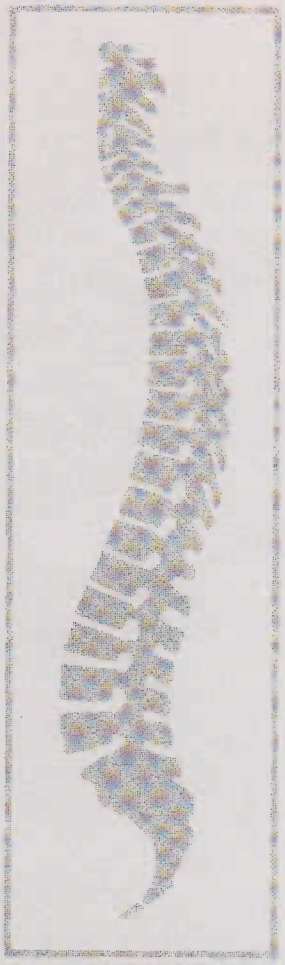

THE CHIROPRACTIC REPORT

An international review of professional and research issues, published bimonthly.

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Professional Notes

The Mercy Center Conference – Comprehensive Guidelines for Chiropractic Practice

A conference titled 'Guidelines for Chiropractic Quality Assurance and Standards of Practice' sponsored by all major chiropractic organizations in North America is to be held at the Mercy Center, San Francisco, January 25-30, 1992.

The guidelines document published following the Mercy Center Conference, perhaps aptly named, will have a practical impact on every chiropractic practice in North America. Because many US insurers have international operations, it will affect chiropractors from Hong Kong to the Middle East. For a detailed introduction to the conference, and the standard-setting process now well underway, see the March 1991 issue of this Report. (Vol. 5 No. 3).

The Consensus Group

There has been keen interest in who has been chosen by the Steering Committee and the sponsoring organizations to represent the profession. For details – see page 6.

In a concurrent process the Canadian Chiropractic Association is developing Canadian standards of practice with a consensus group comprised of nominees from all provincial, educational and other chiropractic organizations in Canada. The CCA Standards of Practice Steering Committee is chaired by Dr. Donald Henderson with Dr. Herb Vear as a special consultant.

The RAND Study – Manipulation for Low-Back Pain

A. Introduction

1. Research into spinal manipulation during the past ten years, crowned by the British Trial[1] last year and now two RAND reports just published,[2,3] has truly put the cat amongst the pigeons. A treatment approach largely rejected by western medicine until recent years is now:

• "The most commonly used conservative treatment for low back pain" in the United States.[4]

• The treatment for back pain with most research evidence of effectiveness – both in terms of early results and now long term benefit. (See paras 11-17).

Throughout the western world the great majority of joint manipulation is by chiropractors – over 90% in the US according to a study just published in the American Journal of Public Health.[5] (Exact numbers – chiropractic 94%, osteopathy 4%, medicine 2%). RAND, again speaking for the US, concludes that about two-thirds of all patient visits for back pain are made to chiropractors, of whom there are about 45,000, and treatment averages between 5 and 18 manipulations per episode.[2]

2. The RAND study, now in its third year and funded by the chiropractic profession (Consortium for Chiropractic Research and the Foundation for Chiropractic Education and Research) and the U.S. government (National Institutes of Health), is entitled *'The Appropriateness of Spinal Manipulation for Low Back Pain'*.

The aim of the project, which will take several million dollars and several years, is to provide *"a comprehensive set of indications for performing spinal manipulation for persons with low back pain"*. These indications, or guidelines, will be based on:

• Appropriateness ratings by a multi-disciplinary panel of experts.

• Appropriateness ratings by an all-chiropractic panel of experts.

• On-site field studies.

3. The project will yield six publications (monographs):

a) Project overview and literature overview

b) Ratings report from multidisciplinary panel.

c) Ratings report from all-chiropractic panel

d) Analysis of the two sets of ratings

e) Description of the research instruments

f) Field study of use of chiropractic services, use of manipulation, and characteristics of chiropractic patients.

The first two were published in July – the third is due in November.

4. Anyone in chiropractic doubting the importance of this project has food for thought in the immediate reaction of the U.S. media to the first two RAND reports. It included:

• An extensive article entitled 'Back Manipulation Gains Respectability' in the New York Times (front page of the 'Living Section', July 3). This reviewed the RAND study, reassessed the chiropractic profession, and described the greatly increased cooperation and referral between MDs and chiropractors.

• Prime time coverage on national TV. (e.g. 'CBS This Morning' July 15 and 'CBC Nightwatch' July 24. In the latter host Steve Roberts discussed the new acceptance of manipulation and chiropractic by medicine for 20 minutes with Neil Kahanovitz MD, a prominent New York orthopedic surgeon, Scott Haldeman DC MD, chiropractor and neurologist, and Louis Sportelli DC, Past-Chairman, ACA).

5. A project as extensive as this one by the RAND Corporation can be confusing. Who is RAND, and why does the organization command such attention? This report introduces RAND and the project, defines spinal manipulation, provides a current literature review of controlled trials of spinal manipulation, summarizes RAND's report on all the literature (RAND Report 1), and briefly analyzes the ratings of the multi-disciplinary panel. (RAND Report 2). The matter of ratings will be revisited when RAND has completed the next two steps – the ratings of the all-chiropractic panel (Report 3) and a comparison of the two panels (Report 4).

B. The RAND Corporation

6. The RAND ('Research and Development') Corporation, is a non-profit private corporation in Santa Monica, California, which conducts research and development for the US government and the private sector and commands international respect. It first gained prominence with research for the U.S. military in World War II.

Its current research programs include classified defence research for the military, applied economics, education, sociology, civil justice and health sciences. With respect to health sciences:

- RAND's health sciences department is the largest non-university based research center in the US.
- For the past ten years a central concern has been the development and application of methods to assess the appropriateness of health care procedures.
- RAND is currently assisting many health provider groups with research aimed at establishing practice standards or guidelines, including the American Medical Association.

RAND has studied many medical interventions before the current project on spinal manipulation – most recently the appropriate use of CABG and angioplasty for coronary artery disease.

7. RAND's principal investigator for the project on spinal manipulation is Paul Shekelle MD MPH, an internist on the faculty of UCLA whose research interests lie in assessing the appropriateness of health services.

The initiative and first funding for the project came from the California Chiropractic Association and the Consortium for Chiropractic Research, which represents a number of chiropractic colleges and professional associations throughout the United States, including the American Chiropractic Association and the International Chiropractors' Association. The largest current source of funds is the Foundation for Chiropractic Education and Research, with major contributions from NCMIC and the American Chiropractic Association. The first chiropractic coordinators of the project were Reed Phillips DC PhD, President, and Alan Adams DC MS, Vice-President, Chiropractic Education, Los Angeles College of Chiropractic. They and Eric Hurwitz DC MPH, together with Shekelle, Mark Chassin MD MPH, and other RAND officers and staff, are joint authors of the publications arising from the study.

C. Spinal Manipulation – Definition

8. The term 'spinal manipulation' has been used loosely in the past, often to refer to all manual techniques used to treat muscles or joints. Today the international literature of all relevant professions – chiropractic, medicine, osteopathy and physiotherapy – makes a distinction between two inherently different types of joint treatment:

a) **Mobilization:** slower (low-velocity) techniques in which the joint remains within its passive range of movement. The treatment can be monitored and resisted by the patient, who therefore has final control.

b) **Manipulation':** faster (high-velocity) techniques that take the joint beyond the passive range end barrier to what is known as the 'paraphysiological' space. Range of movement is greater. Because of the speed the patient does not have control. Potential for harm in unskilled hands is much greater.

9. In the words of Kirkaldy-Willis MD and Cassidy DC *"the terms mobilization and manipulation require separate definition."*[6] This need is emphasized by recent controlled trials showing that manipulation has different and superior results to mobilization in:

a) Reducing back pain.[7]

b) Reducing neck pain.[8]

c) Increasing range of movement in a joint.[8,9]

10. The RAND study adopts the above distinction, describing spinal manipulation as "a directed thrust to move a joint past the physiologic range of motion"[10] and referring to mobilization as a "non-manipulative procedure."[11]

D. Trials of Manipulation

11. The first of the 1991 RAND reports is a 'Literature Review',[2] which now becomes the most recent and authoritative analysis of the evidence on manipulation for low-back pain. The Review encompasses 74 research sources – including 21 controlled trials. Before dealing with RAND's Review, what conclusions can be drawn from just the 21 controlled trials? This form of research, in which the group of patients receiving the treatment being studied (here manipulation) is compared with a control group receiving a sham or alternative treatment, is the most credible in terms of scientific method. ('Studies' allocate all patients to the treatment being tested, and have no comparison group).

12. It is accepted by all that there are a number of design limitations to trials in the field of back pain. There have been difficulties with initial selection and evaluation of patients, type and skill of spinal manipulation given, adequate control treatment for the comparison group, assessment of response to treatment, and statistical error arising from inadequate trial size. Nonetheless there is now a significant body of evidence from which some clear trends emerge.

Acute (less than 3 weeks) **and Sub-acute Pain** (3-13 weeks)

13. The trials, summarized in Table 1, show:

a) Acute and sub-acute mechanical back pain patients given spinal manipulation achieve better early results than others given common medical treatments (bedrest, medication, diathermy, traction, corsets, back school) or a sham treatment.

b) This early advantage has gone at about three months – i.e. all patients, whether given manipulation, another treatment or no treatment, are doing equally well at this time. (For comment – see para 14(b) below).

14. With blithe misunderstanding critics of spinal manipulation have pointed to short-lived advantage as an argument against spinal manipulation. Those specializing in the field of manual care have two answers:

a) Best early result is a prized goal in itself in the management of back pain. From the patient's perspective how you feel and what you can do 5-7 days after being disabled by a 'back attack' is crucial. At that point, with minimal improvement, work and family and other pressures produce the erosion of confidence that greatly complicates recovery.

If a management approach which includes manipulation has the patient up and functioning within one week rather than two, that gives very considerable validity in itself.

b) Leaving that aside, however, in the circumstances pertaining in most trials of manipulation can one expect a continuing

continued on page 5

RAND Reports – How to Order?

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Table 1

CONTROLLED TRIALS OF SPINAL MANIPULATION FOR LOW-BACK PAIN

Acute Pain and Sub-acute Pain

First Author	Number of Manipulations	# Manipulated vs Total # in Trial	Treatment(s) Given to Comparison Group	Results
Coyer[1] (1955) (U.K.)	1	76/136	Bedrest	50% of manipulated group pain free at 1 week compared to 27% of controls treated with bedrest; values for 6 weeks were 88% and 72%, respectively.
Glover[2] (1974) (U.K.)	1	43/84	Diathermy	Manipulation provided better pain relief for those with <7 days of pain and first attack of back pain (61% vs 42% mean pain relief at 3 days)
Doran[3] (1975) (U.K.)	6 avg	116/436	Physiotherapy corset and analgesics	Statistical benefit for manipulation at 3 weeks. (45% vs analgesics 35% improved) (a).
Rasmussen[4] (1979) (Denmark)	2 weeks	12/24	Diathermy	Distinct benefit for manipulation vs diathermy in return to light work at one month.
Hoehler[5] (1981) (USA)	5 avg	55/95	Manipulation	Immediate benefit of manipulation vs sham (84% vs 68% pain relief); gone by 3 weeks.
Coxhead[6] (1981) (U.K.)	14 max	155/322	Corset, back school traction	Statistically significant benefit of manipulation at 4 weeks (82% vs 73% improved) (a). Gone at 4 months.
Nwuga[7] (1982) (Nigeria)	12 max	26/51		Significant benefit for manipulation vs diathermy for total rotation and straight leg raising compared to baseline for each group. Significantly shorter time to pain relief for manipulated group.
Farrell[8] (1982) (Australia)	9 max	24/48	Diathermy and exercise	Shorter time to pain relief (3.5) vs 5.8 treatments) for manipulation vs diathermy andexercises; no difference in groups at 3 weeks.
Godfrey[9] (1984)	5 max	22/81	Massage	Statistically significant benefit (Canada) for manipulation vs massage for back mobility (30% vs 15%) at 2 weeks, trend towards overall benefit. (a)
Hadler[10] (1987) (USA)	1	28/54	Mobilization	Patients with pain of 2 to 3 weeks duration achieved a 50% reduction in pain score more rapidly with manipulation than with mobilization.
Mathews[11] (1987) (U.K.)	up to 10	165/291	Infrared heat	Benefit for manipulation in patients with straight leg raising signs both subjectively and objectively at 2 weeks (30% difference in recovery rate); controls were given infrared heat. Patients without straight leg raising signs improved greatly in all groups, trend favouring manipulation. No difference at one year.

Chronic Pain

Evans[12] (1978) (U.K.)	3 weeks	32	Medication	Statistically significant improvement for manipulation vs codeine in overall pain score for each group. Crossover design.
Gibson[13] (1985) (U.K.)	4 max	41/109	Diathermy	No benefit in subjective or objective outcomes immediately and at 2,4, and 12 weeks.
Arkuszewski[14] (1986) Poland	6 avg. 10 max	50/100	Massage	Time to pain relief improved for manipulation vs massage (3.1 vs 3.8 weeks); at 6 months, 60% of manipulated group vs 36% of control group had returned to old job.
Waagen[15] (1986) (USA)	4 avg	9/19	Sham manipulation	Benefit for manipulation vs sham on Visual Analogue Scale measurements of pain immediately and at 2 weeks.
Meade[16] (1990) (U.K.)	9 avg	375/717	Hospital out-patient clinic care by MDs and PTs	Comparison of "chiropractic care" vs "medical clinic care" for patients with back pain; 99% of chiropractic patients were manipulated, most medical patients were manipulated or mobilized. Significantly greater improvement in Oswestry Score in chiropractic group at 6, 12, and 24 months; improvement in physiologic variables greater for chiropractic group as well.

For references and notes – see page 4

Notes

(a) Trial had errors in statistical analysis as first published. Results given are on re-analysis by Hoehler Ph.D. and Tobis Ph.D. in 1987. (*'Appropriate Statistical Methods for Clinical Trials of Spinal Manipulation', Spine (1987) 12:409-411).*

(b) Some trials, those by Edwards[17] (Australia), Sims-Williams[18] (U.K.) and Zylbegold[19] (Canada), are not included because they do not define the duration of pain. The first two showed early benefits of manipulation, the third did not.

(c) The trials by Glover, Doran, Hoehler, and Meade included acute and chronic patients, and could have been listed under both categores.

(d) Others are not included because they test limited objective effects of manipulation rather than resolution of symptoms e.g. Fisk[20] and Vernon.[21]

(e) All the above are controlled trials. There are a number of prospective studies (research which follows a line of patients, but has no comparison group as in a trial) which report excellent results for manipulation. See, for example, Potter[22] and Kirkaldy-Willis.[23]

References to Table 1

1 'Low-back pain Treated by Manipulation', Coyer AB and Curwin I (1955) Br Med J 1:705-707.

2 'Back Pain: A Randomized Clinical Trial of Rotational Manipulation of the Trunk', Glover JL et al (1974) Br J Industrial Med 31:59-64.

3 'Manipulation in the Treatment of Low-back Pain: A Multicentre Study', Doran D and Newell DJ (1975) Br Med J 2:161-164.

4 'Manipulation in the Treatment of Low-back Pain – A Randomized Clinical Trial, Rasmussen GG (1979) Manuelle Medizin 1:8-10.

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6 'Multicentre Trial of Physiotherapy in the management of Sciatic Symptoms', Coxhead CE et al (1981) Lancet 1:1065-1068.

7 'Relative Therapeutic Efficacy of Vertebral Manipulation and Conventional Treatment in Back Pain Management', Nwuga VC (1982) Am J Phys Med 61:273-278.

8 'Acute Low-back Pain: Comparison of Two Conservative Treatment Approaches', Farrell JP and Twomey LT (1982) Med J Aust 1:160-164.

9 'A Randomized Trial of Manipulation for Low-back Pain in a Medical Setting', Godfrey CM et al (1984) Spine 9:301-304.

10 'A Benefit of Spinal Manipulation as Adjunctive Therapy for Acute Low-back pain: A Stratified Controlled Trial, Hadler NM et al (1987) Spine 12:703-706.

11 'Back Pain and Sciatica: Controlled Trials of Manipulation, Traction, Sclerosant, and Epidural Injections', Mathews JA et al (1987) Br J Rheumatol 26:416-423.

12 'Lumbar Spinal Manipulation on Trial: Part 1 – Clinical Assessment', Evans DP et al (1978) Rheumatology and Rehabilitation 17:46-53.

13 'Controlled Comparison of Short-Wave Diathermy with Osteopathic Treatment in Non-Specific Low-back Pain', Gibson TR et al (1985) Lancet 2:1258-1260.

14 'The Efficacy of Manual Treatment in Low-back Pain: A Clinical Trial', Arkuszewski Z (1986) Manual Medicine 2:68-71.

15 'Short Term Trial of Chiropractic Adjustments for the Relief of Chronic Low-back Pain', Waagen GN et al (1986) Manual Medicine Vol 2:63-67.

16 'Low-back Pain of Mechanical Origin: Randomised Comparison of Chiropractic and Outpatient Treatment' Meade TW et al (1990) Br Med J 300:1431-1437.

17 'Low-back Pain and Pain Resulting from Lumbar Spine Conditions: A Comparison of Treatment Results' Edwards DP et al (1969) Aust J Physiol 15:104-110.

18 'Controlled Trial of Mobilisation and Manipulation for Patients with Low-back Pain in General Practice', Sims-Williams H et al (1978) Br Med J 2:1338-1340.

19 'Lumbar Disc Disease: Comparative Analysis of Physical Therapy Treatments' Zylbegold RS and Piper MC (1981) Arch Phys Med Rehab 62:176-179.

20 'A Controlled Trial of Manipulation in a Selected Group of Patients with Low-back Pain Favouring One Side', Fisk JW (1979) NZ Med J 90:288-291.

21 'Pressure Pain Threshold Evaluation of the Effect of Spinal Manipulation in the Treatment of Chronic Neck Pain: A Pilot Study;, Vernon HT, Aker P et al (January 1990) J Manip Physiol Ther 113(1):13-16.

22 'A Study of 744 Cases of Neck and Back Pain Treated with Spinal Manipulation', Potter GE (1977) J Can Chiro Assoc 154-156.

23 'Spinal Manipulation in the Treatment of Low-Back Pain' Kirkaldy-Willis WH and Cassidy JD (1985) Can Fam Phys 31: 535-540.

Table 2

RAND Summary of all the literature on manipulation for low-back pain

Acute Pain (less than 3 weeks)

Uncomplicated
"The literature supports the use of spinal manipulation for patients with acute low-back pain without evidence of neurological involvement or sciatic nerve irritation."

With sciatic nerve root irritation
"The literature is insufficient to support or refute . . . the available data suggests a short term benefit in terms of pain relief.

With minor neurological findings
"The literature is insufficient to support or refute".

With minor neurological findings and sciatic nerve root irritation
"There is conflicting evidence in the literature."

Sub-acute Low-back Pain (3-13 weeks)

Uncomplicated
"The majority of studies suggest a short term benefit in terms of pain relief."

With sciatic nerve root irritation
"The literature is insufficient to support or refute treatment."

With minor neurological findings
"The literature is insufficient to either support or refute treatment."

With minor neurological findings and sciatic nerve root irritation
"The literature is limited but probably supports the use of spinal manipulation."

Chronic Pain

Uncomplicated
"There is conflicting evidence" – the literature neither confirms nor refutes.

With sciatic nerve root irritation
There are no controlled trials for this group.

With minor neurological findings
Only controlled trial is by Meade and supports use of manipulation.

With minor neurological findings **and** sciatic nerve root irritation
"The literature is not conclusive."

Major Neurological Findings
There are no trials of manipulation in the presence of major neurological findings – there is agreement that manipulation is generally inappropriate.

treatment advantage three months later? In most trials patients have received a few manipulations, treatment then stops, there is little or none of the education and functional restoration that accompanies manipulation in normal chiropractic practice, and the patient then resumes his/her daily round of mechanical and emotional stress, poor posture and fitness – the lifestyle that induced the back problem in the first place. Where:

• The manipulation is integrated with patient education, as in the Kirkaldy-Willis and Cassidy study[6] and/or

• The patient remains under care for a longer period, as in recent trials such as that by Meade[1] (see para 15 below).

There are suddenly reports of long term advantage to patients who have received manipulation – at follow-up periods of between 1-3 years.

Chronic Pain (over 13 weeks)

15. There are a fewer trials of chronic pain patients. These include, however, some of the most recent and authoritative trials, and the Meade trial published last year in the British Medical Journal is quite the largest and best designed trial of manipulation yet. The trials, also summarized in Table 1, show:

a) Manipulation, as with acute pain patients, provides earlier relief than other treatments or no treatment.

b) When manipulation is given in a context approximating normal clinical circumstances – limited as to number of treatments, but otherwise given according to each practitioner's discretion – benefits are long-term and maintained at 1 to 3 years follow-up.

The Meade trial was the first to compare chiropractic manipulation with manipulation and mobilization given by MDs and PTs. It reported that the chiropractic manipulation was twice as effective and that benefit was maintained at 1 and 2 years follow-up. (For a full report on the trial see The Chiropractic Report, July 1990, Vol. 4 No. 5).

E. The RAND Literature Review

16. The RAND Literature Review[2] (32 pages) covers 74 sources, including the 21 controlled trials discussed above. Back pain is classified as acute, sub-acute and chronic as above. Each is sub-classified:

• **Without neurological findings or sciatic nerve irritation** (described in this Report as 'uncomplicated').

• **Minor neurological findings** – defined as "at least one of an asymmetrically decreased ankle reflex, a lower limb dermatormal sensory deficit or a non-progressive lower limb muscle weakness."

• **Major neurological findings** – defined as "a progressive unilateral lower limb muscle weakness or symptoms or signs of the cauda equina syndrome."

• **Sciatic nerve root irritation** – defined as "shooting pain in the posterior thigh or calf, and a straight leg raising sign in the leg with the pain."

Conclusions are summarized in Table 2. You are encouraged to purchase and read the full Review.

17. Overall conclusions of the Review, which was prepared as a resource for the RAND Expert Panels to meld with their practical experience in judging the indications for spinal manipulation, are:

a) As with all other treatments for low-back pain it cannot be said that the efficacy of spinal manipulation is scientifically proven yet. Equally it has not been disproved.

b) Because of the "cost and technical difficulties" the series of trials necessary to prove effectiveness will not be undertaken or completed in the years immediately ahead. (To get a population of 720 eligible patients the Meade trial had to recruit many thousands of patients, took ten years from conception to publication, and cost over $1 million).

c) Therefore guidelines for practice – again as for surgery and other interventions for low-back pain – will need to come from consensus panels of experts.

F. Ratings by RAND Multidisciplinary Panel

18. The second RAND report published in July was the *'Indications and Ratings by a Multi-disciplinary Expert Panel'*.[3] This is a complex document with over 70 pages of tables giving the ratings of nine members for 1550 categories of back pain patients – categorized by length of symptoms, presence of comorbid diseases, clinical course of the pain, history in response to previous treatment of back pain, findings on physical exam, and findings on lumbosacral radiographs and CT or MRI.

19. The ratings process and findings will be reviewed in more detail when the next two RAND reports are available – the all-chiropractic expert panel ratings and the comparison of the findings of the two panels. However certain conclusions deserve mention, especially given continuing inexperience with and reservations about chiropractic and the use of manipulation at the level of general medical practice.

Membership of the Expert Panel

20. As with all RAND expert panels this panel had nine members, a mix of academics and private practitioners, geographic representation and a mix of those who use the procedure being studied – here manipulation – and those who do not. Members were:

Chiropractors *Tom Bergmann DC,* Private practice, Minnesota. Editor, Chiropractic Technique; *Tom Hyde DC,*Private practice, Florida. President, ACA Council on Sports Injuries and Physical Fitness; *John Triano MA, DC,*Director, Spinal Ergonomics and Joint Research Laboratory, National College of Chiropractic, Chicago.

Medical orthopedists *John Frymoyer MD,* Professor, of Orthopedics, University Health Center, Burlington, Vermont; *Sam Wiesel MD,* Professor of Orthopedics, Georgetown University Medical Center, Washington DC.

Osteopath *James Weinstein DO,* Professor of Orthopedics, University of Iowa Hospital, Iowa City.

Internist *Richard Deyo MD MPH,* Director, Health Services Research and Development, Veterans' Administration Medical Center, Seattle Washington.

Family Practitioner *Peter Curtis MD,* Professor of Family Medicine, University of North Carolina, Chapel Hill.

Neurologist *Scott Haldeman DC MD PhD,* Assistant Clinical Professor of Neurology, University of California, Irvine.

Conclusions

21. This panel agreed, pursuant to a defined process and criteria described in the report, to the following ratings for manipulation:

i) **Appropriate**

a) Acute (under three weeks duration) uncomplicated back pain.

b) Acute back pain with minor neurological findings (for definition see para 16 above) and unremarkable lumbosacral radiographs.

These conclusions will seem self-evident to chiropractors and MDs with experience of manipulation. Their impact, however, is that:

• They are made by a RAND expert panel, the majority of which comprises medical opinion leaders in the management of back pain.

• The great majority of back pain patients fall into the above categories – i.e. it is agreed that spinal manipulation is an appropriate treatment for most patients.

ii) **Equivocal**

According to RAND criteria the panel was undecided on the role of manipulation for:

a) Chronic pain

b) Pain with sciatic nerve irritation

c) Pain in the presence of disc herniation

As the RAND Literature Review attests there is scientific evidence supporting the use of spinal manipulation for all the above conditions – this expert panel was unable to reach a level of agreement that confirmed or denied the value of manipulation.

iii) **Inappropriate**

There was agreement that manipulation was inappropriate given:

a) An unfavourable response to prior manipulation.

b) The presence of contraindications on lumbar xrays such as malignant tumours, inflammatory arthritis, acute or unhealed fracture.

c) Absence of xrays in the presence of risk factors such as fever, history of malignancy, severe osteoporosis, age greater than 50, and significant trauma.

d) Major neurologic findings such as progressive locomotor weakness or cauda equina syndrome.

Appropriate Trial of Manipulation

22. Finally, the panel was in unanimous agreement that: "An adequate trial of spinal manipulation is a course of two weeks for each of two different types of spinal manipulation (four weeks total) after which, in the absence of documented improvement, spinal manipulation is no longer indicated."[12] This represents a firm rebuff to the traditional British medical approach, arising from the Cyriax school and influencing medical orthopedists in many countries, that one should manipulate on 1-3 occasions only.

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1 Meade TW, Dyer S et al (1990) 'Low Back Pain of Mechanical Origin: Randomised Comparison of Chiropractic and Hospital Outpatient Treatment, 'Br Med J 300:1431-37.

2 Shekelle PG, Adams AH et al (1991) The Appropriateness of Spinal Manipulation for Low Back Pain: Project Overview and Literature Review', RAND, Santa Monica, California. Monograph No. R-4025/1 - CCR/FCER.

3 Shekelle PG, Adams AH et al (1991) The Appropriateness of Spinal Manipulation for Low Back Pain: Indications and Ratings by a Multidisciplinary Expert Panel, (extracts), RAND, Santa Monica, California. Monograph No. R-4025/2 - CCR/FCER.

4 Ref 2 supra, 1.

5 Shekelle PG and Brook RH (1991) A Community-Based Study of the Use of Chiropractic Services', AmJ Public Health, 81(4):439-442. The percentages quoted come from this study but are reported in the RAND report, ref 2 supra.

6 Kirkaldy-Willis WH and Cassidy JD (1985) 'Spinal Manipulation in the Treatment of Low Back Pain', Can Fam Phys 31:535-540.

7 Hadler NM, Curtis P et al (1987), 'A Benefit of Spinal Manipulation as Adjunctive Therapy for Acute Low-Back Pain: A Stratified Controlled Trial' Spine 12(7):703-706.

8 Lopes AA, Cassidy JD et al 'The Immediate Effect of Manipulation versus Mobilization on Pain and Range of Motion in the Cervical Spine: A Randomized Controlled Trial', in print.

9 Mierau D, Cassidy JD et al (1988) 'Manipulation and Mobilization of the Third Metacarpophalangeal Joint: A Quantitative Radiographic and Range of Motion Study' Manual Medicine 3:135-140.

10 Ref 2 supra, v.

11 Ref 3 supra, 11.

12 Ref 3 supra, 91.

Mercy Center Conference on Guidelines for Practice

Consensus Panel of Chiropractors – *may be expanded to provide better representation from the east and south.*

Alan Adams DC MS – California Vice-President, Chiropractic Education, LACC; **Meredith Bakke DC** – Wisconsin Private practice, Federation of Chiropractic Licensing Boards; **Linda Bowers DC** – Minnesota Orthopedics, nutrition, Northwestern College; **Gerard Clum DC** – California President, Life-West College; **Tammy DeKoekkoek DC** – California Private practice, Technique, LACC; **Arlan Fuhr DC** – Arizona Private practice, Activator Technique; **James Gregg DC** – Michigan Private practice, hospital practice, President ICA; **Daniel Hansen DC** – Washington Private practice, orthopedics, Chair; **Donald Henderson DC DACBR FCCS** – Ontario Private practice, radiology; **John Hsieh MS RPT DC** – California Research, LACC, Physical therapy; **Thomas Hyde DC CCSP** – Florida Private practice, sports chiropractic; **Donald Kern DC** – Iowa President, Palmer College; **Norman Kettner DC DACBR** – Missouri Radiology, Logan College; **Charles Lantz DC PhD** – California Research, Life-West College; **John Martin DC** – Texas Private practice, Past-President, Council of Chiropractic State Associations; **Dale Mierau BBPE DC MSc FCCS** – Saskatchewan Private practice; **Marion McGregor MSc DC** – Illinois Research, National College; **Rick McMichael DC** – Ohio Private practice, Past-President, OSCA; **William Meeker DC MPH** – California Research, President, Consortium for Chiropractic Research; **Silvano Mior DC FCCS** – Ontario Clinical sciences, CMCC; **Robert Mootz DC PhD** – California Private practice, Research, Palmer West; **Michael Pedigo DC** – California Private practice, Past-President, ICA; **Kelli Pearson DC** – Washington Private practice, HMO, Past-President, WCA; **Reed Phillips DC PhD** – California Radiology, President, LACC; **Dennis Skogsbergh DC** – Illinois Private practice, Orthopedics, National College; **Marilyn Smith DC** – California Private practice, Chair, Board of Governors, Palmer West; **Monica Smith DC MS** – Illinois Private practice, health services research; **Louis Sportelli DC** – Pennsylvania Private practice, Past-Chairman, Board of Governors, ACA. **Neil Stern DC** – Texas President, Parker College; **John Triano MA DC** – Illinois Biomechanics, research, National College; **Howard Vernon DC FCCS** – Ontario Private practice, research, CMCC; **James Winterstein DC** – Illinois President, National College.