

Spinal Manipulation Maintenance Care Studies

Spine (Phila Pa 1976). 2011 Jan 17. [Epub ahead of print] **Does maintained Spinal manipulation therapy for chronic non-specific low back pain result in better long term outcome?** Senna MK, Machaly SA. Rheumatology and Rehabilitation Department, Mansoura Faculty of Medicine, Mansoura University.

Study Design. A prospective single blinded placebo controlled study was conducted.

Objective. to assess the effectiveness of spinal manipulation therapy (SMT) for the management of chronic non-specific low back pain (LBP) and to determine the effectiveness of maintenance SMT in long-term reduction of pain and disability levels associated with chronic low-back conditions after an initial phase of treatments.

Summary of background. SMT is a common treatment option for low back pain. Numerous clinical trials have attempted to evaluate its effectiveness for different subgroups of acute and chronic LBP but the efficacy of maintenance SMT in chronic non-specific LBP has not been studied.

Subjects and Methods. **60 patients** with chronic, nonspecific LBP lasting at least 6 months were randomized to receive either (1) 12 treatments of sham SMT over a one-month period, (2) 12 treatments, consisting of SMT over a one-month period, but no treatments for the subsequent nine months, or (3) 12 treatments over a one-month period, along with "maintenance spinal manipulation" every two weeks for the following nine months. To determine any difference among therapies, we measured pain and disability scores, generic health status, and back-specific patient satisfaction at baseline and at 1-month, 4-month, 7-month and 10-month intervals.

Results: Patients in second and third groups experienced significantly lower pain and disability scores than first group at the end of 1-month period ($P = 0.0027$ and 0.0029 respectively). However, only the third group that was given spinal manipulations during the follow-up period showed more improvement in pain and disability scores at the **10-month evaluation**. In the no maintained SMT group, however, the mean pain and disability scores returned back near to their pretreatment level.

Conclusion. **SMT is effective for the treatment of chronic non specific LBP. To obtain long-term benefit, this study suggests maintenance spinal manipulations after the initial intensive manipulative therapy.**

Health Maintenance Care in Work-Related Low Back Pain and Its Association With Disability Recurrence. Manuel Cifuentes, MD, PhD, Joanna Willetts, MS, and Radoslaw Wasiak, PhD, MA, MSc. JOEM Volume 53, Number 4, April 2011. Pages. 396-404.

Abstract

OBJECTIVES:

To compare occurrence of repeated disability episodes across types of health care providers who treat claimants with new episodes of work-related low back pain (LBP).

METHOD:

A total of 894 cases followed 1 year using workers' compensation claims data. Provider types were defined for the initial episode of disability and subsequent episode of health maintenance care.

RESULTS:

Controlling for demographics and severity, the hazard ratio [HR] of disability recurrence for patients of physical therapists (HR = 2.0; 95% confidence interval [CI] = 1.0 to 3.9) or physicians (HR = 1.6; 95% CI = 0.9 to 6.2) was higher than that of chiropractor (referent, HR = 1.0), which was similar to that of the patients non-treated after return to work (HR = 1.2; 95% CI = 0.4 to 3.8).

CONCLUSIONS:

In work-related nonspecific LBP, the use of health maintenance care provided by physical therapist or physician services was associated with a higher disability recurrence than in chiropractic services or no treatment.

J Manipulative Physiol Ther. 2005 Feb;28(2):136-42. **Chiropractic maintenance care and quality of life of a patient presenting with chronic low back pain.** Wenban AB, Nielsen MK. Australian Spinal Research Foundation. adrianwenban@wanadoo.es

Abstract

OBJECTIVE: To report on a 26-year-old female patient presenting with uncomplicated chronic low back pain who received chiropractic maintenance care using 2 quality of life outcome assessment instruments.

OUTCOME MEASURES: Short-form (SF-36) subscales, Quality of Well-Being Scale, Visual Analog Scale, and number of tender vertebral spinous processes.

RESULTS: After **9 months** of care the SF-36 subscale scores showed improvement. The SF-36, although low before care, approached normal on 3 subscales and exceeded normal population values on 5 subscales after 9 months. The SF-36 physical and mental composite scores improved from mean baseline scores of 23.4 and 25.3 to 43.7 and 62.8, respectively, after 9 months of care. The Quality of Well-Being Scale scores improved from a mean pre-intervention score of 1.1 to a post-intervention score of 8.2. The Visual Analog Scale scores improved from a mean pre-intervention score of 8 to a post-intervention score of 1.5. The mean number of chiropractic vertebral subluxations, detected via palpation of spinous process tenderness, went from a pre-care mean of 6.5 to a post-care mean of 4.

CONCLUSION: **The patient appeared to experience improvement in quality of life while showing signs suggestive of improved spinal function.** The relationship between indicators of vertebral subluxation and quality of life deserves further investigation using a research design that allows for exploration of possible causal relationships.

J Manipulative Physiol Ther. 2004 Oct;27(8):509-14. **Efficacy of preventive spinal manipulation for chronic low-back pain and related disabilities: a preliminary study.** Descarreaux M, Blouin JS, Drolet M, Papadimitriou S, Teasdale N. Laval University, Kinesiology Division and Quebec University in Trois-Rivières, Chiropractic Department, Quebec, Canada. Martin_descarreaux@uqtr.ca

Abstract

OBJECTIVE: To document the potential role of maintenance chiropractic spinal manipulation to reduce overall pain and disability levels associated with chronic low-back conditions after an initial phase of intensive chiropractic treatments.

METHODS: Thirty patients with chronic nonspecific low-back pain were separated into 2 groups. The first group received 12 treatments in an intensive 1-month period but received no treatment in a subsequent 9-month period. For this group, a 4-week period preceding the initial phase of treatment was used as a control period to examine the sole effect of time on pain and disability levels. The second group received 12 treatments in an intensive 1-month period and also received maintenance spinal manipulation every 3 weeks for a **9-month** follow-up period. Pain and disability levels were evaluated with a visual analog scale and a modified Oswestry questionnaire, respectively.

RESULTS: The 1-month control period did not modify the pain and disability levels. For both groups, the pain and disability levels decreased after the intensive phase of treatments. Both groups maintained their pain scores at levels similar to the postintensive treatments throughout the follow-up period. For the disability scores, however, only the group that was given spinal manipulations during the follow-up period maintained their postintensive treatment scores. The disability scores of the other group went back to their pretreatment levels.

CONCLUSIONS: **Intensive spinal manipulation is effective for the treatment of chronic low back pain. This experiment suggests that maintenance spinal manipulations after intensive manipulative care may be beneficial to patients to maintain subjective postintensive treatment disability levels.** Future studies, however, are needed to confirm the finding in a larger group of patients with chronic low-back pain.

J Manipulative Physiol Ther. 2000 Jan;23(1):10-9. **Maintenance care: health promotion services administered to US chiropractic patients aged 65 and older, part II.** Rupert RL, Manello D, Sandefur R. Logan Chiropractic College, St Louis, MO, USA.

Abstract

OBJECTIVE: Health promotion and prevention services provided by the chiropractic profession historically have been referred to as maintenance care (MC). The primary objective of this investigation was to obtain information regarding multiple health issues of patients age 65 years and over who have had a long-term regimen of chiropractic health promotion and preventive care. The study also sought to explore the nature of the interventions and methods that were most commonly used by chiropractors when administering MC and to determine whether there were differences between patients who have had long-term exposure to these preventive services versus those who have not.

DESIGN: This descriptive study was accomplished by selecting chiropractic patients (age 65 years and over) who had received health-promotion and prevention services for **at least 5 years, with a minimum of 4 visits per year**. To enhance the probability of securing a more representative patient sample, selection was made through the participation of chiropractors from 6 diverse geographic locations across the United States. Doctors were asked to enroll the first 10 consenting patients who met the inclusion criteria. A battery of diverse assessment instruments were completed by each patient to provide a patient health profile. Information related to each patient included answers to the SF-36D survey, patient health habits, expenditures of health services, frequency of use of health providers, and perceived value of chiropractic prevention and health promotion services.

RESULTS: A total of 73 chiropractors participated in this investigation from the 6 study sites. In addition to an average 1.9 manual procedures used per patient, it was common to recommend stretching exercises (68.2%), aerobic exercises (55.6%), dietary advice (45.3%), and a host of other prevention strategies, including vitamins and relaxation. **The patients investigated in this study reported making only half the annual number of visits to medical providers (4.76 visits per year) compared with the national average (9 visits per year) for individuals age 65 years and over.**

CONCLUSIONS: On the basis of the response of participating chiropractors, this study describes the therapeutic components of MC for the elderly patient. For these patients, **MC does not simply consist solely of periodic visits for joint manipulation, but it involves an eclectic host of interventions (e.g., exercise, nutrition, relaxation, physical therapy, and manipulation) that are directed at both musculoskeletal and visceral conditions.**

J Manipulative Physiol Ther. **2007** May;30(4):263-9. **Clinical utilization and cost outcomes from an integrative medicine independent physician association: an additional 3-year update.** Sarnat RL, Winterstein J, Cambron JA. Alternative Medicine Integration Group, LP, Highland Park, Ill 60035, USA. rsarnat@amibestmed.com <rsarnat@amibestmed.com>

Abstract

OBJECTIVE: Our initial report analyzed clinical and cost utilization data from the years 1999 to 2002 for an integrative medicine independent physician association (IPA) whose primary care physicians (PCPs) were exclusively doctors of chiropractic. This report updates the subsequent utilization data from the IPA for the years 2003 to 2005 and includes first-time comparisons in data points among PCPs of different licensures who were oriented toward complementary and alternative medicine (CAM).

METHODS: Independent physician association-incurred claims and stratified random patient surveys were descriptively analyzed for clinical utilization, cost offsets, and member satisfaction compared with conventional medical IPA normative values. Comparisons to our original publication's comparative blinded data, using nonrandom matched comparison groups, were descriptively analyzed for differences in age/sex demographics and disease profiles to examine sample bias.

RESULTS: Clinical and cost utilization based on 70,274 member-months over a 7-year period demonstrated **decreases of 60.2% in-hospital admissions, 59.0% hospital days, 62.0% outpatient surgeries and procedures, and 85% pharmaceutical costs** when compared with conventional medicine IPA performance for the same health maintenance organization product in the same geography and time frame.

CONCLUSION: During the past 7 years, and with a larger population than originally reported, **the CAM-oriented PCPs using a nonsurgical/nonpharmaceutical approach demonstrated reductions in both clinical and cost utilization when compared with PCPs using conventional medicine alone.** Decreased utilization was uniformly achieved by all CAM-oriented PCPs, regardless of their licensure. The validity and generalizability of this observation are guarded given the lack of randomization, lack of statistical analysis possible, and potentially biased data in this population.

J Manipulative Physiol Ther. **2004** Jun;27(5):336-47. **Clinical and cost outcomes of an integrative medicine IPA.** Sarnat RL, Winterstein J. Alternative Medicine Integration Group, LP, Highland Park, Ill 60035, USA. rsarnat@amibestmed.com

Abstract

OBJECTIVE: We hypothesized that primary care physicians (PCPs) specializing in a nonpharmaceutical/nonsurgical approach as their primary modality and utilizing a variety of complementary/alternative medicine (CAM) techniques integrated with allopathic medicine would have superior clinical and cost outcomes compared with PCPs utilizing conventional medicine alone.

DESIGN: Incurred claims and stratified randomized patient surveys were analyzed for clinical outcomes, cost offsets, and member satisfaction compared with normative values. Comparative blinded data, using nonrandomized matched comparison groups, was analyzed for age/sex demographics and disease profiles to examine sample bias.

SETTING: An integrative medicine independent provider association (IPA) contracted with a National Committee for Quality Assurance (NCQA)-accredited health maintenance organization (HMO) in metropolitan Chicago.

SUBJECTS: All members enrolled with the integrative medicine IPA from January 1, 1999 through December 31, 2002.

RESULTS: Analysis of clinical and cost outcomes on 21,743 member months over a 4-year period demonstrated decreases of 43.0% in hospital admissions per 1000, 58.4% hospital days per 1000, 43.2% outpatient surgeries and procedures per 1000, **and 51.8% pharmaceutical cost reductions** when compared with normative conventional medicine IPA performance for the same HMO product in the same geography over the same time frame.

CONCLUSION: In the limited population studied, **PCPs utilizing an integrative medical approach emphasizing a variety of CAM therapies had substantially improved clinical outcomes and cost offsets compared with PCPs utilizing conventional medicine alone.** While certainly promising, these initial results may not be consistent on a larger and more diverse population.