low back pain, both in the short and long terms. So, if manipulation has been shown to be effective over a period of greater than "4 weeks," why would the ACOEM Guidelines state, "not recommended," for longer than four weeks? Why was the evidence rating on this point listed as a "D" level, when ACOEM’s own bibliography contained this reference? One can only assume that the opinions of non-chiropractic physicians on the panel were allowed to override the research.

In an effort to correct this inaccuracy, the qualifier disallowing manipulation for low back complaints beyond four weeks of care should immediately be removed, and a correction should be made available in an addendum to the ACOEM Guidelines.

**Unreasonably Restrictive Recommendations**

As previously mentioned, the "Summary of Evidence and Recommendations" for low back complaints on page 308 lists manipulation as "not recommended" beyond four weeks. Even if there were no studies supporting the efficacy of chiropractic care past four weeks, this restriction would still be considered unreasonable. For example, if a patient were making a documented positive response over a course of 30
days of manipulative therapy, what happens on day 31, if the patient’s condition is not completely resolved? Should the treating doctor stop providing care? Should he or she refer out to another specialist? Even if a referral were the appropriate course of action, what happens during the days or weeks that are typically required to obtain a referral? Obviously, good clinical judgment must prevail, not a "cookbook" approach to health care.

On this same page, the ACOEM Guidelines indicates that manipulation for patients with "undiagnosed neurologic deficits" is "not recommended." However, a sizable portion of patients with radiculopathy have some form of "neurologic deficit." The guidelines’ statement appears to preclude this subpopulation of patients from manipulative therapy until they have undergone special testing to more precisely isolate the cause of the deficit.

Strangely enough, special testing for non-red-flag conditions is deemed as "not helpful in the first 4-6 weeks" (algorithm, page 311). Thus, manipulation is essentially precluded by the guidelines for at least the first 30 days in this subgroup of patients with radiculopathy. More realistically, it is the progressive neurologic deficit with motor loss that warrants special attention - not a slight decrease of a deep-tendon reflex or a minor sensation loss.

This issue should be remedied, and an amended addendum correcting such unreasonable restrictions should immediately be released. Future editions of these guidelines should include input from those who commonly practice spinal manipulation, in an effort to avoid such erroneous conclusions.

**Chiropractic Status in ACOEM**

The ACOEM has a Web site ([www.acoem.org](http://www.acoem.org)) that lists various classifications for the admittance of different types of health care workers into its organization. Medical doctors and osteopaths are classified under the heading, "Regular Active Membership." Non-physicians with a doctorate level are classified under the heading, "Associate Membership." "Affiliate Membership" is reserved for non-physicians with master’s level degrees, or certified physician assistants or licensed nurse practitioners. Although not specifically identified on the site, an e-mail communication did disclose that doctors of chiropractic are classified under the "Affiliate Membership" heading. Such classification defies reason and all sense of fairness. DCs are doctors with a similar training level to MDs and osteopaths, but are denied inclusion in the same category. There is no doubt that the "D" in DC stands for "doctor," but DCs are also not allowed in the doctorate level of membership. With no offense intended toward those with a master’s degree, doctors of
chiropractic go through a longer education process and warrant a higher level of classification. Additional inquiry on this classification issue from ACOEM yielded no response. This misclassification appears to reflect a strong bias against doctors of chiropractic by ACOEM.

The ACOEM should, without delay, amend its admittance classification to allow doctors of chiropractic into the same membership category as the one for medical doctors and osteopaths, or the category including those with a doctorate-level degree. By allowing a higher level of admittance, as opposed to the current "affiliate membership" level, ACOEM will demonstrate a movement away from the current bias shown toward the chiropractic profession. In doing so, ACOEM will follow the lead of other multidisciplinary organizations, such as the American Academy of Patient Management and the Association for the Advancement of Automotive Medicine.

Conclusions

There are a number of reasons that health care practitioners, insurance providers, the legal profession, and the public should not rely upon the ACOEM Guidelines in regards to chiropractic care. As outlined in this analysis, these guidelines require significant modification in order to reach the goals that have been outlined by the ACOEM itself. The guidelines do not currently represent an unbiased and comprehensive means of evaluating care rendered to injured workers, and should immediately be substantially modified or rejected.

References

5. Return-to-Work Workgroup of the Medical Advisory Committee. Analysis regarding adoption of the ACOEM Occupational Medicine Practice Guidelines. Advisory committee to Texas Workers’
Compensation Commission.


16. An e-mail response from Jerrie Abrahamsen of ACOEM’s Membership Department.


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