The Chiropractic Report

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Professional Notes

WHO Develops Guidelines on Chiropractic Education

On December 2-4, 2004, at the invitation of the World Health Organization, chiropractic leaders from around the world met with WHO officials and consultants in Milan, Italy to discuss the final terms of a significant new WHO document – *WHO's Guidelines on Basic Training and Safety in Chiropractic*.

These guidelines, to be published by May 2005, provide governments with advice on minimum standards for chiropractic education. They actively support the development of chiropractic education and practice in all countries, but explain the depth of training required of all students.

"The new guidelines will make it clear," says World Federation of Chiropractic President, Dr. Anthony Metcalfe of the UK who attended the meeting, "that chiropractic is a distinct and independent profession. They will also make it clear that medical doctors and other health professionals in countries where the practice of chiropractic is not regulated

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The Back Pain Revolution Continues

UK BEAM Trial Strengthens Recommendations for Spinal Manipulation

". . . this is the first study . . . to show convincingly that both manipulation alone and manipulation followed by exercise provide cost-effective additions to best care (for low-back pain patients) in general practice."

UK BEAM Trial

A. Introduction

RECENT RESEARCH REPORTS that, given equal access to medical and chiropractic care – and therefore true freedom of choice, approximately 50% or 1 in 2 of North Americans seeking professional help for back pain will choose a chiropractor.[1,2]

For most patients under most health care systems, however, there are financial and other barriers to chiropractic care. For a variety of reasons, including their historical relationship with a family physician they trust, they will consult their family physician or general practitioner.

In an era of evidence-based health care, and watched by increasingly well-informed third party payors and patients, what care should family doctors be offering most of their back pain patients? That was the fundamental question being asked in a major new back pain trial from the United Kingdom. This is the UK Back Pain Exercise and Manipulation Trial or BEAM trial, sponsored by the British Medical Research Council (MRC) and just published by the *British Medical Journal*.[3,4] The much anticipated results of this large and authoritative trial, involving 1334 patients from 14 centres across the UK are:

a) When manipulation alone, or in combination with a class-based exercise program is added to "best care in general (medical) practice" patients have better recovery in the short term (3 months) and longer term (12 months).

b) "Spinal manipulation is a cost effective addition to 'best care' for back pain in general practice" and "manipulation alone probably gives better value for money than manipulation followed by exercise."[4]

c) There were "no serious adverse events" following spinal manipulation, which was given by chiropractors, osteopaths and physiotherapists.

The 17-member multidisciplinary BEAM Trial team concludes that the trial "shows convincingly" that manipulation is cost-effective and that it should be made generally available to back pain patients through the British National Health Service (NHS).

2. The UK BEAM trial was planned and designed as a follow-up to another large multicentre MRC trial in the 1990s – by Meade et al. and reporting that back pain patients achieved significantly better results after chiropractic care than treatment by medical doctors and physiotherapists in hospital out-patient clinics under the NHS. [5,6]

Some critics of the Meade et al. trial have sought to explain the better results under chiropractic care by suggesting that the sites of care were not comparable – chiropractic treatment was in private clinics whereas physiotherapy treatment was in NHS public facilities less conducive to good results.[7] This was an argument based on intuition, not evidence. As a result, and specifically to answer this criticism, chiropractors and others providing the "manipulation package" in the new BEAM trial each treated half of their patients in their private clinics, half in NHS public facilities. Results were equally good in each setting – cleanly disposing the above-mentioned criticism.

3. Following the new wealth of research since the 1980s, the Manga Report from Canada in 1993,[8] the thorough evidence-based national guidelines in Denmark,[9] the UK[10] and the USA[11] during the

1990s and now the UK BEAM trial, there is compelling evidence for the cost-effectiveness and appropriateness of a chiropractic approach to the management of back pain patients. In summary this is management based upon:

(a) Sufficient diagnostic training and ability to identity and refer the 5 to 10% of back pain patients with 'red flags' (pathology requiring medical or surgical care) or 'yellow flags' (psychological disorders requiring specialized care).

(b) Management of the remaining 90% on a conservative biopsychosocial model, central aspects of which are patient motivation and education, identifying and correcting biomechanical dysfunction in joints and soft tissues – with a focus on spinal manipulation and exercise, and earliest possible return to activities of daily living (ADL).

The significance of the BEAM trial is not only the new questions answered, but also the previous research confirmed and the policy directions made clear. As the prominent Scottish orthopaedic surgeon and back pain authority Gordon Waddell has noted, after the serious mistakes of the 20th century there is now a "back pain revolution" underway in the current management of patients.[12] A biomedical approach, reliant upon medication or surgery for visible pathology or, in its absence, rest, has given way to a biopsychosocial approach based on physical treatments, early activity and patient motivation and education.

Accordingly, in this issue of *The Chiropractic Report*, we review details of the BEAM trial in context – looking firstly at the British MRC's Meade et al. trial which set the stage for the major shift in subsequent research, clinical guidelines and management, secondly at the BEAM trial, and then the likely next steps in the evidence-based back pain revolution.

B. Meade Trial

4. The Meade et al. trial, published in the *British Medical* Journal in 1990[5] (shorter term results) and 1995 [6] (longer term) was funded by the British government as a result of the 1979 Cochrane Report[13] which noted the huge impact of low-back pain, many alternative treatments, the lack of adequate scientific evidence supporting any of these and the "urgent need for rigorous comparative trials".

In this trial independent researchers appointed by the MRC compared chiropractic and hospital outpatient management of 741 acute and chronic back pain patients in 11 matched chiropractic and hospital clinics across the UK.

Apart from the independence, size and quality of the Meade et al. trial, there were two new aspects of trial design that made it different from, and of greater significance than, previous back pain research. These were:

(a) **Pragmatic design giving external validity**. The researchers chose a pragmatic trial design - testing "what happens in day-to-day practice and in which details of the type, frequency and duration of treatment would be at the discretion of the chiropractor or hospital team". The only treatment limitation was that the total number of treatment visits was limited to 10.

Most prior back pain research had been on a more restricted and controlled basis – comparing one aspect of treatment (e.g. a particular form of manipulation or medication or set of exercises compared with another treatment or placebo). Most researchers prefer this research design because it can identify the effectiveness of an isolated aspect of treatment. The difficulty is that the results do not equate to any real clinical encounter in practice. (Chiropractic practice involves far more than spinal adjustment and physical assessments/treatments. Coulter has recently described the central role of superior communication skills in the chiropractic clinical encounter.[14])

The Meade et al. trial adopted a more pragmatic approach "because the effectiveness of treatment in day-to-day practice . . . is of most immediate interest" to patients, health care professionals, third party payors and those developing public policy. The results have more 'external validity'.

(b) **Patient-centered measurement of results**. Up until the mid-1980s, when the Meade et al. trial was being designed and performed, it had been thought that objective measures of results or outcomes (e.g. professional measurements such as degrees of straight leg raise or spinal rotation) were more valid and reliable than subjective measures (e.g. disability questionnaires completed by patients and reporting functional abilities). However patient questionnaires, once regarded as soft evidence, were now accepted as hard evidence – at least as valid and reliable as professional measurements.[15,16]

Accordingly the primary outcome measure chosen for the Meade et al. trial was a recently validated patient questionnaire – the Oswestry Low Back Pain Disability Questionnaire,[17] a questionnaire widely used in subsequent trials and clinical practice.

5. Key details from the Meade et al trial are:

(a) **Patients and exclusion criteria**. Those admitted to the trial had acute or chronic mechanical low-back pain. Main exclusion criteria were age outside the range of 18-65; major structural abnormalities visible on x-ray; evidence of nerve root involvement; treatment within the past month, or treatment at a chiropractic or hospital clinic involved in the trial within the past two years.

(b) **Comparison groups**. Patients were randomly assigned either to chiropractic treatment or hospital out-patient treatment. The number of treatment visits was limited to 10 over a period of up to 6 months. All other aspects of treatment

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were left to the discretion of the treating practitioners.

All chiropractic patients received joint adjustment or manipulation. The great majority of hospital out-patients received physiotherapy manipulation or mobilization (84%) either according to the techniques of Maitland (72%) or Cyriax (12%).

Many patients in both groups also received exercises, traction, use of corsets and physical therapy modalities.

(c) **Measurement of results.** Results were measured by patient completion of the Oswestry Questionnaire prior to treatment, then at 6 weeks, 6 months, 1 year, 2 years and 3 years. In addition there was objective measurement of degrees of straight-leg raise and lumbar flexion upon entry into the trial, and then after 6 weeks by a coordinating nurse who was blind to treatments received and entry measurements.

(d) **Results.** Patients in both treatment groups improved, but on all measures there was significantly greater improvement for those receiving chiropractic care. This was for all patients, but also specifically for patients with chronic and/or severe pain. This was a surprise to the medical researchers.

So was the fact that results were long-term – "the benefit of chiropractic treatment became more evident throughout the follow-up period".

For these matched groups of patients there was also measurement of lost time at work and Meade et al. reported "of those with jobs 21% of patients given chiropractic treatment had time off work because of back pain compared with 35% of hospital outpatient patients . . . Between 1 and 2 years the frequency and duration of absence from work were less in those treated by chiropractic."

It was concluded that "the potential economic, resource, and policy implication of our results are extensive" and that "consideration should be given . . . to providing chiropractic within the NHS (National Health Service) either in hospitals or by purchasing chiropractic treatment from existing clinics."

Some chiropractic services were subsequently made available through the NHS, but not on a broad basis with direct funding. One impediment, now resolved under The Chiropractic Act 1994, was that chiropractic practice was not regulated in the UK. Another was that competing groups of professionals sought to criticize and undermine the Meade et al. results. This led the MRC to engage in wide consultation and then fund and perform a second major trial – the BEAM trial.

C. UK BEAM Trial

6. **Trial team and publication.** The MRC established a multidisciplinary Back Pain Working Party to design and implement this major trial. The chiropractic member of this, nominated by the British Chiropractic Association, was Professor Alan Breen from the Anglo-European College of Chiropractic, who was also the principal chiropractor consulted for the Meade et al. trial. There was no chiropractic participant, however, on the 17 person final trial team, details of which appear in the published papers. First publication by the BMJ has been online on November 19, 2004, and the trial will appear in print form in the BMJ in the near future.

7. **Goal**. The overall goal of the trial was to assess the effectiveness of physical treatments in primary care for patients with back pain. Specific objectives were:

(a) To establish, for patients consulting their general medical practitioner for persistent back pain, the effectiveness and cost-effectiveness of adding exercise classes, spinal manipulation, or a combination of these to "best care in general practice."

(b) To test "whether the manipulation package was more or less effective in manipulators' private premises than in National Health Service (NHS) premises."

8. **Design.** This, similar to the Meade et al. trial, "was a pragmatic trial to estimate the effectiveness of manipulation and exercise in routine clinical practice". This means that, although it was a randomised controlled clinical trial, it was not double-blind – "blinding of participants and professionals was neither desirable nor possible."

9. **Patient population**. Patients were 1334 adults under age 65 with uncomplicated low-back pain and no pain referral below the knee. They had significant loss of function associated with their back problem and pain (a score of 4 or more on the Roland Morris Disability Questionnaire) and had experienced pain every day for at least 28 days before randomization into the trial. They were recruited from 14 representative family or general medical practice centres across the UK.

10. **Trial groups**. Patients were randomly assigned to 1 of 4 groups:

(a) *"Best care" in general practice*. These patients received "active management" in primary medical care in accordance with current UK national back pain guidelines[9] – except that there was no use of physical treatments. Management involved avoidance of bedrest, encouragement to continue normal activities, medication for pain and patient motivation and education on self-management, partly through provision of a 23 page booklet titled *The Back Book*.[18] This booklet, designed as a guide for back pain patients and widely used in medical practice in the UK at present, was authored by a multidisciplinary team led by Professor Martin Roland of Manchester University, the co-designer of the Roland Morris Questionnaire and a member of the BEAM trial team, and Professor Gordon Waddell. The booklet claims to contain "all the latest thinking on back pain" and advice "based on the latest medical evidence".

(b) *Best care in general practice plus an exercise program.* The exercise program was a 60 minute structured session incorporating cognitive behavioural principles and led by experienced physiotherapists in a community facility. There were up to 8 sessions over 4-8 weeks, with a maximum of 10 people in the exercise class, then a final refresher session after 12 weeks.

(c) *Best care in general practice plus spinal manipulation package*. Spinal manipulation was by chiropractors, osteopaths and physical therapists who had at least two years experience. Up to 8 treatment sessions were given over 12 weeks. (This compares with up to 10 treatment sessions over 6 months in the Meade et al. trial). The agreed range of techniques included "high velocity thrusts". Notably, this group was then divided so that half the patients received manipulation in a private practice setting, the other half from the same chiropractors, osteopaths and physical therapists and physiotherapists in an NHS center.

(d) *Best care in general practice plus spinal manipulation package plus exercise program.* Exercise and spinal manipulation were given as described above. Again, this group was divided

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WHO Develops Guidelines on Chiropractic Education

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by law, should undergo extensive training to re-qualify as chiropractors before claiming to offer chiropractic services."

In some countries there have been recent efforts by medical groups to provide short courses of approximately 200 hours in chiropractic technique. WHO's guidelines will indicate that a medical graduates would require a minimum of 2100 hours including 1000 hours of supervised clinical training for full and appropriate education.

In the text and glossary of the guidelines there is clear reference to chiropractic terminology, including subluxation and the vertebral subluxation complex, and the document identifies the fundamental importance of the philosophy of chiropractic to the profession and its practice.

The World Federation of Chiropractic (WFC), which is in official relations with WHO, has worked with Dr. Xiaorui Zhang of WHO on this project for the past five years. WFC representatives at the Milan meeting were Dr. Anthony Metcalfe, WFC President, Dr. Ricardo Fujikawa, WFC Council member for Latin America, and Mr. David Chapman-Smith, WFC Secretary-General. A WFC past-president, Dr. John Sweaney of Australia, is the principal consultant retained by WHO for this project.

Chiropractic representatives from many other organizations and countries included Dr. Jean Moss, President of the Canadian Memorial Chiropractic College (CMCC), Canada and of the Association of Chiropractic Colleges (ACC), Dr. Anfinn Kilvaer, Past-President of the European Council on Chiropractic Education and CCE International, and Dr. Peter Dixon, Past-President of the European Chiropractors' Union (ECU).

The meeting was led by Dr. Xiaorui Zhang of China, Coordinator of the WHO Traditional Medicine Strategy 2002-2005. The new Guidelines are part of that Strategy which can be found at www.who.int/medicines/library/TRM/trm_strat_eng.pdf.

Participants at the Milan meeting. These include Dr. Xiaorui Zhang of WHO (centre), WFC President Dr. Anthony Metcalfe (to the right of Dr. Zhang), ACC President Dr. Jean Moss (4th from left in front row) and the Co-Chairs of the consultation meeting, Sein Win, MD of Myanmar (far left) and Edward Lee, DC MD, Chairman, Chiropractors' Council of Hong Kong (2nd from right in front row).

WHO's Dr. Xiaorui Zhang, from China, opens the meeting. Next to her is Professor Umberto Solimene, Director, WHO Collaborating Centre for Traditional Medicine, University of Milan.

(Below) Participants listen to a welcome address from Dr. Maurizio Amigone, Deputy Director-General of Health, Lombardy Region, Italy. Chiropractic representatives shown are Dr. Anfinn Kilvaer of Norway (left – representing ECCE and CCEI), Dr. Jean Moss of Canada (second from left - representing the ACC) and Dr. Martin Camara of the Philippines (right foreground)

Source: World Federation of Chiropractic.

World Notes

United States of America. Federal legislative victories continue, and lobbying activities in Washington DC, led by the American Chiropractic Association (ACA – Mr. Garrett Cuneo, Executive Vice-President) and the Association of Chiropractic Colleges (ACC – Mr. David O'Bryon, Executive Director) have never been stronger or more successful.

Following the November 2003 Chiropractic Advisory Committee report to the Department of Veterans' Affairs (DVA) and the DVA's March 2004 decision to implement recommendations in the report, chiropractic services have been established in recent months at 27 VA hospitals and facilities. These offer not only chiropractic services but also opportunities for student residencies and research. This is all on a similar basis to introduction of chiropractic services into the military health care system. Dr. Reed Phillips, who chaired the all important interdisciplinary DVA Chiropractic Advisory Committee that laid the foundation for these developments, deserves particular praise and has just been named *Dynamic Chiropractic's Person of the Year*.

The most recent victory, signed into law by President Bush on December 8, is a further $2 million in funding to expand a pilot program introducing chiropractic services to under-served communities through a program administered by the National Health Service Corps (NHSC), an agency of the US Department of Health and Human Services. This program recruits primary care clinicians on the basis that student loans are waived up to $25,000 per annum for a 2-3 year period. NHSC officials were resisting a chiropractic pilot program commenced in 2003

– Congress has now provided strong new direction and financial support.

A further important development relates to coverage of chiropractic services under Medicare, the Federal government program for seniors. Currently there is reimbursement for chiropractic adjustment or manipulation, but many other standard chiropractic services, including all diagnostic imaging services, are not covered. Legislation in December 2003 provided for a demonstration project "to evaluate the feasibility and desirability of covering additional chiropractic services." In November the relevant government agency, the Centres for Medicare and Medicaid Services (CMS), announced four locations for the demonstration project – the states of Maine and New Mexico, 17 counties in central Virginia, and metropolitan Chicago.

Switzerland. Switzerland was the first country in Europe to pass law recognizing and regulating the practice of chiropractic, beginning with the Canton of Zurich in 1939. Current draft new health professions law recognizes chiropractic as one of the 5 major health care professions with a similar structure for undergraduate and continuing education requirements – the 5 are chiropractic, dentistry, medicine, pharmacology and veterinary science.

Spain. Two decades ago there were under 20 chiropractors in Spain, none of them Spanish. Today the Asociación Español de Quiropráctica (AEQ) has approximately 150 members and is led by Spanish chiropractors committed to establishing chiropractic education and practice within the mainstream health care system in Spain. These include Dr. Ricardo Puig of Seville, AEQ President (a graduate of Logan), Dr. Belén Sunyer of Madrid, AEQ Vice-President (Palmer) and Dr. Juan Elizalde of Madrid, AEQ Past-President (Palmer). They met with WFC Secretary-General Mr. David Chapman-Smith in Madrid in early December. His visit to Spain was also for the launch of the Spanish edition of his book *The Chiropractic Profession*, edited by Dr. Frank Spencer of Zaragoza and available at www.quiropractica.com.

India. There are many Indian doctors of chiropractic practising in North America, Europe and elsewhere. Some, such as Dr. Shireesh Bhalerao, a faculty member at Western States Chiropractic College in Portland, Oregon (sbhalerao@wschiro.edu) and Dr Jimmy Nanda, a Life West graduate practicing in Toronto, Canada (drjimmynanda@gmail.com) maintain close links with their homeland - but until now there has been no duly qualified chiropractor resident and practising in India.

That has changed with the arrival in Bangalore of Dr. Shailly Prasad who commenced her practice there in September. Dr. Prasad, a Canadian who graduated from Western States in 1999, and has since married into a Bangalore family and been active in supporting Palmer College Clinics Abroad visits to India, is looking for support for the development of chiropractic and a representative association in India. If you are Indian, or otherwise have a reason for wanting to offer support, please contact her at shaprasad@hotmail.com.

Denmark. The University of Southern Denmark (USD) in Odense was the venue for a meeting of representatives of European chiropractic schools on Saturday November 20. Representatives from Denmark (USD - Odense), France (Institut Franco-Européen de Chiropratique - IFEC, Paris), Sweden (Scandinavian College of Chiropractic, Stockholm) and the UK (Anglo-European College of Chiropractic – AECC, Bournemouth, England, and the Welsh Institute of Chiropractic, University of Glamorgan – WIOC, Pontyprydd, Wales) met to exchange information and tour the teaching and research facilities at the USD and the specialized spinal care hospital at which chiropractic students do most of their clinical training.

Under the European Union's Bologna Agreement, all major professions in Europe are re-organizing the structure of their education on a model similar to the current chiropractic program at USD – a 3 year bachelors degree followed by a 2 year masters degree then followed by a period of additional supervised training.

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into two, with half the patients seen in private clinics and the other half in NHS centers.

Accordingly the treatment phase for this trial was a maximum of 12 weeks.

11. **Outcome measures.** The primary measure of outcomes or results was the Roland Morris Disability Questionnaire (the Roland Morris). Secondary measures used were the Modified Von Korff Scale (measuring both pain and disability), a Back Beliefs Questionnaire, a Fear Avoidance Beliefs Questionnaire, the SF-36 (general health) and the EuroQol (giving economic data). Questionnaires were completed at baseline and 1, 3 and 12 months after randomization into the trial. Results are reported for 3 months and 12 months.

12. **Results.** On the Roland Morris, the primary outcome measure, a reduction of 2.5 points was judged clinically significant. Detailed results on all outcomes are given in the two published papers. In summary:

(a) *Best care in general practice.* In the best medical care group Roland Morris scores improved by an average of 3.3 points at 3 months, 3.5 points at 12 months.

(b) *Best care plus manipulation package*. The addition of manipulation produced statistically significant improvement over best care alone at both 3 months and 12 months on disability on the Roland Morris, pain and disability on the modified Von Korff scale, and on all other measures except fear avoidance beliefs.

The improvement in function or disability is described by the investigators as "small to moderate". There was no difference between the results of manipulation relative to whether it was delivered in NHS or private premises. All manipulation results were pooled, so that there is no information on whether patients of chiropractors, osteopaths or specialist physiotherapists achieved superior results.

(c) *Best care and exercise.* The addition of exercise alone produced significant improvement of function/disability on the Roland Morris at 3 months, though to a smaller degree than manipulation, but there was no significant improvement at 12 months.

(d) *Best care plus combined manipulation and exercise*. The addition of both manipulation and exercise gave similar results to manipulation alone on all measures – except back beliefs and fear avoidance. In these two areas combined treatment achieved significant improvement over manipulation alone.

(e) *Cost-effectiveness.* The trial team presents a separate and second paper on the important issue of cost-effectiveness, because of its complexity, the little prior evidence on cost-effectiveness in the UK, and the team's goal "to reduce the uncertainty surrounding the cost-effectiveness of (exercise and manipulation) for back pain."

The economic evaluation is extremely sophisticated. In summary, however, the cost of various units of NHS and private health care as reported are established; these are then related to consultations/treatments given in the trial, improvement scores converted to quality adjusted life years (QALYs), and cost per QALY over 12 months. (The QALY is a measure used by the UK National Health Service in assessing which services to fund and at what level). Overall conclusions on cost-effectiveness are:

(i) This study "shows convincingly that both manipulation alone and manipulation followed by exercise provide cost-effective additions to care in general practice."

(ii) "Manipulation alone probably gives better value for money than manipulation followed by exercise."

(iii) Given that research funding constraints prevented follow-up of patients for longer than 12 months, and that patients continued to show benefits of treatment at 12 months, "the cost-effectiveness of both manipulation and combined treatment may be better than we have reported."

(iv) If government and NHS decision-makers are willing to pay £10,000 per QALY, a conservative amount which is lower than existing recommendations, "purchasing manipulation from the private sector to provide treatment within the NHS would still represent good value for money . . . "

13. As with all research trials, limitations can be found and questions asked. Those promoting the value of exercise can point to the fact that patients receiving exercise may have fared better if a greater number had attended more than a basic minimum of sessions. Those promoting manipulation can point to evidence that practitioners with more than 5 years experience have significantly better skills and results - here practitioners only required two years experience – and that experienced clinicians with freedom to treat more frequently than 8 times over 12 weeks would have achieved even better results.

Chiropractors will immediately say that within the field of spinal manipulative therapy, as partly demonstrated by the Meade et al. trial, chiropractic education, diagnostic and treatment skills and results are distinctly different from and superior to those of other professionals whose results are combined with theirs in this new trial.

Overall, however, there is no question that the UK BEAM trial represents a major and important addition to the research evidence. Perhaps its central challenge to current medical thinking is its finding that "best care" can no longer be regarded as such – best care of most back pain patients in general medical practice now requires referral for a skilled assessment of biomechanical function and provision of physical treatments to reduce dysfunction, particularly spinal manipulation. This is both effective and cost-effective.

Many individual physicians will be comfortable with this – they already have good referral relationships with chiropractors and others. On the other hand organized or political medicine, on the basis of past experience, will be reluctant to allow open access to clinical services outside the scope of education and practice of medical doctors. After the BEAM trial, where are we in the back pain revolution, and what happens next? These are the questions now discussed.

D. Commentary and Conclusions

14. Leaders in orthopaedic medicine now acknowledge that medical management of patients with back pain was "a 20th-century medical disaster" and that "the legacy reverberates into the new millennium."[12] Fundamental problems have been the lack of adequate research and a medical curriculum that still gives doctors no grounding, skills or confidence in the management of patients with common back pain. Recent studies report that medical interns, for all their skills in many areas, still have no competence in basic musculoskeletal medicine. [19,20,21]

Against this background medical practice was, and in many places still is, based on a biomedical model on which, if there

is evident pathology (e.g. infection, tumour, disc herniation), that was the cause and should be addressed through medication and/or surgery. If there was no visible pathology the patient should rest until the problem resolved naturally, and prolonged pain and disability were likely of psychological origin alone. Spinal manipulation and early exercise were dangerous and misguided – as, therefore, was chiropractic practice.

15. Then came the clinical research of the 1980s and the 1990s, including over 40 randomized controlled trials of spinal manipulation, the evidence-based national guidelines of the mid and late 1990s, the systematic reviews, and the evidence based revolution. Clinical guidelines were now based on a biopsychosocial model, in which bedrest is inappropriate and expensive – because it leads to chronic problems and increased disability.

The variation rates, complications, inappropriateness and high cost of much surgery were clearly documented and found unacceptable. The most respected national guidelines, such as those from multidisciplinary expert panels in the UK[22] and USA[11] in 1994, called for spinal manipulation and/or simple medications to help with pain and function, together with patient motivation, education and continuation of activities of daily living for the great majority of patients - those without red or yellow flags.

There were recommendations against the mainstays of medical management – bedrest, most surgery and injections, antidepressants and other heavier prescription drugs because of their side effects, electrotherapies and even formal exercise programs.

16. In most countries organized medicine was reluctant to accept this change, which undercut the role of physicians in a huge area of practice/economic turf. Back problems are the second most common reasons patients seek professional help[23, 24] and medical doctors have neither the diagnostic nor treatment skills to provide spinal manipulation.

The response of official medicine in the past decade has been predictable. Medicine has accepted some major modifications in practice – the move from rest to early activity, more education and motivation of patients concerning back problems and self care, more conservative use of medication and surgery – but only those that leave the patient under medical care. This is now termed "best care".

Spinal manipulation, provided by chiropractors and others, has been contained with the twin arguments that it is not much more effective than best care in medical practice, and is not worth the additional cost. A good example of this is the Cherkin, Deyo et al. study published in the *New England Journal of Medicine* in 1998,[25] published with much orchestrated press[26] and heavily quoted since.

In that trial acute and chronic back pain patients had better results under chiropractic care than medical care based on education and advice to keep active but minimal intervention – better in terms of effectiveness, patient satisfaction and reduced disability. In the following year 7% of chiropractic patients had time off work, 17% of medical patients – total time is not reported. This was at a total average cost for chiropractic care of US$230 per patient, less than the cost of routine imaging in medical practice. Yet the researchers claim the benefit is small and the cost questionable.

All of this underlines the great importance of the new BEAM trial – much larger, better designed and thorough on the issues of effectiveness and cost-effectiveness than the Cherkin, Deyo et al. trial or any other previous research. It profoundly disagrees, reporting that even a small clinical benefit from manipulation has a major impact on cost given the high prevalence of disability from back pain.

17. The most rational policy direction, of course, is not simply to have general practitioners refer a patient for skilled manipulation as recommended in the BEAM trial – that recommendation was made because that was what was studied – but to encourage patients to consult chiropractors and others who provide primary care spinal manipulation directly. Here is the compelling logic for that policy:

(a) Family physicians do not have training and competence in the assessment and treatment of patients with back pain, and often find such patients time consuming and frustrating.

(b) There is a shortage of overworked family physicians in many countries and regions.

(c) Back pain is one of the most common reasons patients consult a medical doctor.

(d) Management of patients with back pain has always been the largest part of chiropractic practice and in many jurisdictions chiropractors are now regulated by law, numerous, and available to see many more back pain patients.

(e) There is good evidence that chiropractic management produces superior results in terms of safety, effectiveness, cost-effectiveness and patient satisfaction – that was so at the time of the government-funded Manga Report in Canada in 1993[8] has been strengthened by much research since , and is now definitively supported the BEAM trial.

(f) Patients are already generally willing to choose and consult chiropractors if given the choice – and will be even more so if directly encouraged by health authorities.

In Ontario, Canada, home of this publication, there is an acute shortage of family physicians, but approximately 3,200 duly licensed doctors of chiropractic. In the UK there are 2,100 registered chiropractors and 3,200 registered osteopaths whose core training is in the field of spinal manipulative therapy. A recent California study confirms the cost-effectiveness of allowing patients to choose chiropractic care for a large range of neuromusculoskeletal problems including back pain.[1,2]

18. To conclude then, the BEAM trial continues the revolution in the management of back pain patients and poses a significant challenge to policy-makers and the medical profession. If the evidence is, as is now the case, that best care requires services not typically provided by medical doctors, will that evidence be respected and acted on. The BEAM trial team, to its credit, says it should be. We will watch the UK with great interest in the months and years ahead. TCR

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World Notes *continued from page 5*

Europe. The European Chiropractors' Union (ECU), whose members are national associations in Europe, held its semi-annual General Council meeting in Athens, Greece November 26-27. In a meeting presided over by ECU President, Dr. Philippe Druart of Belgium, and attended by many able young leaders with large plans for chiropractic in their countries, the ECU made major grants of funds to the Ellenic Chiropractic Association in Greece, to support legal/lobbying costs for legislation, and to the Netherlands Chiropractic Association, supporting the development of chiropractic education in the Netherlands. For information on the next ECU annual convention, to be held in Cyprus May 5-7, 2005, visit www.ecu2005.org.

Source: World Federation of Chiropractic