

THE CHIROPRACTIC REPORT

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July 1997 Vol. 11 No. 4



LESSONS FROM THE MARKETPLACE

A. INTRODUCTION

This issue considers the changing market for chiropractic services, and speaks provocatively about how chiropractors should be reacting. The need to do this has been suggested by two recent events:

a) **The California Convention.** A *Philosophy vs Science* debate was presented at the annual convention of the California Chiropractors' Association held in Monterey in June. This was California's largest and most successful convention in five years.

CCA members came to hear a broad spectrum of speakers debate the relative importance of science and philosophy in chiropractic and health care. Speakers included Dr. Fred Barge, Dr. Chris Kent and Dr. Sid Williams of the ICA, Dr. Michael Pedigo (recently elected President) and Dr. Louis Sportelli of the ACA, Dr. Guy Riekeman of Palmer College and Quest, Dr. Joe Keating representing the education/research community and Mr. David Chapman-Smith representing the public interest.

Everyone agreed that you need a strong basis of both philosophy and science to deliver effective health care. There was also no disagreement - which was a surprise to some - on the basis of chiropractic philosophy, namely:

- Holism - treating the whole person
- Homeostasis - the inherent healing power of the body, historically known as the "Innate" or "power within".
- The central regulatory function of the nervous system.
- The significance for health of removing vertebral subluxation and other dysfunctions in the motor/musculoskeletal system that may influence homeostasis.

The area of sharp disagreement was how to market chiropractic. In essence there were two viewpoints:

i) For chiropractic to be principled, distinct and successful, public education

must be about the central philosophy of the chiropractic approach to health care, and how this is fundamentally different from the medical approach of curing conditions. This will "win over" patients to chiropractic care. There should be a focus on subluxation.

ii) Effective public education must start with information that is easily understood by laypersons, and will make potential patients try chiropractic care. This is information on the education of chiropractors, and their successful management of the most common forms of back pain and headache. Every family has someone with one of these conditions, respectively the second and third most common reason patients seek health care services^{1,2}. These are the conditions for which there is the most evidence of effectiveness and cost-effectiveness of chiropractic care, and this is what will generate first interest for most people.

Chiropractic care does not involve, and should not be presented as involving, a rejection of other health care providers. Conflict will be unattractive to most patients, who wish to have their various chosen providers cooperating, and other health professionals. The time to talk about wider concepts of chiropractic care is when a person has demonstrated sufficient interest by becoming a patient or attending a more extended lecture on chiropractic.

b) **The Rover Group Back Pain Study.** Titled *Back Pain in the Workplace* this recent study is by Ratti and Pilling, occupational health physicians at Rover, a major British motor vehicle manufacturer, and the Institute of Occupational Health, University of Birmingham.³ It reports a successful new program for cost-effective prevention and management of back pain.

The basis of management is the new evidence in general, and manipulation and early return to activity in particular. However it contains some lessons from the marketplace for the chiropractic pro-

PROFESSIONAL NOTES

1800 Attend Tokyo Congress

From June 4-8, 1800 chiropractors attended the 1997 World Chiropractic Congress in Tokyo, Japan, co-hosted by the World Federation of Chiropractic (WFC) and the Chiropractic Council of Japan (CCJ).

The meeting included a Cervical Spine Symposium co-sponsored by the World Health Organization (WHO). At the Congress Banquet Mr. Koizumi, Minister of Health, addressed over 500 guests in the ballroom of Tokyo's finest hotel, the Imperial Hotel, expressing the willingness of the government to work with the chiropractic profession for recognition and licensure. Other highlights included:

- *Cervical Spine Symposium.* This brought together the leading chiropractic and medical authorities on conservative management of cervical spine disorders including Yoshiharu Aizawa, MD (Japan), Philip Bolton DC PhD (Australia), David Cassidy DC PhD (Canada), Jiri Dvorak MD (Switzerland), Scott Haldeman DC MD PhD (USA), Niels Nilsson DC MD PhD (Denmark), Åke Nygren MD DDS PhD (Sweden), Lindsay Rowe DC MD DACBR (Australia) and John Triano DC MA (USA).

From 80 original research presentations from Australia, China, Japan, South Africa, Europe and North America awards went to:

- Scott Haldeman Award - First prize:
Responsiveness of Pain Scales: A Comparison of Three Pain Intensity Measures In Chiropractic Patients: Jennifer E. Bolton, PhD and Rachel C.

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fession, which now lives in a world where patients with back pain - and their employers - do not have to come to chiropractors to escape bed rest and passive modalities.

This Report now reviews the Rover study and its lessons from the marketplace.

B. ROVER GROUP STUDY

2. Rover has a workforce of 17,500 at its car manufacturing plant at Longbridge, England. Like major employers everywhere it discovered that it was paying a fortune in health care costs and disability costs for musculoskeletal sprain/strain injuries, especially back pain.

The authors commence their report by defining the size of the problem faced by employers - in the UK in 1987/88 the cost of low-back pain in terms of lost business output was estimated at £2,000 million,⁴ and recently in the US the estimated average cost for each back care patient in industry was \$40,000 - \$18,000 for health care expenses and \$22,000 for loss of income and related benefits.⁵

When the UK Clinical Standards Advisory Group produced new evidence-based guidelines for management of back pain in 1994⁶ Rover decided to adopt them and make aggressive changes. This paper reports huge success. In the first year there was a 9% decrease in lost days (6,000 days saved) for a gross saving of £300,000 (approx. US\$500,000), a net first year saving after recovery of all set-up costs of £200,000.

Rover is so pleased with this that it is planning "developing a centre of excellence allowing referrals to be sent to us from other industries and (general practitioners)". The company says "programs such as that developed at Longbridge should be applied across all sectors of industry the cost-effectiveness of such schemes with industry has now been proven."

Realizing that prevention and management of back pain has many dimensions, Rover attacked the problem on four fronts:

a) **Ergonomics** (the relationship of people and machines in the workplace, including the study of human movement). Known risk factors for back pain include heavy physical work, incorrect lifting, twisting and bending, whole body vibration. To respond to ergonomic factors Rover has commenced:

- *Employee screening* - if a task is easy for someone 5' 10" in height but a stretch for someone 5' 6", the task is done by the taller person.

- *Education* - specific ergonomic education is part of a wider Backwatchers educational program.

- *Ergonomic job design* - drawing on the experience of BMW in Germany, the workplace and work tasks are being re-designed using an ergonomic risk assessment protocol measuring 26 different activities and criteria.

b) **Education.** Employees (called 'associates' at Rover) take Backwatchers classes which include a thorough review of all aspects of prevention and management of back pain.

c) **Job Modification.** As part of their rehabilitation, and to provide early return to work, Rover makes alternative work available for an interim period for employees/associates recovering from a back injury - alternative work without twisting, excessive bending or heavy lifting.

d) **Re-tooled Occupational Health Services.** A completely revamped approach to management of injured associates is, in the view of the authors, the centrepiece of cost savings to date. Details, for a workforce of 17,500, are:

i) The compass for management is the CSAG Back Pain Guidelines⁶ - the UK equivalent of the US AHCPR guidelines.⁷ For Rover this means avoidance of rest, early activity and "the key to treatment ... is manipulation." This is combined with back education classes and the job modification program.

Although manipulation is the key, the philosophy of management is not which treatment is better for everyone but which is the most successful for a particular case - accordingly there is also use of traction, vibract couches, ultrasound, trophic stimulation, acupuncture, etc.

ii) The basic occupational health service includes 2 occupational physicians, 2 sessional family physicians, 3 physiotherapists, 1 sports therapist, an acupuncturist, 11 fulltime nurses and a part-time radiographer and the new "proactive physiotherapy department in our occupational health department" takes up "the vast amount of the workload seen in our clinic". This department has 1,400 treatments per month and "at least 50% are back problems".

"For our associates who fail to respond we also offer a chiropractor. These associates are cross-referred by our physiotherapists."

iii) Rover expects to do even better in the years ahead. A continuing problem is that associates generally first contact their

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own family physician/general practitioner and "often get incorrect advice - it is still common to see associates who have been told to rest for 3-6 weeks". Rover wants to get associates into their proactive program within 24 hours.

iv) The concluding advice of Ratti and Pilling to employers, based on the Rover experience, is that management of back pain injuries in all sectors of industry should have two basic principles:

- Consistent guidance encouraging early mobilization rather than rest.
- "Early referral to a physical therapist e.g. physiotherapist, chiropractor, osteopath."

3. Well now - there are many messages to ponder in all of this. As we do so, appreciate you are not only reading about 17,000 employees at a British auto maker. You are also reading about that 70-80% of the public in your community who have never chosen chiropractic care, largely because traditional medical advice discourages both manipulation and chiropractic, but who are now going to be encouraged by their employers, insurers and

medical advisors to seek skilled manipulation for common problems.

4. **What Rover Wanted.** In considering the messages, let's start with what Rover - and by analogy any intelligent employer successfully reforming its management of occupational health today - wants. This seems to be:

a) **Control of back pain disability and costs.** This was the major cost item, focus, and bottom line. We know that back pain has traditionally produced approximately 30% of workers' compensation claims and accounted for 50-60% of compensation costs.⁸

b) **Control of who provides care.** At Rover there is obviously some respect for patient choice, but ultimately the employer wants to influence all workers through its education and its choice of providers.

c) **A multi-factorial approach.** The first three parts of the 4 point plan - ergonomics, education and job modification - had nothing to do with treatment. It is recognized that there must be a multi-factorial approach to prevention and management of back pain - and employers will use health professionals who understand and support this.

d) **Interdisciplinary occupational health team.** The occupational health program, whatever its precise elements, requires a multidisciplinary team. This requires use of physicians, nurses, chiropractors, physiotherapists and others with:

- The right attitude - respect for each other.
- Common communication skills.
- A clearly defined scope of practice - including diagnostic and treatment services used and management algorithms or flowcharts describing frequency and duration of care and points of discharge and referral.
- Protocols for interdisciplinary patient management.

e) **Core treatment skills.** Rover wanted health professionals who can provide the frontline evidence-based treatments now recommended in a number of national guidelines namely:

- Ability to diagnose biomechanical dysfunction in joints and soft tissues.
- Ability to treat joint problems with manipulation.
- Ability to treat and/or know when to refer to other team members for soft tissue problems, using trigger point therapy,

modalities, exercise and education.

- A commitment to early patient activation and return to activities of daily living.

- These things for all musculoskeletal sprain/strain injuries, not just back pain.

5. **Rover's Choices.** To meet these needs Rover made various choices. Firstly, mirroring a world trend, it gave a major role to nurses - 11 fulltime salaried nurses. They provide good patient skills, team skills and education at comparatively low cost. Secondly it chose only two fulltime physicians, clearly ones open to significant change and prepared to leave most treatment to others. Thirdly it recognized a role for acupuncture and chiropractic.

Fourthly, however, it chose three physiotherapists as the core of its manipulation/early exercise treatment team, even though "the key" to the program is manipulation. British chiropractors have a much more comprehensive education in this field than British physiotherapists, and Meade et al's British multicentre trial⁹ reports that chiropractors deliver significantly better results. Why use PTs first, having them refer on to a chiropractor only when patients "fail to respond"?

6. We engage in speculation here but the perceived advantages of physiotherapists to Rover management and occupational health physicians may include:

- a) PTs will leave diagnosis and coordination of care to medical doctors.
- b) They can work well within defined referral patterns and relationships with others in the occupational health unit.
- c) Their scope of practice includes all musculoskeletal dysfunction, and use of education, exercise, manual treatments and modalities.
- d) They are prepared to work on a salary, one that gives predictable and comparatively low cost.

7. What should be the response of chiropractors to this? As in any market you must counter the perceived advantages of another firstly by neutralizing them and secondly by emphasizing your own competitive advantages. Advantages of chiropractic services include:

- a) Demonstrably superior education and skills in diagnosis generally and in the key management areas of joint manipulation and manual treatments for all musculoskeletal dysfunction. (The high-

er manipulative skills of chiropractors seem to be acknowledged in Rover's management protocol.)

- b) This, as evidenced by the Meade et al trial,⁹ and The Manga Report,¹⁰ produces even better outcomes in terms of reduced disability, lower cost and higher patient satisfaction.

- c) Ability to instigate diagnostic imaging, establish a diagnosis and commence/coordinate care when a medical doctor is unavailable.

Responses to the perceived advantages of physiotherapists may be:

- a) *Scope of Practice.* The chiropractic scope of practice is just as comprehensive. (True, but is this the clear message you and your colleagues and your national association are giving?).

- b) *Established referral patterns.* Chiropractors now have these and work in interdisciplinary teams in many settings with defined referral protocols. (Is this the message you give? Do you have referral patterns defined in management charts or algorithms? The British Chiropractic Association is certainly strong in this field, and has recently worked with the UK Royal College of General Practitioners in establishing guidelines for management of back pain.¹¹)

- c) *Coordination of care by medical doctors.* By training, licensure and practice chiropractors can adopt the coordinating role and frequently do. This is so in most workers' compensation systems in North America where injured workers can choose chiropractic or medical care. Many multidisciplinary rehab clinics and sports medicine teams now have chiropractors as coordinators of care, with direct referral to medical specialists where necessary.

However this is an issue that needs to be dealt with wisely according to the needs of each industry and employer. If there are established occupational health physicians, seeking the right to take over the first diagnostic visit and coordination of care for all patients will often be too challenging and unwise. It is also unnecessary. If there is mutual respect - which there will have to be - within a short time many patients will in fact be coming direct to the chiropractor anyway.

- d) *Cost-effectiveness.* It must be demonstrated that, overall, chiropractic management is equally or more cost-effective. This involves a review of both expenses (you may demonstrate that 1

MD, 2 DCs and 2 PTs can do the work of 2 MDs and 5 PTs) and savings (introduction of DCs also produces better return to work rates and/or fewer recurrences. That is reported by the Meade et al trial and other evidence, and can be tested by a pilot study by the employer in question as chiropractic services are introduced).

8. Reflect now upon those two attitudes to public education expressed at the California Convention. Which of the following are employers such as Rover, who are accelerating skilled manipulation and exercise into the mainstream market, interested in:

- A profession that wants to explain it does not provide manipulation for relief of back pain but adjusts subluxations, and is separate and alternative to medicine; or
- One that says it has specialized education and skill in the diagnosis and management of back pain and other neuromusculoskeletal disorders, with a focus on joint manipulation and early active rehabilitation. It shares a biopsychosocial model of back pain with medicine and works within a multidisciplinary model in practice, research and the development of evidence-based clinical guidelines.

C. LISTENING TO THE PUBLIC - FOCUS GROUPS

9. The above discussion deals with employers. What about individuals?

Do you appreciate what focus groups are and why they are used by the marketing experts by Chrysler, Microsoft and Coca Cola? Do you think Chrysler designed its hugely successful minivans in the 1990s because car designers and manufacturers are more excited about selling minivans than sports cars, or because focus groups from different socioeconomic groups of consumers told them that a minivan is what they wanted?

When you think of increasing the percentage of the population that uses chiropractic services, generally or specifically in your practice, do you first think of listening to what consumers say they want, through focus groups and otherwise, or do you think about what you and other chiropractors want to tell them? Do you think about minivans about sports cars? There are two basic problems with chiropractors, or any producer of a product or service, having the answers:

- a) Your perception of the value and nature of your services is exaggerated and different from the consumer, and therefore unreliable as a starting point for promotion/ education.
- b) You will disagree with your colleagues/fellow producers - this leads to inconsistent and unclear messages, and loss of market identity. The average consumer is most reluctant to use a service/product unless it and its relevance to the consumer's needs are clear.

These principles can be illustrated with two recent examples from chiropractic in North America.

a) **CCF Documentary on Chiropractic.** In 1995 and 1996 the Chiropractic Centennial Foundation put substantial resources into producing then airing on television a documentary on chiropractic. This drew strong financial support from individuals and groups within the chiropractic profession who almost universally approved and loved the final product. Admittedly this was a project with both internal and external public relations goals - it sure satisfied the first goal.

With respect to external public relations, did it produce a message of interest to the outside world? Did it cause people to better understand or use chiropractic care? We will never know.

There were no focus groups before to find out what would interest and influence the public, no focus groups or surveys afterwards and no follow-up plan. The end result was likely an excitement for those already affiliated with the profession but no appreciable impact on the public.

b) **CCA Promotional Campaign.** By contrast the Ontario Chiropractic Association and the Canadian Chiropractic Association established a continuing public relations campaign in the print media at the same time, now in its third year. The initial funding came from a surcharge on membership dues voted in by a large majority of members who wanted to see a sustained effective public education campaign.

The OCA/CCA, in this for the long term and wanting results, accepted the need for focus groups - randomly chosen demographic groups of people who were not chiropractic patients, some comprising individuals open to the possibility of chiropractic care and others having people who admitted on telephone interview they were unlikely to seek chiropractic care. The first round of focus groups commented on chiropractic generally, the second round on the various potential messages suggested by the profession and its PR consultants. The third round of focus groups commented on various creative proposals for conveying the chosen messages.

The result, after the rather sobering process of viewing videos of these groups discussing the strengths and weaknesses of chiropractic as they saw it, was that the CCA Board unanimously approved an initial campaign that most of them had strongly opposed prior to the focus group testing. This was a campaign with two simple messages which, as the focus group testing revealed, were most likely to get non-patients to consult a chiropractor, namely:

- i) The level of education and licensure of a chiropractor
- ii) The proven safety and effectiveness of chiropractic management of back pain.

Now, in year 3, the campaign has progressed and has more emotive appeal. The point of the story, however, is that public education is very different and more effective if you start with what interests the public rather than what interests chiropractors.

D. CONCLUSIONS

10. **Focus for Public Education.** At a time when there is a fundamental change in the management of patients with non-specific musculoskeletal pain - from a traditional medical model based on rest and medication and modalities to a traditional chiropractic model based on early activation and manipulation - what will increase the use of chiropractic services?

What will lead to Ford, General Motors, managed care organizations, the medical group down the street and the average person deciding to use chiropractic services? It is suggested that public education must consistently focus on what concerns most patients and payors rather than more abstract principles that are the concern and interest of chiropractors. These principles are obviously important but it takes months if not years of training to understand and apply them - you have only moments to catch the attention of the public.

Simply put, no one comes to a chiropractor complaining of subluxation - why then would you put that concept in the center of your public education? Those chiropractors who support this all originally sought chiropractic care for conditions, usually musculoskeletal pain.

11. **The Role of Entrepreneurs.** There are two major trends influencing chiropractors in current health care marketplaces. The first, facing all health professionals, is that the public is placing them under much greater scrutiny because of past excesses. The public is not prepared to tolerate the former autonomy of health professionals with "treatment as indicated," it is demanding more control. The second, more specific to chiropractic, is that a huge new marketplace is opening up for treatment based on skilled manipulation and active rehabilitation.

The trail now to be taken by chiropractic has been blazed by many of the profession's leading clinicians and entrepreneurs. Examples are:

- Dr. Dan Hansen and Dr. John Triano of the Texas Back Institute, Dallas, where chiropractors work in a multidisciplinary environment managing primary care and post-surgical patients. They have led the development of evidence-based management algorithms in the US.
- Dr. Lu Barbuto of Toronto, co-author 10 years ago with David Imrie MD of the book *The Back Power Program*,¹² which combined chiropractic manipulation and exercise in a program welcomed by industry in the US and Canada. This integrated the services of chiropractors, medical doctors and physical therapists. Dr. Barbuto's Ontario network of 23 Active Injury Management (AIM) Clinics was recently acquired by Extendicare Inc. which has revenue of \$1.3 billion per annum from operations in Canada, the US and the UK.
- Dr. Alan Jordan in Denmark and Dr. Craig Liebenson in California, who are authorities in the development of protocols for integration of low-tech rehab into private chiropractic practices. Over 100 clinics in Denmark use evidence-based protocols and equipment developed by Dr. Jordan in an approach to practice that is now producing a strong market interest in North America.

Chiropractors are independent by nature, no bad thing, and have tended to be suspicious of entrepreneurs and networks because they:

- Acknowledge the need for limits on professional freedom, and provide limits through development of explicit guidelines and costs for care.
- Represent a competitive threat.
- Are identified as partners with the 'opposition' - third party managers and payors that are controlling health professionals.

It is certainly true that some chiropractic entrepreneurs in the US have been willing to accept grossly restrictive contracts with managed care organizations that are contrary to the evidence for quality care and prejudice all patients and the profession - contracts for example that allow only 6-8 treatments before independent review. Such entrepreneurs deserve criticism.

However third party payors and managers must be seen as partners in the marketplace, who have legitimate demands, not 'the opposition'. Just as poor entrepreneurs limit the profession, it is the strong entrepreneurs and networks that are opening hugely important mainstream market opportunities that will ultimately benefit all chiropractors.

12. **Actions You Might Take.** If chiropractors wish to provide services in the many new mainstream settings open to them, there are two main requirements:

a) *Be available.* Make yourself and your profession more available than in the past. To do this you must act at two levels. At a personal level this means actively cultivating interprofessional and business contacts in your community. Location, es-

pecially proximity to others, is important. Historically chiropractors have worked alone - many market opportunities will now require your participation in a network or group of chiropractors. Your office may remain separate but your management protocols must be defined, standardized with those of others, and easily understood by payors and patients.

At a general level it is more important than ever for you and the silent majority to be active in your regional and national chiropractic associations to make sure they present a common and consistent model of chiropractic services as a fully integrated part of mainstream care. An unclear image has been damaging to the chiropractic profession in the past - in the present era it will greatly limit your new opportunities whatever you do in your individual practice.

b) *Have a defined product.* Payors and patients are now requiring this of all health care providers. "Treatment as indicated" may survive in the marginal cash market, but it is gone at Rover and in all markets with third party payments. As discussed, a defined product means many things - not just a clear scope of practice with specified diagnostic and treatment services, but also explicit management guidelines, standard protocols for documenting and measuring outcomes, defined cost, time limited care, etc.

Here again chiropractors must act at two levels. For many there will be the need to develop new clinical, communication and administrative skills. Many postgraduate programs and chiropractic network protocols provide these. However the individual chiropractor is only one point in the chiropractic world. If a significant number of your colleagues contradict you, suggesting for example that there is conflict in chiropractors and medical doctors working together, the public will be confused and pass you by. This will limit your ability to exploit new market opportunities far more than in the past. For this reason also there is a new need to participate in professional associations. Some of these, particularly state associations in the US, have tended to reflect extreme or conflicting viewpoints.

The time has come for the silent majority in the chiropractic profession to be active, noisy and heard. 

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Professional Notes: continued from page 1

Wilkinson, BSc Chiro - Anglo-European College of Chiropractic, England.

This trial compared the responsiveness or clinical sensitivity of three valid and reliable pain scales - the VAS (Visual Analogue Scale), the VRS (Verbal Rating Scale) and the NRS (Numerical Rating Scale). It found the NRS was the most responsive - and that all pain scales were more responsive if the patient was asked to report on "their usual level of pain" at present rather than their "current pain level" as they are completing the document.

- Second prize: *Research Productivity of Chiropractic College Faculty:* Dennis Marchiori DC MS DACBR William Mecker DC MPH and Cheryl Hawk DC PhD - Palmer College, USA.
 - Third prize: *A Pilot Study of the Purchase of Manipulation Services for Acute Low Back Pain:* Neil Scheurmier and Alan Breen, DC PhD - Wiltshire Health Authority and AECC, England.
 - Special Clinical Research Award: *Chiropractic Management of Primary Dysmenorrhoea:* Bridget Bromfield, MTech Chiro - Technikon Natal, South Africa.
 - *WFC Assembly.* New national associations admitted as WFC members were from Egypt (10 DCs), Honduras (2 DCs) and Turkey (2 DCs - both recently established in Istanbul). The WFC now has 64 association/country members.
- Delegates representing 42 countries reported on the exciting growth of chiropractic worldwide. Chiropractic education is being developed in many countries - there is now a full government funded program at the University of Odense, Denmark; and university-based programs commence this September at the University of Surrey, England and next year at Feevale University, Brazil and Hanseo University, Korea.

There is particularly rapid growth in Asia where new colleges are also being considered in China, the Philippines and Taiwan. During the Congress there

was a meeting to establish an Asian Federation of Chiropractic to represent national associations in Asia on a similar basis to the European Chiropractors' Union (ECU) in Europe.

New Trial of Chiropractic for Cervicogenic Headache

The original research presented in Tokyo that had greatest clinical and scientific interest is a new trial from Denmark confirming the effectiveness of chiropractic manipulation for patients with cervicogenic headache (CH).

The trial, to be published in JMPT soon, is from Niels Nilsson DC MD, Henrik Wulff Christensen DC MD and Jan Hartvigsen DC from the University of Odense, and Dr. Nilsson reported:

Purpose: To study whether the isolated intervention of high-speed, low-amplitude spinal manipulation of the cervical spine has any effect on cervicogenic headache. *Design:* Prospective randomized controlled trial with a blinded observer. *Setting:* Ambulatory outpatient facility in an independent research institution.

Participants: 53 subjects suffering from frequent headaches who fulfilled the IHS criteria for cervicogenic headache (excluding radiological criteria). These subjects were recruited from 450 headache sufferers who responded to newspaper advertisements.

Intervention: After randomization 28 of the group received high-velocity, low-amplitude cervical manipulation twice a week for 3 weeks. The remaining 25 received low-level laser in the upper cervical region and deep friction massage (including trigger points) in the lower cervical/upper thoracic region, also twice a week for 3 weeks.

Main outcome measures: The change from week 1 to week 5 in analgesics use per day, in headache intensity per episode and in number of headache hours per day, as registered in a headache diary.

Results: The use of analgesics decreased by 36% in the manipulation group, but was unchanged in the soft tissue group; this difference was statistically significant ($p = 0.04$, chi-square for trend). The number of headache hours per day decreased by 69% in the manipulation group, compared to 37% in the soft tissue group; this was significant at $p = 0.03$ (Mann-Whitney). Finally, headache intensity per episode decreased by 36% in the manipulation group, compared to 17% in the soft tissue group; this was significant at $p = 0.04$ (Mann-Whitney).

Conclusion: Chiropractic manipulation has a significant positive effect in cases of cervicogenic headache.

Shoulders and Manipulation

Comparison of Physiotherapy, Manipulation, and Corticosteroid Injection for Treating Shoulder Complaints in General Practice: Randomised, Single Blind Study, Winters JC, Sobel JS et al (1997) *Br Med J* 1997; 314:1320-1325.

This new trial from the Netherlands compared the effectiveness of manipulation (cervical and thoracic spine and ribs), physiotherapy (exercise, massage and modalities), and corticosteroid injections in the management of 172 general practice patients with shoulder complaints. It is noted:

- Shoulder complaints were defined as "pain localised in the region of the deltoid muscle, acromioclavicular joint, superior part of the trapezoid muscle, and scapula. Radiation of the pain in the arm could be present, and the range of movement of the upper arm or shoulder girdle could be limited."
- Patients with specific rheumatic disorders, acute severe trauma (fracture, dislocation, etc.) and herniated cervical disc were excluded.
- The patients included were then divided into two groups: *The synovial group* comprised patients "with pain or limited movement in one or several directions of the glenohumeral joint ... and complaints originating from disorders of the subacromial structures, the acromioclavicular joint, the glenohumeral joint, or combinations of these (the synovial structures). *The shoulder girdle group* consisted of patients for whom the pain was assessed as "originating from functional disorders of the cervical spine, upper thoracic spine or the upper ribs (the shoulder girdle)."
- For the shoulder girdle group of patients, who received either manipulation or physiotherapy, manipulation was significantly superior and the investigators pronounce it the preferred treatment. For the synovial group of patients corticosteroid injections were superior to both manipulation and physiotherapy, and thus recommended as the preferred treatment.

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