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Does More Add Up to Less? A Review of a Guideline on Whiplash Associated Disorders

By: Anthony J. Lisi, DC

Users of clinical practice guidelines turn to these resources, in part, to reduce inappropriate variations in care. The expectation assumes that a thorough, systematic synthesis of data will yield a product suited to consistently influence case management decisions across populations, providers, and patients. Yet guidelines themselves are of varying methodologies and perspectives; thus, a reader consulting two guidelines on a given topic may likely encounter substantially different recommendations (1).

The International Chiropractors Association of California Guideline on Management of Whiplash Associated Disorders (WAD) represents a recent effort to bring order to the care of patients suffering from this specific neck condition. However, key areas of the Guideline conflict with other current evidence syntheses, and this may result in users facing more, rather than less, uncertainty when attempting to apply these recommendations.

A central component of the Guideline is a recommended treatment strategy for WAD that proposes both treatment options and treatment duration. Among the recommended options are manual therapies, exercises, and education. This is consistent with research demonstrating the short term effectiveness of manual mobilization combined with exercises and educational videos encouraging exercise and return to activity (2). Yet, the Guideline also recommends various physical modalities (electrotherapy, traction, and ultrasound) that others have reported as lacking evidence of benefit (3-5). Furthermore, although the Guideline does cite the work of Hurwitz et al., it seems to overlook the authors' conclusion that manual therapies, exercises, and education alone appear more beneficial than physical modalities or usual care (2).

pain disorders in general (2) or for whiplash in particular (6). When considering manipulation and mobilization for mechanical neck disorders, low quality evidence indicates that relief for both acute and chronic neck pain was achieved after one to four treatment sessions (7). This does not imply that the maximum benefit is attained after one to four sessions. Low quality evidence from one small trial of chronic cervicogenic headache suggests that nine to 12 sessions may provide greater pain relief and improvement in neck-related disability than three sessions (7). However, the optimal dosing approach for manual therapies in general remains unknown. On the other hand, there is consistent evidence that frequent, early use of health care and psychological factors, such as passive coping, correlate with poorer recovery (8). In the general neck pain population, psychosocial factors such as coping pattern and the need to socialize were identified as the strongest factors associated with poor prognosis (9). Thus, one must consider the real possibility that frequent applications of a passive modality by an empathetic provider may be the worst approach for many WAD patients.

All stakeholders in healthcare — from policy makers to patients — face an ever increasing amount of medical information. Clinical practice guidelines provide readers with an accessible summary of this information as it applies to patient care. However, clinicians presented with conflicting guidelines will need to carefully consider the primary literature, along with their own clinical experience and individual patient factors, when making treatment decisions.

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Disclaimer

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The views and opinions expressed are those of the author and do not necessarily state or reflect those of the National Guideline Clearinghouse™ (NGC), the Agency for Healthcare Research and Quality (AHRQ), or its contractor, ECRI Institute.

Potential Conflicts of Interest

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Comments

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In reply to the Expert Commentary, "Does More Add Up to Less? A Review of a Guideline on Whiplash Associated Disorders," by Anthony J. Lisi, DC, it should be noted that page 1 of the International Chiropractors Association of California guideline on "Management of Whiplash Associated Disorders" states, "In this document the maxima guidelines are that considered in a complicated case." The document is a guide only, and there will always be individual variations.

As for modalities, page 33 of the guideline includes the following statement, "Modalities (including electrotherapy) may be used in support of active therapy and flare-ups." In his commentary, Dr. Lisi relies upon evidence based on randomized controlled trials (RCTs). For those who require only RCTs as evidence, the guideline addresses this, as well (1). For a better solution in an individual case, the decision regarding the use of modalities would be up to the practitioner.

Also, Dr. Lisi makes a comment on a recommendation for 56 visits over 76 weeks. However, he did not identify the associated grade of severity of injury. The guideline indicates that this frequency and duration applies to a Whiplash Associated Disorder (WAD) Grade III injury, defined as "Moderate; Limitation of motion; some ligamentous injury; neurological symptoms. Common symptoms: Neck and arm pain; Cervical herniated disc; Neck pain with headache; Cervicoscapulalgia (pain referred to upper back)." This is indicative of injuries to the facets and disc, which are likely to become chronic. For example, Barnsley, Lord, and Bogduk state, "Therefore, patients with injuries to the discs or joints may be expected to have prolonged pain with little chance of healing or spontaneous recovery." (2)

There is surprisingly little written about the duration and frequency of treatment for whiplash injuries. Specifically, Billig's

daily and then three times weekly." (3) Similarly relevant to duration and frequency of treatment for whiplash, Jackson states, "Treatment schedules will vary somewhat for each individual. Some patients may require daily treatments for a week or two, after which the treatments should be given two or three times per week. As the symptoms decrease the treatments can be spaced farther apart unless the patient experiences an exacerbation of symptoms, in which event more frequent treatments may be necessary." (4) Ameis notes that the simplest of injuries require 6 months, moderate injuries require up to two years, and, occasionally, some individuals require 3 to 5 years before they reach maximum improvement. (5) Schofferman and Wasserman write, "The mean duration of treatment was 29 weeks (7 months 1 week). The range of treatment was 8 weeks (2 months) to 108 weeks (2 years and 1 month)." (6)

Not everyone recovers or improves with time. In the article titled, *Soft-tissue injuries of the cervical spine. 15-year follow-up*, Squires, Gargan, and Bannister write, "Between 10 and 15 years after the accident, 18% of the patients had improved whereas 28% had deteriorated. Of patients who were symptomatic, 60% had not seen a doctor in the previous five years, mostly stating that they felt that doctors had nothing to offer them." (7) Another article reports that 33% reported increased severity of symptoms 2 years since the accident (8).

Finally, Dr. Lisi states, "In the general neck pain population, psychosocial factors such as coping pattern and the need to socialize were identified as the strongest factors associated with poor prognosis. Thus, one must consider the real possibility that frequent applications of a passive modality by an empathetic provider may be the worst approach for many WAD patients." Research, however, indicates that those with psychological factors may have an organic basis for their complaints (9-15). The limiting of treatment might result in untreated chronic pain.

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Dr. Lisi has offered a number of comments concerning the International Chiropractors Association of California's (ICAs) "Management of Whiplash Associated Disorders" guidelines. As the original researcher and developer of these guidelines, it seems appropriate that I respond to Dr. Lisi's critique.

Dr. Lisi conjectured that these guidelines "may result in users facing more, rather than less, uncertainty when attempting to apply these recommendations" because, in his view, there were several conflicts between the guideline recommendations and current (best) evidence synthesis. He cited a number of references to support his position on this, arguing, for example, that certain physical therapy modalities have not been shown to be more effective than other interventions. In my opinion, Dr. Lisi has misquoted and mischaracterized the guidelines. For example, he notes, "The Guideline also provides a recommended treatment frequency and duration strategy of up to 76 treatment sessions within 56 weeks." This statement is both incorrect and taken out of context. Firstly, the guidelines do not "recommend" any duration of care. In fact, they state that the treatment is predicated on the individual patient's response to care. Thus, if a

whiplash. Those maxima always consider a more complicated case.

The guidelines follow the internationally adopted whiplash associated disorder (WAD) grading system which was first developed and published by me in 1993 (1) and subsequently popularized by the Quebec Task Force on Whiplash-Associated Disorders in 1995. (2) In the years since, it has been demonstrated that these grades do follow a recovery profile and thus have good construct validity. It is important to remember that the majority of medical interventions have not been subjected to rigorous validation. As a result, current best evidence synthesis—a most admirable, yet fairly recent trend in healthcare in general—is often wanting.

Cases in point are some of the studies of the genre mentioned by Dr. Lisi. For instance, The Cochrane Reviews synthesize existing literature following a meta-analytical methodology. The source studies frequently suffer from methodological limitations because their study design lacks solid external validity. A classic example of this point was an earlier report that indicated that soft cervical collars were not beneficial in the management of whiplash injuries. (3) This conclusion was based on a study that compared volunteers who had recently suffered whiplash injury and who were subsequently randomly assigned to either a cervical collar group, or a group that was told to act normally and continue on with their normal activities. At the end of the trial period of a few weeks, there was no statistically significant difference between the two groups, leading the authors to conclude that cervical collars were of no benefit. Since very few physicians actually treat whiplash victims by doing no more than telling them to essentially ignore their pain, or to wear a cervical collar for a few weeks, the study lacks external validity. Most practitioners prescribe the collar only as a minimal adjunct or support during the acute phase and, even then, only for more severe individual cases. Randomization cannot replicate the important effect of a physician's case-wise discrimination in

The studies comprising the reports that Dr. Lisi mentioned typically suffer from this high level of tenuous, real-world therapeutic intervention because the researchers naturally attempt to control for the kind of confounding that otherwise creeps in when practitioners' overall approaches to care vary; this presents a circular conundrum that has no simple solution. In the end, the efforts of the Cochrane syntheses are laudable, but it is still well to remember that the best evidence is sometimes rather weak and that a lack of evidence of benefit is not synonymous with evidence of a lack of benefit. The guidelines more often reduce the intervention when used appropriately, which is why more insurers are now adopting them. We believe that they reduce uncertainty precisely because they are based on solid evidence.

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