

1992

Family Physicians, Chiropractors, And Back Pain

Peter Curtis

University of North Carolina at Chapel Hill

Geoffrey M. Bove

University of New England, gbove@une.edu

Follow this and additional works at: http://dune.une.edu/biomed_facpubs

 Part of the [Alternative and Complementary Medicine Commons](#), [Family Medicine Commons](#), [Medical Sciences Commons](#), and the [Musculoskeletal System Commons](#)

Recommended Citation

Curtis, Peter and Bove, Geoffrey M., "Family Physicians, Chiropractors, And Back Pain" (1992). *Biomedical Sciences Faculty Publications*. 15.

http://dune.une.edu/biomed_facpubs/15

This Article is brought to you for free and open access by the Biomedical Sciences Faculty Works at DUNE: DigitalUNE. It has been accepted for inclusion in Biomedical Sciences Faculty Publications by an authorized administrator of DUNE: DigitalUNE. For more information, please contact bkenyon@une.edu.

Family Physicians, Chiropractors, and Back Pain

Peter Curtis, MD, and Geoffrey Bove, DC

Chapel Hill, North Carolina

In this article, major aspects of back care provided to patients by family physicians and chiropractors are reviewed, and the recent guidelines on spinal manipulation therapy are discussed. These guidelines should be

useful for family physicians wishing to refer patients to chiropractors.

Key words. Chiropractic; backache; physicians, family; referral and consultation. *J Fam Pract* 1992; 35:551-555.

In a commentary on back pain in the *The Journal of Family Practice* in 1988, Dan Cherkin wondered why there had been so little study of this problem by family physicians, and whether this was attributable to their satisfaction with current approaches to care or to frustration over their inability to modify the course of the illness.¹ In this country, low back pain, dysfunction, and work disability are moving toward epidemic proportions, and the context in which back problems occur most often results in presentation to primary care physicians, particularly family physicians. However, another discipline, chiropractic, is playing an increasing role in the primary care of musculoskeletal problems. Family physicians should therefore reevaluate their relationship with these health care providers.

Manpower Issues

Back pain is the second leading reason reported by patients for visiting physicians.^{2,3} Every year nearly 13 million visits are made to physicians for chronic low back pain, and it is the second leading cause of work days lost.^{3,4} From 1971 to 1981, the number of disabled people and the costs of care for low back pain increased at a rate 14 times that of the population growth.³ In medical settings, family physicians care for 38.6% of the patients with acute and chronic back pain, compared with 36.9% seen by orthopedists, 16.9% by osteopaths, and 7.6% by internists.⁵ Back symptoms are the third most common reason for visiting a family physician.⁶

Chiropractors account for about twice the number of visits for back pain as physicians.^{7,8} In an 8-year community-based survey of six sites in different parts of the country, Shekelle and Brook⁸ reported that 7.5% of the population made at least one visit to a chiropractor; 42.1% of the visits were for back problems and 10.3% for neck problems. Manipulation accounted for 66% of repeat visits.

Thus, in terms of musculoskeletal problems, family physicians and chiropractors provide the majority of ambulatory care in the health care system. They tend to serve similar populations and yet their services do not seem to be in competition with each other.⁸⁻¹⁰ Certainly both groups have grown in numbers over the past 20 years.^{9,11} There are at least 20,000 registered chiropractors in the United States who treat over 7.5 million people each year with services covered by Medicaid, Medicare, and government-employee and private insurance, as well as state worker's compensation.^{12,13}

Perspectives on Back Care

In a series of reports based on physician, chiropractor, and patient surveys, Cherkin and colleagues¹⁴⁻¹⁶ offered some interesting insights on the management of back pain by these professionals. In a study of health management organization (HMO) and non-HMO settings, 50% of family physicians surveyed believed they were only slightly or not at all informed about the clinical scope and skills of chiropractors, although 26% saw them as an excellent source of care for certain musculoskeletal problems. The latter group tended to be the younger family physicians who were also the most knowledgeable about chiropractors, and more likely to have encouraged patients to see them.

Patient perspectives from another well-designed

Submitted, revised, May 5, 1992.

From the Departments of Family Medicine (P.C.) and Cell Biology and Anatomy (G.B.), University of North Carolina, Chapel Hill. Requests for reprints should be addressed to Peter Curtis, MD, Department of Family Medicine, CB # 7595, School of Medicine, University of North Carolina, Chapel Hill, NC 27514.

study restricted to an HMO population indicated significantly greater satisfaction with chiropractic care than with family physician care.¹⁶ Items of back care provided by family physicians with which patients were not very satisfied were: information about the cause of pain; advice on recovery time and how to manage the problem; and instruction on posture, exercise, and lifting skills. Patients believed that family physicians were less confident and comfortable in their diagnosis and management and showed less concern and understanding of their problem than chiropractors. The number of days of disability for patients seen by family physicians was significantly higher (mean 39.7) than for patients managed by chiropractors (mean 10.8).

What were the chiropractors doing right and what were the family physicians doing wrong? Although not based on randomized controlled interventions, these data suggest that family physicians were not able to provide as clear or rational an explanatory model of the problem to the patient as the chiropractors. In addition, they did not individualize management as well. These issues, as well as the possible value of hands-on manual therapy, could be addressed by additional training and education in musculoskeletal disease either during or after residency training.

There is some evidence from a handful of controlled trials that spinal manipulation does have a beneficial effect for low back pain, particularly for certain subgroups of patients with more chronic or recurrent problems.¹⁷⁻²¹ On the other hand, in a recent meta-analysis of 35 randomized trials of spinal manipulation, only 51% of the studies showed an improved short-term outcome. Most of these studies had methodological problems, not the least of which were patient selection bias and difficulties of standardized diagnosis.²² Other forms of treatment, including physical therapy and facet injections, have also been shown recently to be of little or no benefit, probably for the same reasons.^{23,24} Treatment is generally palliative and not curative. Setting specific therapies aside, there are other issues raised from these studies. Cherkin et al¹⁴ suggest that the beliefs of family physicians that no specific diagnosis for back pain exists other than "back strain" and "slipped disc," and that there is little effective treatment other than expectant analgesia, lead to frustration and therapeutic nihilism. The same investigators have recently reported on a targeted continuing medical education (CME) program designed to improve back care and patient satisfaction.²⁵ The primary goal was to increase physician comfort and confidence in managing back pain. Although an increased feeling was noted on the part of the physicians that their patients were more satisfied and reassured about their problem, a survey of the patients seen by the above physicians

showed that the intervention had no effect on outcomes of care.²⁶ Cherkin et al suggest, after reviewing several options, that negative feelings about back pain patients induced early in medical training may override other determinants in back care outcome. This may be subconsciously or openly conveyed to patients creating a negative placebo effect.¹²

Positive placebo effects derive from agreement between patient and provider on the nature and cause of the problem, strong assurance on outcome, the use of instrumentation, and the "laying on of hands."^{12,27,28} In their recent paper, Koes et al²³ comment on the power of the placebo and the possibility of beneficial effects of referral to another professional. Placebo modulation of pain through segmental reflexes as well as cortical and limbic activity through the hypothalamus is well substantiated by the gate-control theory developed by Melzack and Wall in 1965.²⁹ Furthermore, Waddell³⁰ has shown that, for chronic low back pain, physical pain contributes only 40% whereas psychologic distress and abnormal illness behavior contribute 31% to the degree of disability, although the contribution by illness behavior may be significantly less for patients with acute back pain. Back pain, therefore, provides a classic example of the biopsychosocial model of illness in which social and psychologic factors play major roles in pain control, disability, and rehabilitation. Yet the tools commonly used by family physicians to treat back pain tend to be those of biomedicine and referral rather than behavioral and direct manual therapy, and this may explain why patients are more satisfied with care from chiropractors, who are much more focused on musculoskeletal problems and the context in which they occur.^{6,14}

Referral to Chiropractors

Over the last 50 years, allopathic medicine has had a deep suspicion and concern about chiropractic. Until 1980, the American Medical Association stated that it was unethical to refer a patient to a chiropractor, and a physician doing so was likely to lose membership in the Association. National chiropractic associations were only able to achieve full acceptance as a clinical discipline through winning a historic lawsuit against the American Medical Association, which was found to have conspired with other groups to contain and eliminate chiropractic through ethical prohibitions.³¹

Many physicians, probably a majority, are still reluctant to make specific referrals to osteopaths or chiropractors. In a survey of a 25% random sample of chiropractors in 1973, respondents indicated that 90% referred patients to physicians and 65% received referrals from

Table 1. Guidelines for Identifying A Competent Chiropractor

-
- Treats mainly musculoskeletal disorders with manual manipulative techniques
 - Does not do routine radiographs on every patient
 - Does not extend duration of treatment unnecessarily (see Table 2)
 - Writes a response to a referral and outlines evaluation and therapy
 - Does not charge "front end" lump sum for whole treatment program
 - Graduated from a school accredited by the Council on Chiropractic Education
 - Is willing to have physician visit the office to observe treatment
 - Good feedback from patients on care given
-

physicians.³² A 1986 survey of a sample of patients attending 10 chiropractic clinics¹⁹ indicated that 53% had consulted a physician during the current episode of pain and 19% had been referred to the chiropractor by the physicians; but a more recent study⁸ reported that less than 1% of patients were referred to chiropractors by other providers. Some guidelines on identifying a competent and ethical chiropractor are shown in Table 1.

There are many complex factors of history, attitude, belief, and professional distrust that contribute to this discrepancy in behavior between the professions.³³ Probably the most powerful perceptions noted by allopathic physicians involve suspicion regarding the extent, depth, and validity of manipulative training, particularly the possibility of "missing" a serious disease. Since the early part of the century, however, chiropractic schools have required a minimum of 4 years of training that includes medical basic sciences, general diagnostics, radiology, physical therapy, and, of course, manipulative therapy, with prerequisite coursework similar to that necessary to enter medical school. In 1979, a commission of inquiry found the basic sciences at North American chiropractic schools to be equivalent to those taught at medical schools.³⁴ Currently, a typical curriculum involves a minimum of 4200 hours of training, of which approximately 1200 hours are patient contact.³⁵ Doctors of Chiropractic are highly trained practitioners, qualified and licensed to diagnose disease entities and to refer patients when the treatment necessary is out of their scope of practice.

Another argument against the use of chiropractic is the perceived lack of basic scientific evidence and clinical trials that would justify the use of not only manipulation but other mechanical and electronic devices. Although there is a considerable amount of neurophysiological research supporting the theoretical basis of manipulative therapy, basic scientific evidence and clinical trials dealing with this topic are scarce, as they are for other modalities used in the treatment of musculoskeletal ailments.^{18,22,24,28}

Finally, there is the argument that manipulation is a

dangerous intervention.¹² Over the years, there has been some justification for these views as a result of unsupported claims for success in treating a range of medical conditions.³⁶ The dangerous complications of manipulative techniques, mainly vascular accidents, occur in very small numbers (about 113 documented cases) and have been used as a weapon against chiropractors.^{37,38} The incidence of vascular accidents following cervical manipulation has been reported as between 1:400,000 to 1:1 million procedures.^{39,40} Almost all complications of manipulative therapy have involved specific rotary adjustments of the cervical spine, which comprise about 30% of the 100 million visits per year made to chiropractors.^{41,42} In fact, a number of these complications have followed manipulations by allopathic physicians.³⁶ Complications of lumbar spine manipulation are even more rare and usually consist of an exacerbation of radiculopathy with a herniated disc.³⁶ However, certain clinicians have used manipulative therapy specifically for lumbar disc herniation.⁴³

What Is Manipulative Therapy?

For chiropractors, manipulative therapy is the art of restoring a full and pain-free range of motion to joints. The theoretical basis is that hyper- or hypomobile joints produce local and distant effects as a result of abnormal afferent and efferent nerve irritation from joints, synovial membrane, and other soft tissues. The ability to perform manipulative therapy is not easily attained. The communication skills and sensitivity of the hands to appreciate tissue compliance and subtle joint movements take some time to develop. Manipulation is generally performed by taking joints to their end point of motion ("long lever" technique) and then isolating the joint to be manipulated by local pressure on prominences of the articulating bones within the stretched area ("short lever"). Once isolated, a high velocity but low amplitude thrust is delivered to the joint, and an audible noise usually signifies that the manipulation has been successful. Done properly, the procedure is painless and the joint has moved past its passive range of motion but not outside of its range of anatomical integrity.³⁵ It should be obvious that the techniques, broadly described here, should not be performed by those who are not adequately trained. It should be noted that chiropractors also provide physical therapy, perform radiographic examinations, and advise their patients about diet and exercise. These adjunct therapies are said to promote more rapid recovery than manipulation alone but have not been proven to be of benefit.

Contraindications and Indications for Referral for Manipulative Therapy

Contraindications for referral for manipulative therapy include a range of systemic diseases, including arthritis, bone disease such as infection or metastases, long-term steroid therapy, evidence of significant cardiovascular disease, anticoagulation, vertigo, neurologic disease, severe cervical spondylosis, and disc lesions with objective neurologic deficits.^{36,44} Less than 1% of all low back pain patients have an underlying systemic disease as a cause, however, and almost all can be screened by radiograph and sedimentation rate by applying the criteria established by Deyo⁴⁵: presence of neurologic deficit; age over 50 years; presence of fever, weight loss or adenopathy; steroid use; evidence of rheumatoid or ankylosing spondylitis; prior malignancy. These risk factors are rarely absolute; both of us have treated patients from each of the aforementioned categories, after accurate diagnosis and special considerations have been made. Thus, a patient with breast cancer may still suffer from mechanical back pain, and manipulation can be effective as long as bone metastases have been excluded.

Chiropractors are highly trained in musculoskeletal diagnosis and treatment techniques and are found in many of the same practice locations as family physicians. Their popularity and presence has increased, and in all states their services are covered by insurance and worker's compensation.⁴⁴ Because of the significant economic and professional impact of this form of treatment, interest in the validation of manipulative therapy has grown. Recently, the RAND Corporation, in conjunction with the UCLA Division of General Internal Medicine and the Foundation for Chiropractic Education and Research and the Consortium for Chiropractic Research, used the modified expert panel technique to assess the appropriateness of spinal manipulation for low back pain.⁴⁶ This evaluation reviewed manipulation in general rather than specific chiropractic techniques. The results provide some guidance to family physicians in the referral of patients with low back pain to chiropractors and assist them in educating patients on what to expect in terms of treatment duration. The panel included a number of nationally recognized expert clinicians and researchers in back pain from the disciplines of orthopedics, medicine, family medicine, sports medicine, and chiropractic. A wide and exhaustive range of back-pain scenarios were rated by the panel by degree of appropriateness based on probable benefit, and were scored in terms of agreement, disagreement, or equivocation by the panel. The major agreed upon clinical profiles that would *most likely* benefit from manipulation are shown in Table 2.

Table 2. Clinical Profiles Appropriate for Manipulation*

Problem	Duration of Treatment†
Acute low back pain (<3 wk) Previous good response to manipulation Normal or abnormal radiographs Radicular pain None or minor neurologic signs	3 to 5 treatments, maximum of 10 before reevaluation
Subacute low back pain (3–12 wk) Previous good response to manipulation Normal or abnormal radiographs No neurologic signs	Unclear
Chronic low back pain (>3 mo) Previous good response to manipulation Normal radiographs/imaging No neurologic signs	3 treatments/wk for up to 8 wk before reevaluation

*Adapted from RAND study.⁴⁶

†Estimates, not consensus.

Summary

The scientific evidence accumulated to date does not clearly indicate that spinal manipulation is beneficial, although most of the studies had flawed methodologies. In terms of return to normal function and patient satisfaction, chiropractic therapy seems to be of value. This may be the result of one or more factors: an effect of manipulation, a different approach to working with a patient, or a placebo effect. Indeed, the referral process itself may have an effect on patient outcome.²³

Family physicians could certainly benefit from re-evaluating their approach to back pain by addressing issues of a more organized concept of diagnosis, the biopsychosocial model of illness, and the judicious use of the placebo effect.

Deciding which patients should be referred to a chiropractor requires careful consideration. A favorable prior response to manipulation is a good sign that treatment may help again. Using the expert-panel approach, the guidelines reported here begin to define for primary care physicians (as well as the health insurance industry) the indications and time frames for manipulative treatment and recovery that patients can expect from chiropractors and osteopaths. The expert-panel approach relies on literature review and complex consensus development. Ideally, these data and recommendations should be acquired using prospective randomized intervention studies. This would be an important and expensive undertaking, but worthwhile given the huge cost of back care in this country.

Acknowledgment

This article was supported in part by a grant from the Agency for Health Care Policy and Research, No. HS06664-02.

References

1. Cherkin DC. [Commentary]. Lanier DC, Stockton P. Clinical predictors of outcome of acute episodes of low back pain. *J Fam Pract* 1988; 27:488-9.
2. Cypress BK. Characteristics of patient visits for back symptoms: a national perspective. *Am J Public Health* 1983; 73:389-95.
3. Frymoyer JW. Magnitude of the problem. In: Weinstein JN, Wiesel SW, eds. *The lumbar spine*. Philadelphia: WB Saunders, 1990:32-8.
4. Cunningham LS, Kelsey JL. Epidemiology and musculoskeletal impairments and associated disability. *Am J Public Health* 1984; 74:574-9.
5. Deyo RA, Tsui-Wu YJ. Descriptive epidemiology of low-back pain and its related medical care in the United States. *Spine* 1988; 12:264-8.
6. Deyo RA, Diehl A, Rosenthal M. Reducing roentgenography use. Can patient expectations be altered? *Arch Intern Med* 1987; 148:141-5.
7. Murt HA, Parsons PE, Harlan WR, et al. Disability, utilization and costs associated with musculoskeletal conditions: United States, 1980. National Medical Care Utilization and Expenditures Survey, series C, analytical report no. 5. Washington, DC: National Center for Health Statistics, 1986. DHHS publication No. (PHS) 86-20405.
8. Shekelle PG, Brook RH. A community-based study of the use of chiropractic services. *Am J Public Health* 1991; 81:439-42.
9. Gesler WM. The place of chiropractors in health care delivery: a case study of North Carolina. *Soc Sci Med* 1988; 26:785-92.
10. Yesalis CE, Wallace RB, Fisher WP, Tokheim R. Does chiropractic utilization substitute for less available medical services? *Am J Public Health* 1980; 70:415-7.
11. Nyiendo J, Lamm I. Disabling low-back Oregon worker's compensation claims. Part I: Methodology and clinical categorization of chiropractic and medical claims. *J Manipulative Physiol Ther* 1991; 14:177-84.
12. Coulehan JL. Chiropractic and the clinical art. *Soc Sci Med* 1985; 21:383-90.
13. Von Kuster T Jr. Chiropractic health care: a national study of cost of education, service, utilization, number of practicing doctors of chiropractic and other key policy issues. Washington, DC: Foundation for the Advancement of Chiropractic Tenets and Science, 1980.
14. Cherkin DC, MacCornack FA, Berg AD. Managing low-back pain—a comparison of the beliefs and behaviors of family physicians and chiropractors. *West J Med* 1988; 149:476-80.
15. Cherkin D, MacCornack FA, Berg AD. Family physicians' views of chiropractors: hostile or hospitable? *Am J Public Health* 1989; 79:636-7.
16. Cherkin DC, MacCornack FA. Patient evaluations of low back pain care from family physicians and chiropractors. *West J Med* 1989; 150:351-5.
17. Waagen GN, Haldeman S, Lopez D, Deboer KF. Short term trial of chiropractic adjustments for the relief of chronic low-back pain. *Manual Med* 1986; 2:63-7.
18. Hadler NM, Curtis P, Gillings DB, Stinnett S. A benefit of spinal manipulation as adjunctive therapy for acute low-back pain: a stratified controlled trial. *Spine* 1987; 12:703-6.
19. Bronfort G. Chiropractic treatment of low-back pain: a prospective survey. *J Manipulative Physiol Ther* 1986; 9:99-113.
20. Meade TW, Dyer S, Browne W, Townsend J, Frank AO. Low-back pain of mechanical origin: randomized comparison of chiropractic and hospital outpatient treatment. *Br Med J* 1990; 300:1431-7.
21. MacDonald RS, Bell CMY. An open controlled assessment of osteopathic manipulation in nonspecific low back pain. *Spine* 1990; 15:364-70.
22. Koes BW, Bowler LM, Kripschild PG, et al. Spinal manipulation and mobilisation for back and neck pain: an indexed review. *Br Med J* 1991; 303:1298-1303.
23. Koes BW, Bouter LM, van Mameren H, et al. The effectiveness of manual therapy, physiotherapy and treatment by the general practitioner for nonspecific back and neck complaints. A randomized clinical trial. *Spine* 1992; 17:26-35.
24. Carette S, Marcoux S, Truchon R, et al. A controlled trial of corticosteroid injections into facet joints for chronic low back pain. *N Engl J Med* 1991; 325:1002-7.
25. Cherkin D, Deyo RA, Berg AO, Bergman JT, Lishner DM. Evaluation of a physician education intervention to improve primary care for low back pain: impact on physicians. *Spine* 1991; 16:1168-72.
26. Cherkin D, Deyo RA, Berg AO. Evaluation of a physician education intervention to improve primary care for low back pain II: impact on patients. *Spine* 1991; 16:1173-8.
27. Thomas KB. General practice consultations: is there any point in being positive? *Br Med J* 1987; 294:1200-2.
28. Burn L, Patterson JK. Relevant physiology. In: Burn L, Patterson JK, eds. *Musculoskeletal medicine: the spine*. Boston: Kulwer Academic Publishers, 1990:30-58.
29. Melzack R, Wall PD. Pain mechanisms: a new theory. *Science* 1965; 150:971-9.
30. Waddell GA. A new clinical model for the treatment of low-back pain. In: Weinstein JN, Wiesel SW, eds. *The lumbar spine*. Philadelphia: WB Saunders, 1990:38-56.
31. *Wilk vs AMA*, 895 F2d 352 Cert den, 112.2 Ed 2D 524(1990).
32. Wardwell WI. The present and future role of the chiropractor. In: Haldeman S, ed. *Modern developments in the principles and practice of chiropractic*. New York: Appleton-Century-Crofts, 1979:25-41.
33. Silver GA. Chiropractic: professional controversy and public policy. *Am J Public Health* 1980; 70:348-50.
34. Chiropractic in New Zealand. Report of the Commission of Inquiry. Wellington, New Zealand: PD Hasselberg, Government Printer, 1979.
35. Council on Chiropractic Education. Standards for chiropractic institutions. West Des Moines, Iowa: Council on Chiropractic Education, August 1991.
36. Kleynhans AM. Complications of and contraindications to spinal manipulative therapy. In: Haldeman S, ed. *Modern developments in the principles and practice of chiropractic*. New York: Appleton-Century-Crofts, 1979:359-82.
37. Henderson D, Cassidy J. Vertebral artery syndrome. Part A. Vertebrobasilar vascular accidents with cervical manipulation. In: Vernon H, ed. *Upper cervical syndrome: chiropractic diagnosis and treatment*. Baltimore: Williams & Wilkins, 1988:194-222.
38. Terrett AGJ. It is more important to know when not to adjust. *Chiropractic Technol* 1990; 2:1-4.
39. Mason V, Forgie SK. 15 69/82 Court of Queen's Bench. New Brunswick, Canada. *Decision*—Dec 27, 1984:19, 27.
40. Dvorak J, Oriel FV. How dangerous is manipulation to the cervical spine? *Manual Med* 1985; 2:1-6.
41. Terrett AGJ. Vertebrobasilar accidents following cervical spine adjustments. *J Am Chiropractic Assoc* 1982; 12:24-8.
42. Sandoz R. Some physical measurements and effects of spinal adjustments. *Ann Swiss Chiropractic Assoc* 1976; 6:12-4.
43. Kirkaldy-Willis WH, ed. *Managing low back pain*. New York: Churchill Livingstone, 1988.
44. Hansen DT, ed. Chiropractic standards of practice and utilization guidelines in the care and treatment of injured workers. Chiropractic Advisory Committee, Department of Labor and Industries, State of Washington, September 1988.
45. Deyo RA. The role of the primary care physician in reducing work absenteeism and costs due to back pain. *Spine* 1987; 2:17-30.
46. Shekelle PG, Adams AH, Chassin MR, et al. The appropriateness of spinal manipulation for low-back pain. Indications and ratings by a multidisciplinary panel. Santa Monica, Calif: RAND Corp, 1991.