

THE CHIROPRACTIC REPORT

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PROFESSIONAL NOTES

HMO Physicians and Patients Want Chiropractic Services.

The health maintenance organization Kaiser Permanente has recently surveyed primary care physicians (approximately 700) and adult patients (approximately 18,000) at one of its large northern California HMOs on their use of and interest in "alternative therapies". Very interesting findings include:

- 1 in 4 patients (25%), especially the young and middle-aged, have used alternative therapies during the past year - usually going outside their health plan to do so. Nearly 90% of primary care physicians had recommended at least one alternative therapy during the past 12 months primarily for pain management. Therapies most often cited were chiropractic, acupuncture, massage and behavioral medicine techniques such as meditation and relaxation training.
- 55% of primary care physicians wanted the HMO to make chiropractic services available to members - one of their high-

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BACK PAIN, SCIENCE, POLITICS AND MONEY

A. INTRODUCTION

Last month the New England Journal of Medicine (NEJM) reported a new back pain trial by Cherkin, Deyo et al from a Washington health maintenance organization (HMO).¹ It compared chiropractic manipulation, McKenzie Methods physical therapy, and a control group.

The chiropractic patients had significant improvement and the best results, and the overall cost for diagnosis and management, including diagnostic imaging where necessary, was \$230 per patient. This seems rather good, when this is less than the cost of a single MRI or CT scan of the type routinely ordered by medical doctors for back pain patients. As in past studies of chiropractic there was a high satisfaction rate - 75% of the patients rated the care 'very good' or 'excellent'.

As in past studies of chiropractic there was a lower disability rate during the following year - 7% of chiropractic patients took time off work compared to 13% from the physical therapy group and 17% from the control group. Notably, this advantage was achieved even though the chiropractic care was limited to 9 patient visits and 4 weeks, far less than optimal for this largely chronic back pain group according to evidence-based guidelines.^{2,3}

2. From all of this you may be expecting that these medical researchers had positive things to say about chiropractic care. You would be wrong. Because patients in a very suspect control group also improved considerably, the researchers characterize the overall good results with patients in both the chiropractic and McKenzie groups as of limited benefit and questionable cost. The NEJM, as Cherkin and Deyo must have predicted as experienced researchers who know the current politics of back pain, arranged huge exposure and this is what the newspapers said:

· **Chiropractic Care Blasted.** Challenging the main reason people go to chiropractors, a major medical journal is releasing a new study today showing that spinal manipulation eases back pain no better than specialized physical therapy and only a bit better than doing next to nothing. *The Des Moines Register, Iowa, October 8, 1998, front page story.*

· **Studies Show Little Benefit to Chiropractic Treatment.** Visiting a chiropractor may be little better than reading a \$1 pamphlet about back pain ... by far the most common complaint seen by chiropractors is back pain ... but a report in today's issue of the New England Journal of Medicine concludes their effect is surprisingly modest. *The Tribune, Scranton, Pennsylvania, October 8, 1998. Associated Press article that was in numerous newspapers under similar headings.*

This Report charges Cherkin, Deyo and their colleagues with making science subservient to medical politics and the marketplace. It levels a similar charge against Ernst and Assendelft on the other side of the Atlantic, for their recent editorial in the British Medical Journal titled *Chiropractic for Low Back Pain: We Don't Know Whether it does More Good Than Harm.*⁴ To illustrate the point their writings may usefully be compared with another recent editorial by another medical expert in another leading medical journal, Marc Micozzi MD PhD of the College of Physicians of Philadelphia in the *Annals of Internal Medicine.*⁵ Here now are samples from all of the above:

a) *Daniel Cherkin PhD, Richard Deyo MD MPH et al, NEJM.* "Systematic reviews have concluded that chiropractic spinal manipulation appears to be effective in some subgroups of patients with back pain and this is one of the few treatments recommended in clinical-practice

guidelines on the care of adults with low-back pain in the United States.”

“Given the limited benefits and high costs (of chiropractic the study we are now reporting), it seems unwise to refer all patients with low-back pain for chiropractic ...”¹

b) Edzard Ernst MD PhD and William Assendelft MD, *BMJ*. “Chiropractic includes various techniques used in the hope of correcting vertebral disc displacements, freeing spinal joint adhesion, inhibiting nociceptive impulses, or correcting spinal misalignment. Several national guidelines on the treatment of low-back pain recommend spinal manipulation, including chiropractic, as a symptomatic treatment for acute uncomplicated cases How solidly are these recommendations based on the evidence?”⁴

“On the basis of current evidence, it seems uncertain whether chiropractic does more good than harm. More and better research is required.”

c) Marc Micozzi MD PhD, *Ann Int Med*. “The Agency for Health Care Policy and Research (AHCPR) recently made history when it concluded that spinal manipulative therapy is the most effective and cost-effective treatment for acute low-back pain. One might conclude that for acute low-back pain not caused by fracture, tumor, infection, or the cauda equina syndrome, spinal manipulation is the treatment of choice.”

“Because acute low-back pain is the most prevalent ailment and most frequent cause of disability for persons younger than 45 years of age in the United States, adherence to these practice guidelines could substantially increase the numbers of patients referred for spinal manipulation. Chiropractors provide 94% of spinal manipulation.”

“As physicians are becoming increasingly willing and able to justify referral for complementary care ... we must foster the development of training, research and clinical protocols to support integration ... in a way that promotes favorable clinical outcomes. Alternative medicine can benefit from the kind of support from which mainstream medicine has benefited over the years. When all is said and done, what works will no longer be called mainstream or complementary - it will just be called good medicine.”⁵

3. Ladies and gentlemen, take your pick! All authors quote and acknowledge for-

mally developed evidence-based national guidelines for the management of back pain. These were developed by multidisciplinary consensus panels which combined a rigorous literature review with clinical experience. Full marks to Dr. Micozzi for accepting these guidelines. Lower marks to the others for supplanting this international consensus with their own views, quoting their own work. They are presenting you with a clever blend of medical politics and science, with politics being the dominant flavor.

If the British Medical Journal and the New England Journal of Medicine are allowing such fare in their generally respected pages, in the latter case accompanied by an extensive media campaign doubting that chiropractic is really cost-effective after all, it is perhaps time to answer not only with reason but also with vigor. It is time to speak plainly. This issue of the Report:

- Dismisses the conclusions of the new Cherkin, Deyo et al trial as both flawed and wrong. (See Section B).

- Dismisses the editorial by Ernst and Assendelft as transparently thin and unworthy of credible researchers. Why didn't the BMJ editors catch this, and, even more interestingly, who did what to Professor Ernst and Dr. Assendelft to make them risk their reputations in this cavalier manner? (See Section C).

- Concludes that these writings are part of a gathering campaign by corporate medicine to respond to the substantial loss of market share to chiropractic and complementary medicine in the 1990s. (See Section D).

B. THE WASHINGTON HMO TRIAL

4. Before we drop down into the details here are some broad initial reasons we should be cautious about the scientific objectivity of this trial as reported:

a) The opening comment is “There are few data on the relative effectiveness and costs of treatments for low-back pain.” What a very strange observation. There is a broad body of evidence, lately reviewed in guidelines developed by the UK Royal College of General Practitioners.⁶ At April 1996 this evidence included 36 randomized controlled trials (RCTs) for manipulation and 28 for back exercises, comparing each of these with many other treatments. There are extensive data from workers' compensation records on cost.

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Canadian health economists Manga et al analysed a large body of this data in 1993.⁷ Two recent studies in US managed care settings, comparing cost-effectiveness of chiropractic and medical management with favourable results for chiropractic,^{8,9} are not mentioned by Cherkin and Deyo.

Their opening comment must be interpreted as a device to enhance the importance of their study.

b) The main focus of the trial is market impact, not scientific investigation of optimal care. Thus:

- The setting is a staff model HMO.

- The protocol chosen for chiropractic patients was inconsistent with professional guidelines for effective care,^{2,3} was based on minimal intervention with common procedures excluded (e.g. all physical treatments other than manipulation, extension exercises) and was therefore not likely to produce best clinical results. In other words, as might be expected of an HMO, the protocol was apparently dictated by the desire for evidence on cost

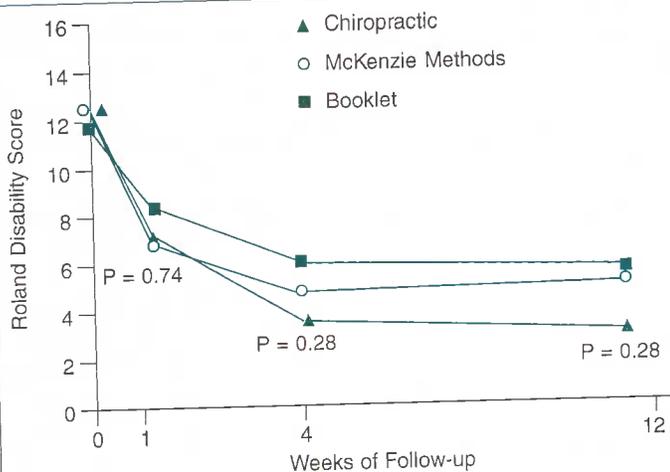


Figure 1

Disability Scores. Adapted from Cherkin, Deyo et al, NEJM, 1998. Parts of the graph in black illustrate disability scores between 1 and 12 weeks as reported. Parts in blue illustrate baseline data and improvement during the first week of the trial, and have been added by The Chiropractic Report. A higher score indicates greater disability.

rather than effective care. This Report will identify the chiropractic group as 'minimum chiropractic.'

Cost is clearly foremost in the minds of the authors as they report. Indeed they are speaking primarily to managers and payors, not health professionals. Their concluding comment is "whether the limited benefits of (chiropractic manipulation and physical therapy) are worth the additional costs is open to question." As already noted the cost, even as reported, was quite modest. However the cost analysis is unsophisticated and wrong. (See para 8.)

c) The figures are drawn in a manner that minimizes the improvement of all three groups and the superior results of both the minimum chiropractic and the McKenzie Methods groups. Strangely, baseline data are not shown in these figures - i.e. you do not see the improvement in the first week, only the improvement after that. This means the overall improvement is hidden. It also means that the control group patients seem to have been more disabled at the beginning - in fact they were the least disabled.

To illustrate these problems see Figure 1. The portion of the graph in black gives the patients' improvement in disability over 12 weeks as shown by Deyo, Cherkin et al in the NEJM. The portion in blue shows the baseline data. Paints a different picture, doesn't it? A more generous vertical axis would improve it further. Now to the details of the trial.

5. Patients. The trial population was 321 adults who made a primary care visit to their HMO for back pain which then persisted for 7 days. 78% had had the current episode for less than 6 weeks, but 56% had had two or more prior episodes of back pain. As a result most fell within the AHCPR guideline definition of acute (a present episode of back pain lasting less than three months) but many would commonly be labelled as sub-acute or chronic.

Patients were excluded if they only had mild pain 7 days after the first visit, a history of back surgery, sciatica, severe neurologic signs, or various medical pathologies. Other grounds for exclusion included involvement in compensation claims/litigation, and use of physical therapy or chiropractic manipulation for their current problem.

6. Trial Groups. Patients were randomly assigned to one of three groups:

a) Physical therapy - McKenzie Methods (McKM). This employs a form of mechanical diagnosis and treatment, with much of the exercise self-directed by the patient. Care was given by experienced practitioners in a private clinic setting, subject to a limit of 9 visits over one month. Patients actually received an average of 4.6 treatment visits.

b) Chiropractic manipulation - minimum chiropractic (MinChiro). Similarly there were up to 9 visits over one month from experienced practitioners, in a private clinic setting. Chiropractors could give recommendations on exercise and activity, but no physical treatments other than manipulation (i.e.. soft-tissue techniques, traction, adjunctive electrotherapy, etc.) and no exercise involving extension - because that was too similar to McKenzie Methods. Average number of treatments actually received was 6.9.

c) A control group. The "minimum-intervention control group" was meant to receive only an educational booklet. This discussed causes of back pain and "activities for promoting recovery". As usual with back pain trials there were difficulties with the control group. 81% made use of exercise, as recommended in the booklet. But 1 in 5 (18%) later admitted receiving other treatments during the first month. The types of treatment are not known - but as 40% of these control patients had had prior chiropractic care, and satisfaction rates are high for chiropractic patients, a significant number may have chosen chiropractic treatment.

Scientifically speaking things may well be much worse with this control group which is at the heart of the trial and upon whose integrity the researchers base all their major conclusions. Note:

i) The majority of these patients had chronic or recurring pain, which was moderate or severe and disabling at the time of the trial. Eisenberg et al's study¹⁰ tells us that about 1 in 3 of such patients under medical care also uses alternative care, principally chiropractic, acupuncture and massage therapy - but that 3 of 4 (72%) of these *do not tell their medical doctor*.

ii) 70% were dissatisfied with their HMO care, a booklet plus nothing. (Only 30% rated their treatment very good or excellent and it might not be thought unreasonable to suppose that all of the satisfied 30% were receiving some other treatment).

iii) And now consider how these patients were asked to acknowledge unauthorised care - over the telephone rather than in person. If 3 out of 4 patients receiving care elsewhere won't tell their family physician in person, how many dissatisfied HMO enrollees are going to tell a research assistant over the telephone? Do you really think that everyone in the control group who had care on the side fessed up? The above factors and human nature say no. No one can say, but it is quite likely that more than 50% of the control patients were receiving outside care, many of them from chiropractors as they had chosen in the past. If this is so, and it may be, this alone would destroy the trial's validity.

7. Outcomes. Outcomes or results were measured as follows:

a) Disability was measured prior to care, after one week of treatment, after 4 weeks of treatment, at 12 weeks (i.e. 8 weeks after treatment ended), at one year and at 2 years using a modified Roland Disability Scale and an 11 point visual analogue scale assessing how "bothersome" the symptoms were to patients. All groups improved significantly on both measures.

A 2.5 point improvement on the Roland Disability Scale is considered significant. All groups improved by over 6 points within 4 weeks - the booklet group by 6.8, the McKenzie Methods (McKM) group by 8.1 and the minimum chiropractic (MinChiro) group by 8.4. At 12 weeks improvement was 7.4 for the booklet group, 8.1 for the McKM group, and 9 for the MinChiro group.

In their discussion Cherkin, Deyo et al make no comment on these overall improvements. They focus on the degrees of difference between the MinChiro and McKM groups on the one hand and the control group on the other, which is obviously important if the control group is valid. The chiropractic patients had the best results throughout, but the difference between them and the control group was only statistically significant at 4 weeks (i.e. at the end of the treatment period). It was nearly significant at 12 weeks and one year.

b) At 1 and 4 weeks a satisfaction survey was done. Subjects were asked to rate their care as either excellent, very good, good, fair or poor. "About 75%" in the McKM and MinChiro group rated their care as very good to excellent, compared with "about 30%" in the booklet group.

c) At 1 and 2 years follow-up subjects were also questioned on "recurrences of low-back pain and the use of back-related health care." The authors blithely report that, in the 11 months after treatment, a similar number of all subjects reported reduced activity, need for bed rest and missing work. But the percentages missing work were 17% in the booklet group, 14% in the McKM group and 7% in the MinChiro group - in other words half as many chiropractic patients had lost work time. This is potentially of great importance in the cost analysis later made. However there is no detailed data on time off work, and this point isn't even discussed by the authors.

8. Cost. The authors quote two sets of comparison costs:

· For the trial period of two weeks - booklet group an average of \$1.00 (for the booklet), MinChiro group \$226.08 (visits \$185.28 plus plain film x-ray \$40.80) and McKM group \$238.54 (visits \$221.38, McKenzie book \$7.99 and lumbar roll \$9.17).

· For the full two years of trial treatment and follow up - booklet group \$153.00 per patient, chiropractic \$429.00, and physical therapy \$437.00.

These figures include "total costs of care to the HMO" and it is on this basis that chiropractic and McKenzie Methods are said to have "high costs" making their use "open to question." The message appears to be please forget decades of research, forget the US AHCPR and UK RCGP guidelines^{11,6} forget what even their own trial suggests is better care producing good patient satisfaction, avoid chiropractors and McKenzie Methods physical therapists - and stay with HMO medical practice because it is cheaper.

Even if it was cheaper this would be a dubious argument - ask any patient. But is it cheaper, are their figures right? Health economists such as Manga and Angus in Canada and Stano and Johnson in the US, who are teaching us how sophisticated the analysis of cost of care really is, will have a field day with the superficial analysis presented. Here are a few criticisms:

a) Treatment Costs (i.e. Direct Costs).

i) *Primary Diagnosis.* Prior to the treatment phase all patients received a primary care visit in the HMO to establish a diagnosis.

In normal practice that would be necessary for patients in the booklet and McKM groups, who would need to have seen a medical doctor for referral, but not for patients in the chiropractic group. Accordingly the cost of that primary visit should have been added to the trial costs of the control and McKM groups.

ii) *Radiology.* At the primary care visit before the trial many patients were referred by medical doctors for x-rays. For those who were then sent for chiropractic care, 63% of the x-ray costs were added to the chiropractic costs on the assumption chiropractors would have ordered x-rays at that rate. (See the note to Table 2). However no x-ray costs were included for the other two groups - for a true comparison they should have been.

iii) *Medications.* Trial subjects greatly reduced their dependence on medication during the treatment phase - but at different rates. For MinChiro patients there was a 64% reduction, for McKM patients a 57% reduction, and for booklet patients a 45% reduction. There is no calculation of these costs. Various medications used for back pain have quite common serious adverse consequences. A truly thorough cost analysis would bring in the cost of reduced medication and complications saved.

iv) *Cost of unauthorized care.* As discussed 18% of those in the control group admitted "additional care" and many more likely sought it. We don't know what this care was or what it cost. It should have been added to control group costs. (There was also minor additional care for the other two groups, to be costed too).

b) Indirect Costs (Cost of Disability and Compensation).

There is a wealth of evidence to show that indirect costs are more significant than direct costs in the analysis of the total cost of back pain.^{7,12,9} The most recent study comparing chiropractic and medical management costs, by Johnson and Baldwin⁸ and based on California data in the 1990s at a time when medical costs are more closely controlled, shows that chiropractic *treatment* costs are higher than medical costs - but that the *overall* cost of chiropractic care is less because of shorter periods of disability and lower compensation costs.

In this study, where none of the direct costs are high, a minor savings in disability and compensation costs for the chiropractic group would completely reverse the conclusions on cost. However the authors, being medical researchers rather than economists, ignore this. In particular:

· There are no data for disability and indirect costs during the 4 weeks of treatment. A greater percentage of the MinChiro group (39%) had lost one day of work or more than the control group (30%) during the week before the trial, and a greater percentage had been forced to take one day or more of bed rest (MinChiro group 35%, control group 22%). Despite this, during the 4 weeks treatment period the chiropractic patients did significantly better than those in the control group - *but no data was reported on time off work during the treatment phase!*

· For the 11 months after the treatment phase general off work data was reported. The percentage of chiropractic patients taking time off work (7%) was half that in the McKM group (13%) and control (17%) groups. *But how much time off work, and the costs of that, are not reported!* Again, this information could completely reverse the cost findings of the trial.

9. Statistics. Anthony Rosner PhD, Director of Research, Foundation for Chiropractic Education and Research, regards use of statistics to interpret the data as a serious problem in the trial, and

continued from page 1

est choices, though acupuncture at 78% was highest.

· 61% of patients wanted chiropractic services within the HMO - and this was higher than for any other form of alternative therapy.

(Gordon NP, Sobel DS et al (1998) *Use of and Interest in Alternative Therapies Among Adult Primary Care Clinicians and Adult Members in a Large Health Maintenance Organization*, West J Med 169:153-161).

A Major New Radiology Text. *Clinical Imaging: With Skeletal Chest and Abdomen Pattern Differentials*, edited by Dennis Marchiori DC DACBR of Palmer College (Mosby 1999, 1077 pages, 2453 illustrations) is a major new text of particular value for practising chiropractors. This is because it combines the expert contributions of many chiropractic and medical radiologists with a new format designed for clinical problem solving.

As Dr. Joseph Howe, Professor of Radiology, LACC says in his foreword this book "takes a unique approach that is particularly valuable to non-radiologists" because it is "based on a pattern approach to radiology usually used in clinical practice(it) begins by using radiological signs to develop the differential list of possible diagnoses and then progresses to traditional discussions of the several diseases or conditions" on that differential list.

Other enthusiastic forewords are from David Stark MD FACR, Professor and Chairman, Department of Radiology, University of Nebraska Medical Center, and Francis Burgener MD, Professor of Radiology, University of Rochester Medical Center, New York, who endorses this as "an outstanding text" which successfully combines "a standard disease-oriented text with the pattern-oriented approach."

Chiropractic Education. The number of chiropractic schools outside the US (17) is now greater than inside it (16). De La Salle University, Manila, which has a medical school of 1000 students and is one of the major universities in the Philippines, is probably the site of the next new school of chiropractic, working in collaboration with RMIT University, Melbourne and the Association of Chiropractors of Philippines.

These were facts that emerged from two meetings of significance to chiropractors in Asia and internationally held in Manila September 28 to October 2, 1998 and co-sponsored by the World Federation of Chiropractic and De La Salle University (DLSU).

At the first meeting, held September 28 to October 1, 74 invited delegates from 20 countries and nearly all chiropractic colleges worldwide discussed present developments in chiropractic education. Representatives of accredited colleges met delegates hoping to commence chiropractic education in the near future in countries such as Argentina, Malaysia and Taiwan. At the close there was a unanimous resolution that there should be future such meetings regularly.

On Friday October 2 there was a symposium on *Chiropractic in Asia* at DLSU opened by DLSU President, Brother Rolando Dizon and Dr. N.V.K. Nair, Director, Health Infrastructure, WHO Western Pacific Region. Medical leaders, including faculty at DLSU, and government representatives heard lectures on chiropractic education, research and practice and saw demonstrations of chiropractic diagnostic and treatment techniques. Dr. Nair's comments, on behalf of the World Health Organization included:

"Chiropractic is an accepted form of healing to WHO. Its acceptance, recognition and availability is gradually spreading in the countries of the Western Pacific. WHO would encourage the progress as long as you are able to maintain the established minimum standards.

I am aware of the hesitation in so-called modern medical circles to accept chiropractic as their partners in lessening the suffering from specific conditions, especially musculoskeletal. Many forget the benefits of joining hands between modern and traditional medicine ... Times have changed and now it is the customer's demand which is the crucial factor."

(*Traditional medicine* is WHO's terminology for disciplines such as chiropractic and acupuncture.)

Japan - New Unity. At meetings in Tokyo on October 10-11, 1998 brokered by the World Federation of Chiropractic an era of conflict ended when the three major national associations representing doctors of chiropractic in Japan merged to form the Chiropractors' Association of Japan (CAJ). President is Dr. Hirofumi Nakatsuka, a National College graduate formerly of the Japanese Association of Chiropractors, and Vice-President is Dr. Yozo Kawanishi, a Palmer graduate formerly of the Chiropractic Council of Japan and the Doctors of Chiropractic Liaison Council.

The CAJ is based on a new constitution and consensus statement requiring more rigorous standards of education for Japanese trained chiropractors than in the past.

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his full explanation of this will appear in a commentary in JMPT shortly. Square root transformation, which has rendered raw data favoring chiropractic patients statistically insignificant, is not adequately justified. Other adjustments "are so convoluted as to render the reported results uninterpretable". Mechanically or technically correct steps were taken but in a manner that "confused the true underlying implications of the results."¹³

10. External Validity. Finally, how well can the results of this trial be said to reflect normal chiropractic clinical practice - does the trial have external validity? Issues here include:

a) Some features do suggest external validity. Treatment was by experienced chiropractors in a normal clinical setting. There was a normal evaluation and management could include chiropractic manipulation and many recommendations about exercise and activity.

However, as previously noted, chiropractors were restricted from using physical treatments and extension exercises commonly used in chiropractic practice. Many chiropractors now also integrate use of the McKenzie Methods physical therapy, being treated here as a comparison treatment. By contrast, in the British Meade et al trial¹⁴ chiropractors were free to provide any normal services. This gave that trial better external validity.

b) A more serious difficulty with the present trial is that it restricted treatments both as to number (9) and time period (4 weeks). Patients actually received an average of 7 (6.9) treatments. In the Meade et al trial, which reported excellent results for chiropractic patients, treatments were restricted to 10 (and virtually all patients received 10 treatments) but were spread over a six month period.

However clinical guidelines recommend, and usual chiropractic practice involves, more intensive care for patients with complicating factors, including severe pain and two or more previous episodes.^{2,3} Many such patients have postural or occupational or psychosocial or inactivity problems that cannot be addressed satisfactorily in four weeks. Depending upon level of disability, many of these might require 20-30 visits over a 10-12 week period to resolve symptoms, restore function, and maintain compliance with rec-

ommended lifestyle changes and use of exercise.

c) A number of categories of patient commonly treated in chiropractic practice were excluded from the trial - on one hand those who had only mild or no pain seven days after their first primary care visit, on the other hand those with sciatica and a history of back surgery.

In summary the trial does not have good external validity, principally because of the limitation of treatments to one month and the single HMO health care system used. This was minimal, not optimal, chiropractic care.

11. Conclusion. The AHCPR Guideline, as Deyo appreciates for he was one of the 35 members of the multidisciplinary expert panel, accepts that spinal manipulation brings earlier relief and is of more proven benefit than any other treatment for patients with common back pain such as those in this Washington HMO trial. The trial tended to confirm this earlier evidence, but offered a minimal course of care and had the design problems discussed.

It was misleading and inaccurate for the researchers to imply that a normal course of chiropractic care gave 'marginal' and 'limited' benefit at an unacceptably 'high cost'. There appears to be a medical bias - whether conscious or unconscious it matters not - in all the conclusions and especially this one:

"..... it seems unwise to refer all patients with (common) low-back pain for chiropractic or McKenzie therapy."

Pray tell us, what's the alternative? Oh, we see it now - standard medical management. Let's now look to the other side of the Atlantic.

C. BMJ EDITORIAL

12. Professor Edzard Ernst is Director of the Department of Complementary Medicine in the Postgraduate Medical School, University of Exeter in the UK. Dr. Willem Assendelft is a senior researcher at the Institute for Research in Extramural Medicine, Vrije University, Amsterdam, Netherlands. Their July 18 editorial on chiropractic in the British Medical Journal is significant because of the BMJ's reputation and distribution. It, together with numerous letters of response, can be found at the journal's website www.bmj.com.

The editorial has an air of condescension, indeed arrogance. This is not always a bad thing and, if carried off with good evidence and style, can provoke debate in a worthwhile manner. But there is no style or credible evidence, and the editorial is sure to be an embarrassment to the British Medical Association which has had a much more honest approach to chiropractic and other forms of complementary medicine¹⁵ than, say, the American Medical Association.

Sometimes medical researchers have an unconscious bias against other disciplines. The opening sentence betrays more than that in saying "Chiropractic includes various techniques used in the hope of correcting" certain things. Ernst and Assendelft's purpose is plainly to debunk chiropractic, and on the strength of their own writings - 7 of the 13 references are to their own work. This is their method, and our criticisms of it:

a) They admit that there are "several national guidelines" on the treatment of low-back pain recommending chiropractic spinal manipulation and that these are based on a large volume of evidence.

b) They then quote one review of the chiropractic trials which finds them unconvincing - a review, wait for it, by Assendelft - and on this slim basis conclude that "the effectiveness of chiropractic as a treatment for low-back pain has not been established beyond reasonable doubt." Observations on this are:

i) It is obviously open to two individuals to express doubts about the conclusions of the evidence-based guidelines, but when there are many experts behind several national guidelines interpreting the evidence one way, it is surprising to justify an opposite conclusion on your own work alone.

ii) This is more surprising and problematical when your work actually *does* support the effectiveness of chiropractic for low-back pain. In a 1992 paper, not mentioned in the BMJ editorial, Assendelft et al concluded "chiropractic seems to be an effective treatment for back pain".¹⁶

Assendelft then, you may be interested to learn, entered a major scientific spat with Dr. Tom Meade, the British epidemiologist who was principal investigator in what is still the leading and largest independent trial of chiropractic management of low-back pain patients.¹⁴ Assendelft published a broad criticism of the Meade

trial.¹⁷ Meade panned the review, saying it was "valueless and should be completely disregarded."¹⁸ In retreat, Assendelft acknowledged the Meade trial was "one of the better trials in this field".¹⁹ It was after all of this that Assendelft re-worked his assessment of the chiropractic trials, including the Meade trial, in the more negative review he now references in the BMJ.²⁰

Finally, and even more interestingly, this last review by Assendelft, the one he relies to now criticize the effectiveness of chiropractic in the BMJ, is interpreted by Cherkin, Deyo et al in their study as one of the several reviews in favor of chiropractic manipulation.¹

Are you beginning to feel that science in the leading journals can be strange? All of this causes us to go back to Ernst and Assendelft's actual statement in the BMJ editorial - "the effectiveness of chiropractic treatment for low-back pain has not been established beyond reasonable doubt." Maybe we should interpret this as meaning that effectiveness *has* been established. Their concern is, not beyond reasonable doubt. What has been so proven in health care?

This is all smoke and mirrors. The general medical consensus - based on the evidence and, as you see from this Report articulated by Dr. Micozzi in the *Annals of Internal Medicine* - is that a clear conclusion can be drawn.

c) Having dismissed the effectiveness of chiropractic treatment for back pain in this interesting manner, Ernst and Assendelft then turn to consider safety. What will they do, when manipulation of the lumbar spine is universally acknowledged as remarkably safe? There has never been one significant injury in all the trials ever performed. Quite unbelievably, for it is the BMJ in which they speak:

i) They quote the literature on *cervical* manipulation, on the pretext that "upper spinal manipulation (sic) is occasionally performed in lower back pain (sic)."

ii) They then offer "there may be *important indirect risks*" such as "potential over-use of radiographs" and "the negative attitude of *some* chiropractors towards immunization." What are the references substantiating these nebulous claims? Two articles by Ernst, one not yet published.

iii) The only evidence given relates to "mild adverse reaction" in a minority of

patients. On this basis there is the grand conclusion:

"It seems uncertain whether chiropractic does more good than harm."

d) Finally, of course, they ask "does chiropractic save money for health care systems?" Largely on the basis of two observational studies by medical researchers, that have been rejected on issues of cost analysis by health economists,¹² they answer 'no'. The third piece of evidence is a review of workers' compensation studies. Two guesses on who the author is - no not Ernst this time, but Assendelft.

One reference is made to the work of health economists, Stano and Smith in the US, and it is admitted that they come to the opposite conclusion - chiropractic is cost-effective. But this reference is merely to provide a semblance of balance. Readers are left unaware of major work in the field by other health economists such as Manga and Angus in Canada, and Johnson and Baldwin in the US.

D. CONCLUSION

13. Let's admit honestly that in health sciences literature and research, including chiropractic research, there is often a tight weave of science, politics and money. At medical conferences you soon hear of all the negative drug trials never published. Currently hematologist Dr. Nancy Oliveiri is fighting for her professional life at Toronto's Hospital for Sick Children, an internationally famous University of Toronto teaching hospital. When she disclosed interim drug trial results because of her level of concern about ineffectiveness, against the wishes of the pharmaceutical company Apotex Inc. that was funding the trial and had marketing rights and had signed her to a non-disclosure contract, neither the hospital nor the University of Toronto would stand behind her. Apotex is one of their biggest donors and is about to give another \$20 million to the university. This disruption in medical-pharmaceutical solidarity was a front page furore in Canada earlier this month.

Returning to the present context, back pain is one of the most common reasons people use the health care system. Current evidence suggests that much of that care should be transferred from the medical profession to chiropractors. When the US government's Agency for Health Care Policy and Research produced guidelines to this effect in 1994 it was hurriedly

pushed out of the guidelines field - its budget was decimated and its guidelines for management of headache, in final draft and also acknowledging a significant role for manipulation, were never published.

In the western world the bigger picture is that chiropractic, acupuncture and all disciplines labelled *alternative* and *complementary* by mainstream medicine are taking significant market share. A Landmark study in the US this year reports 16% of the adult population using chiropractic services per annum, and a decrease of approximately 13% in primary medical care consultations. A 1997 Angus Reid national survey in Canada showed 70% of the population wanting government funding for alternative care and that the fastest growth rate of use was in young adults (age 18-34) - a 146% growth rate in the past five years. Over objections from political medicine the US government established an Office of Alternative Medicine at the National Institutes of Health in 1992, and this year upgraded the Office to a full National Center with its annual budget increased from \$20 to \$50 million.

Last year an American Medical Association survey ranked alternative medicine 68 out of 73 subjects in terms of interest rate for JAMA and its physician readers. This year it is "among the top 3". Do you think this is because physicians active in the AMA want to promote understanding and referral - or control of the marketplace? This month, for the first time in its history, JAMA is about to publish a chiropractic trial, relating to management of headache. From the mere fact that this was accepted, do you think the results will be positive or negative? Do you think there will be any media coverage? Will we hear about the several trials already published showing effectiveness?

14. This is the larger context in which the medical profession, its researchers and its trade journals such as the NEJM, a publication of the extremely conservative Massachusetts Medical Society, and the BMJ are publishing. But chiropractors, who after all are fairly astute at looking after their own politics, should not be too dismayed. This counter attack has come because there has been such rapidly progressing acceptance of chiropractic services by the public and many members of the medical and other health professions only concerned with their patients' best interests. Some opposition should be

anticipated. However, it should also be exposed when it is advanced under the banner of science and that science is used for public relations. **TCR**

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