

## Evidence in Action

### Is There Evidence to Support Regular “Maintenance” Care for Chronic Low-Back Pain Patients?

By Michelle Barber, MSW, DC, and Barbara Mansholt, BA, DC

#### *Clinical Scenario*

We have probably all experienced it. We have managed a patient with chronic low-back pain whose symptomatology diminishes after an initial intensive treatment of 2-3 times per week for about 1 month. The patient is pretty excited about this improvement, but due to the chronicity of her condition, she is not optimistic about continued improvement. As you recommend that treatment frequency reduction—eventually to 1 visit per month—your patient questions the necessity of maintenance care.

Doctors have shared clinical experience and treatment plans for decades. In private practice, we tailor this knowledge to each patient. Initially, we recommend continued care based on what we’ve been taught. After a few years in practice, we have witnessed the benefits of maintenance care.

But it’s a new decade. Our patients budget their health care dollars tighter, argue with their own insurance companies, and search the Internet for answers to questions about their conditions before and after coming to us for treatment and information. And while some patients come to us as a “last resort,” this may or may not represent a majority of patients. Patients in the United States are becoming conditioned to respond to objective test measurements and to reports of current research.

#### *Evidence-Based Consideration*

An evidence-based approach is to find current literature about a patient’s condition and incorporate that information into our evidence-informed approach to patient management and education. Referencing published literature is 1 part of a 4-part management approach that also includes patient circumstances, patient

preferences, and current evidence—all woven together with clinical experience.

In the management of chronic low-back pain, spinal manipulation has been compared with physical therapy and back school, and has been shown to provide improved short- and long-term function.<sup>1</sup> Chiropractic care for low-back pain has been compared with medical care (both with and without physical therapy). Significant results included perceived improvement in low-back symptoms.<sup>2</sup> Although long-term outcome measures were assessed, neither of these studies included “maintenance” care. A prominent literature synthesis in 2008 revealed a predominance of literature for chronic LBP (compared with acute LBP or in conjunction with radiculopathies). It further rated evidence for manipulation in treatment of chronic low-back pain “grade A,” which indicates quality evidence from relevant studies.<sup>3</sup> One small study (n=30) compared 2 groups. Both received 12 treatments over a 1-month intensive period, while only 1 group continued with manipulation every 3 weeks. Although both groups had initial improvement, the maintenance group continued that trend.<sup>4</sup>

So we find the following recent study: Senna MK and Machaly SA. Does maintained spinal manipulation therapy for chronic non-specific low-back pain result in better long-term outcome? *Spine* 2011; Aug 15;36(18):1427-37.

**Objective:** According to this paper, most of the literature regarding the efficacy of spinal manipulative therapy (SMT) for low-back pain (LBP) has been limited to patients with acute nonspecific LBP. This study attempted to address the efficacy of SMT as a treatment for those patients with chronic nonspecific LBP. It also

looked at maintenance SMT for long-term reduction of pain and disability levels in chronic low-back conditions.

**Methods:** In this study, the authors performed a prospective single-blinded controlled study design. They identified eligible patients between the ages of 20 and 60 who had had chronic nonspecific LBP for at least 6 months. Patients were recruited from the Outpatient Clinics of the Rehabilitation and Rheumatology Department of Mansoura Hospital in Egypt. Ninety-three patients were ultimately enrolled in the study, and were randomized into 1 of 3 groups: 1) those receiving 12 treatments of sham SMT over 1 month and no additional treatments for 9 months; 2) those receiving 12 treatments of standardized “initial intensive” SMT 3 times weekly over 1 month, but no treatments for the subsequent 9 months; and 3) those receiving 12 treatments of standardized “initial intensive” SMT 3 times weekly over 1 month, followed by “maintenance” SMT every 2 weeks for an additional 9 months. Patients were evaluated at 1, 4, 7, and 10 months using the Oswestry disability questionnaire, visual analog scale (VAS), and Short Form Health Survey (SF-36), and were also asked to compare their current back-related health status with their baseline status on a 5-point Likert scale (much better to much worse). Additionally, objective measures of mobility were assessed using the modified Schober test (flexion) and lateral bending measurements.

**Results:** In all, 33 patients declined to follow up at some point in the study, leaving 60 patients who completed the study. Data were analyzed using a statistical technique known as multiple imputation to account for those who did not complete the study. All 3 groups of patients were similar at baseline on all measures. However, patients in the 2 groups receiving treatment had significantly lower pain and disability scores than the control group following the first month of treatment. At the end of 10 months of treatment, the patients who received “maintenance” SMT had significantly lower pain and disability scores than the patients who had only received “initial

intensive” SMT. Additionally, the scores of the non-maintenance groups returned to near the pretreatment level (see Table 1).

**Conclusion:** The authors conclude that SMT is effective for the treatment of chronic nonspecific LBP. Not only that, but this study would also suggest that “maintenance” SMT after the initial intensive SMT is beneficial to maintain the improved post-treatment pain and disability levels.<sup>5</sup>

### *Putting It All Together*

So what does this study mean to us in practice? We have “known” that maintenance care has benefits, but we lacked literature to support our claims. It is interesting that Senna and Machaly reference Descarreaux’s 2004 study, and it is reassuring to find repeatable outcome measures from that study. Certainly, given the clinical scenario we started with, this article would provide us with an opportunity to give the patient more than just our opinion: the results of a recent clinical study. Now, when our patients question the necessity of maintenance care for chronic LBP, we can state that current research suggests that patients who discontinue care after showing initial improvement may see their pain and disability levels revert toward their pretreatment levels, whereas those patients who continue with maintenance care are likely to continue to experience further improvement over the duration of care. Furthermore, claims that are denied by the insurance companies as being medically unnecessary could be challenged using the information gained from this article. ■

*Dr. Michelle Barber is an assistant professor in the Life Sciences Department at Palmer College of Chiropractic in Davenport, Iowa. She also has a private chiropractic practice in Rock Island, Illinois.*

*Dr. Barbara Mansholt is an assistant professor in the Technique Department at Palmer College of Chiropractic in Davenport, Iowa.*

## Evidence in Action

### References

1. Cecchi F, Molino-Lova R, Chiti M, Pasquini G, Paperini A, Conti AA, et al. Spinal manipulation compared with back school and with individually delivered physiotherapy for the treatment of chronic low back pain: a randomized trial with one-year follow-up. *Clin Rehabil* 2010 Jan;24(1):26-36.
2. Hurwitz EL, Morgenstern H, Kominski GF, Yu F, Chiang LM. A randomized trial of chiropractic and medical care for patients with low back pain: eighteen-month follow-up outcomes from the UCLA low back pain study. *Spine (Phila, Pa. 1976)* 2006 Mar 15;31(6):611-21; discussion 622.
3. Lawrence DJ, Meeker W, Branson R, Bronfort G, Cates JR, Haas M, et al. Chiropractic management of low back pain and low back-related leg complaints: a literature synthesis. *J Manip Physiol Ther* 2008 Nov-Dec;31(9):659-674.
4. Descarreaux M, Blouin JS, Drolet M, Papadimitriou S, Teasdale N. Efficacy of preventive spinal manipulation for chronic low-back pain and related disabilities: a preliminary study. *J Manip Physiol Ther* 2004 Oct;27(8):509-514.
5. Senna MK and Machaly SA. Does maintained spinal manipulation therapy for chronic non-specific low back pain result in better long term outcome? *Spine* 2011; Aug 15;36(18):1427-37.

	Mean Oswestry Disability Score (%)			Mean VAS (mm)		
	Control Group (n=37)	Non-maintained SMT Group (n=26)	Maintained SMT Group (n=25)	Control Group	Non-maintained SMT Group	Maintained SMT Group
<b>Baseline</b>	38.1081	38.6923	39.6000	41.2162	41.8077	42.8000
<b>1 month</b>	32.5405	24.0769	24.6400	33.1892	29.4615	29.4400
<b>10 months</b>	37.4374	34.9058	20.6190	38.2902	38.5255	23.5449

**Table 1. Patient Data**