The Chiropractic Report

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Professional Notes

Disc Herniation and Sciatica – Non-Surgical Care Safe and Equally Effective

A major new US trial of surgical vs nonoperative treatment for back pain and radiating pain from lumbar disc herniation published in the Journal of the American Medical Association on November 22 is the first large, well-designed trial comparing surgery for sciatica with waiting. It led to extensive media coverage because of its quality, because the researchers were senior medical figures in the US (lead author is Dr. James Weinstein from Dartmouth Medical School, Hanover, New Hampshire, editor of the journal *Spine*), and because the study reported important results challenging much conventional thinking.

These results were that patients with disc herniation recover almost equally as well with surgical or non-surgical care; that even where there is severe sciatica there is no risk of significant harm through opting for waiting and non-surgical care; and that patient choice is important and should be respected.

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Patient Satisfaction with Chiropractic Care

Consistently High Rates are Achieved — How and Why?

". . . chiropractors are very effective at communicating, . . . the studies have identified the doctor–patient communication as the key component (in the high rates of patient satisfaction)"

Ian Coulter, PhD, sociologist, 2005[1]

A. Introduction

NO ONE DISPUTES THE FACT that chiropractic patients are generally very satisfied with their care, and that patient satisfaction rates for chiropractic care are consistently higher than for medical and other forms of care with which they had been compared. These conclusions are supported by extensive research discussed below.

And as Gary Gaumer PhD says in a new independent national survey in the USA, which again reports a high satisfaction rate, "this is remarkable given the fact that much of the financial burden of the care is borne by patients, and that the preponderance of care is for the difficult chronic problems of (the) back and neck."[2]

2. While this is obviously good news for doctors of chiropractic (DCs) and their patients, it raises many interesting and practical questions such as:

- Why is this?
- How much of this is influenced by the circumstances in which patients choose chiropractic care?
- What specific aspects of the 'chiropractic clinical encounter' increase or reduce patient satisfaction?
- How can individual practitioners further improve patient satisfaction?

There is now good quantitative and qualitative research to answer these questions, which is reviewed in this issue of The Chiropractic Report. There will be surprises for many DCs. For example:

- While the success of treatment is an important factor in patient satisfaction it seems not to be the most important – patients rate good communication and specific aspects of that, most important.
- While many DCs consider advice on philosophy of chiropractic an important part of communication – and this proves to be true – the content of that advice is not as important as the enthusiasm with which it is given. The research suggests that advice on healthy living and future wellness and the theories of chiropractic has relatively little impact on patient satisfaction rates. What satisfies patients most is good information and a satisfying explanation for their current health problems and treatment and self-help choices, and confirmation that chiropractic treatment is a logical and appropriate choice. However enthusiastic advice on the wider impact of chiropractic and wellness is interpreted by patients as clinician confidence and concern for them – which in turn builds patient confidence and satisfaction.

We now review the general evidence on satisfaction rates, then discuss the differences between qualitative and quantitative evidence and specific aspects of patient satisfaction.

B. Patient Satisfaction Rates

3. Gaumer's recent survey was published together with a literature review in which the results of various satisfaction studies between 1996 and 2000 were summarized in a table reproduced as Table I. These results show that, in various settings with various different populations of patients, surveys report high satisfaction rates for chiropractic patients and/or higher satisfaction than for patients receiving medical care for similar problems. The only two exceptions are a US osteopathic study in 1989 that has the exceptionally low number of 27 chiropractic patients only,[6] and the Cherkin et al. study in 1998.[12] This

reports equal satisfaction rates for chiropractic care and physical therapy care using the McKenzie Methods protocol, both of which produce higher satisfaction in a managed care (HMO) setting than minimal medical care.

Gaumer's review fails to include much other evidence before and after 2000, which will be commented on below, but together with his own survey draws him to the conclusion that "overall satisfaction levels amongst persons using chiropractic is very high." Gaumer is a health services expert from the Department of Health Care Administration, Simmons College, Boston. Relevant details from his survey are:

• From a large group of respondents to a national telephone survey there was a random selection of 400 persons who had had chiropractic treatment, 400 who had not.

• 96.1% of those in the chiropractic patient group had sought care for back pain (68.2%) and/or neck pain (22.6%) and/or headaches (5.3%).

• 83% were either very satisfied (53.5% – over half of all patients) or satisfied (29.5%) with their chiropractic care. This was amongst all past chiropractic patients, including those who hadn't sought care in the last year – who represented 49.2% of the patient survey.

• Fewer than 10% were dissatisfied (3.8% very dissatisfied, 5.5% dissatisfied)

• The rest (7.5%) were neither satisfied nor dissatisfied. Reasons for answers were explored and will be discussed – see below.

4. The first study listed in Table 1, by Cherkin and MacCornack in 1986, [3] has always been regarded as a landmark in this field and remains the most thorough comparative study of satisfaction with chiropractic and medical treatments for patients with low-back pain (LBP). It surveyed 457 LBP patients in a Washington State health maintenance organization (HMO) who had visited either family physicians (MDs - 215 patients) or doctors of chiropractic (DCs – 242 patients) and looked at specific causes of satisfaction or dissatisfaction. It found:

a) The percentage of chiropractic patients who were "very satisfied" with the care they received for low-back pain was 3 times that of patients of MDs (66% versus 22%).

b) Common reasons for higher satisfaction with care included:

• More information received about the back problems, including the cause of pain, recovery from pain, content of care and instructions on exercise, posture and lifting.

• The amount of time the DC spent listening to the patient's description of pain.

• The DC's belief that the pain was real and expression of concern

• Doctor confidence in the diagnosis and effectiveness of treatment.

These findings were consistent with an earlier Australian survey by Boven[14] of a representative sample of 627 patients with general musculoskeletal complaints, as opposed to back-pain only, who had seen two or more of an MD, DC and physiotherapist (PT) for their complaints. Satisfaction with DCs was markedly higher – 51% were very satisfied with DCs, as opposed to 16% for PTs and 8% for MDs. At the other end of the scale 12% were not at all satisfied with DCs compared with 40% for PTs and 44% for MDs.

5. The second study in Table 1, by Sawyer and Kassak in 1989[4] was a mailed survey of chiropractic patients in Minnesota and Wisconsin that asked questions on perceived treatment results as well as overall satisfaction with care. This reported that 84% of patients were "very satisfied", though that unusually high percentage of patients "very" satisfied may have been biased by the survey methods – a mailed survey form with only a 70% response rate. It is noteworthy, however, that only 1 in 2 (47%) of the very satisfied group considered that their health had improved substantially or completely under chiropractic care. Almost all (97%) agreed that they would "recommend their chiropractor to a friend or relative." Asked about fees, about 1 in 4 (25%) were dissatisfied with costs and inadequate insurance coverage.

There are many other surveys in the USA and Canada, some published and some performed by polling experts for chiropractic associations and unpublished, that support an 85 to 90% overall satisfaction rate (very satisfied or satisfied). For example:

a) 1988 telephone survey of 500 randomly selected householders in Connecticut by Wardwell[15] found 21% had visited a doctor of chiropractic and 89% were satisfied with care. Approximately 3 in 4 (78%) rated the treatment effective or very effective and said that they would visit a DC again for the same or a similar problem.

b) In a 1990 telephone survey of 693 randomly selected householders in New Jersey, Sanchez[16] reported that 29% had visited a DC. Of them:

• 88% were satisfied (23%) or fully satisfied (65%) with the effectiveness of the treatment.

• Nearly all were satisfied or fully satisfied with the chiropractor's professional attitude (97%), competence (93%) and level of attention (96%).

• Greatest sources of dissatisfaction were the number of visits (29%) and cost (23%). This represented approximately 1 in 4 patients, similar to the Connecticut survey.

c) In 2003 the Environics Research Group, commissioned by the Canadian Chiropractic Association, conducted a telephone survey of a representative sample of 1,500 Canadians aged 18

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Table 1: Recent Satisfaction Studies

Author	*Year*	*No. of DC patients*	*Type of patient*	*Type of setting*	*Location of study*	*Selection of comparisons*	*Follow-up*	*Major findings about satisfaction*
Cherkin and MacCornack[3]	1986	257	LBP	HMO	Seattle area	Nonrandom MD	8 mo	DC patients more satisfied
Sawyer and Kassak[4]	1988 -1989	376	All DC patients	Community	Minnesota and Wisconsin	None	NA	High DC satisfaction
Carey et al[5]	1995	1633	First episode of LBP	Community	North Carolina	Nonrandom PCP—MDs Orth Surg	NA	DC patients more satisfied
Licciardone and Herron1[6]	1989	27	All adults	All	National	Nonrandom DO, MD, other non-MDs	NA	DC patients less satisfied
Hertzman-Miller et al[7]	1995 -1998	341	LBP	MC	South California	Random MD	4 wk	DC patients more satisfied
Verhoef et al[8]	1995	369	Neck or Back Pain	Community	Alberta	None	6 wk	High DC satisfaction
Meade et al[9]	1989	608	LBP	NHS sites	UK	Randomized PT in OP department	6 wk	DC patients more satisfied
Nyiendo et al[10]	1993	93	LBP	Community pilot study	Portland, Ore	Nonrandom MD	1 mo	DC patients more satisfied
Nyiendo et al[11]	1994	2945	LBP	Community	Oregon and Washington	Nonrandom MD	1 y	DC patients more satisfied
Cherkin et al[12]	1998	321	LBP	HMO	Seattle area	Randomized (3) McKenzie PT pamphlet	4wk	PT = DC satisfaction, both N pamphlet
Gemmell and Hayes[13]	2000	66	Patients filing claims	MC patients	Oklahoma	None	2-5 mo	Very high DC satisfaction levels

HMO, Health maintenance organization; MC, managed care; NHS, National Health Service; PCP, primary care provider; DO, Doctor of Osteopathy; PT, physical theraphy(ist); OP, outpatient; Orth Surg, Orthopaedic surgeons.

From Gaumer, JMPT, 2006.

and over with back pain, specifically to examine "the extent to which Canadians suffer from back pain, the action that they take to relieve their suffering, and levels of satisfaction with various therapies." [17] Findings included:

• The most popular choice for those consulting a health care practitioner for their back pain was a doctor of chiropractic, despite much higher co-payments/user fees than for medical and for para-medical care under the Canadian health care system.

• There was a much higher patient satisfaction level for chiropractic care than any other treatment approach, with approximately 2 in 3 (69%) "very satisfied" and more than 9 in 10 (92%) "very or somewhat satisfied". This compared with less than half "very satisfied" with medical and/or physiotherapy care (43%) or the use of prescription and OTC medications (35% and 30% respectively).

6. Perhaps the most significant new evidence of chiropractic patient satisfaction during the past year comes from the 18 month follow-up results from the University of California at Los Angeles (UCLA) low-back pain trial by Hurwitz and Morgenstern published in *Spine*[19]. In this large, federally-funded trial from prominent researchers 681 adults with mechanical, sub-acute or chronic, low-back pain and belonging to an HMO in Southern California were randomly assigned to 1 of 4 treatment groups – medical care with and without physical therapy, and chiropractic care with and without supportive modalities. Although chiropractic patients did slightly better at 6 and 18 months follow up the difference in term of disability and days off work was not large. This may have been because of the very limited number of treatments given in this managed care setting – an average of 5.4 treatments during a six months period in each of the chiropractic care groups and medical care with PT group. What was noted, although, was:

• Perceived improvement in low-back symptoms was much higher in the chiropractic patients than the medical patients.

• So was overall satisfaction with care.

7. In conclusion, satisfaction levels are high, both absolutely and comparatively, for chiropractic patients – whether they chose chiropractic care for back-pain or other complaints, whether they were surveyed in person or by written survey form, and whether during an episode of care or during a randomized trial or during months and years after treatment is completed.

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In this Spine Patient Outcomes Research Trial (SPORT) which enrolled eligible patients from 13 multidisciplinary spine clinics between March 2000 and November 2004:

a) Patients were 501 surgical candidates who were 18 years or older, and had intervertebral disc herniation and persistent symptoms of radicular pain for six weeks despite use of nonoperative treatments.

b) They were randomized into two groups:

i) The surgery group – receiving open discectomy with removal of disc fragments and nerve root decompression.

ii) The nonoperative group – receiving "usual care" but including a minimum of active physical therapy, education/counselling with home exercise instruction and NSAIDs if tolerated. 36 patients only (11%) received chiropractic care.

c) Primary outcome measures were the SF-36 and a modified Oswestry Disability Index with measurements taken at baseline and then follow-up periods of 6 weeks, 3 months, 6 months and 1 and 2 years. Results on both primary outcome measures were that both treatment groups showed strong improvements at each of the designated follow-up times, with small but non-significant advantages to surgery. It is said that "there was little evidence of harm from either treatment" but 5% of surgical patients had intraoperative complications, and 4% required re-operation within 12 months.

d) This trial provides no comparison of the effectiveness of surgery against any specific nonoperative protocols, including chiropractic care or any use of spinal manipulation – which was little used.

e) High numbers of patients chose to cross over from one group to the other – going both ways. Those more likely to cross over to receive surgery tended to have lower incomes and worse baseline symptoms and baseline disability – those more likely to cross over to nonoperative care were older with higher incomes and less disability and more likely to rate their symptoms as getting better at enrolment for the trial. Globally, however, all patients – including those with more severe pain and disability – did equally well with either surgery or nonoperative care.

f) Weinstein et al. note that lumbar disc herniation is often seen on imaging studies in the absence of symptoms, and can regress over time without surgery and that the 15-fold variation in regional discectomy rates in the US, and lower rates internationally certainly "raises questions regarding the appropriateness of some of these surgeries."

A prominent *New York Times* article on the trial on November 22 noted that "in the end . . . neither waiting nor surgery was a clear winner and most patients could safely decide what to do based on personal preference and level of pain" and that "many surgeons had long feared that waiting would cause severe harm, but those fears were proved unfounded". Senior surgeons were then quoted acknowledging that many doctors as well as patients feared harm if surgery was delayed - but that this study dispelled that fear.

(Weinstein JN, Tosteson TD et al. (2006) *Surgical vs Nonoperative Treatment for Lumbar Disk Herniation: The Spine Patient Outcomes Research Trial (SPORT): A Randomized Trial*, JAMA 296:2441-2450, *Observational Cohort,* JAMA 296:2451-2459.)

Research Notes

1. **Switzerland – Is Back Pain Linked to Spinal Pathology?**

Low-back pain (LBP) is particularly common amongst nurses, and for them and other workers LBP is known to be associated with activities such as lifting, pulling, pushing and carrying, in combination with working in forward, bent or twisted positions. But is this type of work and prevalence of LBP amongst nurses associated with degenerative changes in the spine?

This new study from Zurich reports no. It compared 109 subjects from nursing (high dynamic workload) and administration (static seated work) with persistent LBP and age match controls without LBP. Lumbar disc degeneration was studied by MRI.

Disc form and disc degeneration did not differ between nurses and administrative personnel, whether with and without low-back pain. No structural alterations in the lumbar intervertebral discs were found associated with the high prevalence of LBP in nurses.

(Schenk P, Läubli T et al. (2006) *Magnetic Resonance Imaging of the Lumbar Spine: Findings in Female Subjects from Administrative and Nursing Professions*, Spine 31(23)2701-2706).

2. **Japan – Thoracic Manipulation and Heart Rate Variability**

Brian Budgell, DC PhD, School of Health Sciences, Faculty of Medicine, Kyoto University, Japan, an international research leader in the field of somatoautonomic reflexes, has moved from his extensive animal experiments to human experiments. This new trial published in JMPT reports that thoracic spinal manipulation of healthy young adults is associated with significant changes of heart rate variability (HRV) not found following sham manipulation. The ultimate clinical significance of this, however, is yet to be established. Points are:

a) 28 healthy young adults (normotensive blood pressure, no spinal pain or cervicothoracic discomfort on extreme active cervical rotation) were randomized into two groups, with subjects receiving either two manipulations (high velocity with audible click) or sham manipulations (light, brief impulse with both hands on scapulae, no audible sound) one week apart.

b) ECG recordings from 5 minutes before and after the manipulation/sham manipulation were analyzed. During this time period subjects coordinated their respiratory rate with a metronome.

c) Results were that there was no significant difference in HRV following the sham procedure, but significant differences in HRV and autonomic output to the heart in subjects receiving spinal manipulation. Specifically this involved "significant increases in absolute and normalized levels of the low frequency (LF) component of the power spectrum as well as in the LF/HF (high frequency) ratio". This represents "an increase in sympathetic output to the heart and a shift in the balance of sympathetic to parasympathetic cardiac output in favor of the sympathetic component."

Budgell and Polus provide a good review of the few past human

physiologic experiments on somatoautonomic reflexes. In explanation of their results they suggest that the unique quality of manipulation in increasing sympathetic output may be activation of muscle spindles in paraspinal muscles – thereby modulating cardiac autonomic output.

(Budgell B, Polus B (2006) *The Effects of Thoracic Manipulation on Heart Rate Variability: A Controlled Crossover Trial*, J Manipulative Physiol Ther 29:603-61)

World Notes *Source: World Federation of Chiropractic.*

Canada: A recent government survey of health care services in the Province of Alberta, Canada, reports that 1 in 5 adults in Alberta (20%) used chiropractic services during the previous year – understood to be the highest utilization rate reported anywhere internationally in a public survey. There was also a 90% satisfaction rate, with 67% very satisfied and only 3% dissatisfied. For fuller details go to www.hqca.ca, click on Publications, then go to Satisfaction with Health Care Survey.

China: In November WFC Secretary-General Mr. David Chapman-Smith and Life University Director of International Operations Dr. John Downes were in Beijing to support the growth of chiropractic in a city of 14 million and to meet Beijing's only four doctors of chiropractic. The two most established, both of whom received government-approved licences to practise in 2000, are Dr. Anli Dong, a Sherman graduate in private practice, and Dr. Ferida Khanjani, a National graduate who practises at the Beijing United Family Hospital. Life University is establishing a clinic at a second hospital. While chiropractic is fully established in Hong Kong, with full licensure and over 100 chiropractors, there are understood to be only 8 chiropractors in the rest of the People's Republic of China. However this is a country, unlike some others in Asia, with a health system very open to innovation in health care.

The Netherlands: The Netherlands Chiropractors' Association (NCA) representing approximately 200 of the Netherlands' 250 chiropractors, held its 30th anniversary seminar and celebrations on the weekend of October 6-7, 2006. Dr. Jan-Geert Wagenaar, NCA President, leads the profession in a country where practice is not yet regulated by law – there is a voluntary registration board established by the NCA but no legislation restricting who may practise as a chiropractor – but perhaps the best reimbursement for chiropractic services anywhere. Under the Dutch health care system the great majority of patients have insurance coverage for chiropractic care with a low co-payment, and chiropractic in The Netherlands is flourishing.

Serbia: The WFC has recently received an application for membership from the Serbian Chiropractic Association, led by Dr. Peter Dinich of Belgrade, a 2003 Life University graduate qualified in each of chiropractic and medicine. He would greatly appreciate hearing from chiropractors elsewhere with a Serbian background interested in joining the SCA to support the growth of chiropractic in Serbia. *Contact:* Dr. Peter Dinich at npdinich@yahoo.com.

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C. Factors Influencing Satisfaction

8. Many things will influence patient satisfaction, and these will vary in importance for individual patients, but what are the major common factors? Discovering an answer to this question was the main goal of Gaumer's recent survey[2]. He describes three main areas relevant to satisfaction:

a) Better outcomes/results (e.g. more pain relief, faster return to activity, fewer side effects).

b) Better service quality (e.g. better access, more effective communication, the attitude of the professional).

c) More agreeable methods (e.g. the person consulted actually providing the treatment rather than referring, no prescription drugs, more frequent contact/visits, emphasis on self-help and partnership).

However, after probing for an answer in his survey, Gaumer concludes that the main factors driving patient satisfaction remain unclear. In our view he is wrong – and this seems to be because he has focused too much on quantitative evidence. This is research relying on structured questionnaires and measurements to provide clear data, and that is essentially grounded in the perspective of the researcher, even if patients are asked questions about their views. The patient answers according to one of the alternatives given. Quantitative measures and answers tend to overlook relevant information and over-simplify matters.

The picture changes when you add good qualitative research, a type of research that is better suited to areas in which you are trying to identify and explain behavior – including for example what patients are really looking for when they choose chiropractic care and what produces satisfaction from the full clinical encounter. Qualitative research involves deeper and more extended observation, and is grounded in the patient's perspective rather than that of the researcher. Good examples from Canada in the current context are:

a) The 1980 observational study titled *Chiropractors: Do They Help*?[20] by sociologists Kelner, Hall & Coulter, who randomly sampled 349 DCs and 658 of their patients in these ways – observation of patients receiving care, separate interviews with DCs and patients, following some patients over a total episode of care rather than one day or treatment visit, 1 to 2 days observation on all aspects of 70 of the practices. Additionally one researcher became a patient to conduct participant observation. All this qualitative observational data was then combined with quantitative data from structured questionnaires.

b) The 1994 Caplan Report[21] for the Canadian Chiropractic Association, an extensive qualitative investigation into attitudes toward and perception of chiropractic in Canada. Methods included focus groups and in-depth individual interviews of doctors of chiropractic, chiropractic patients and other members of the public. The 12 public focus groups (8 to 10 participants each), for example, were a cross-sample of men and women in specific age categories, but mixing persons currently or recently under chiropractic treatment (50% of all participants) with those recently under care but discontinuing treatment by their own decision (25%), and those never under chiropractic care although having physical complaints identical to those of the others who were chiropractic patients. As noted in the report, "Group composition was orchestrated so that in each group there was bound to be disagreement and confrontation". Such research is designed to reveal hidden and even unconscious feelings, and get beneath the relatively superficial answers to surveys.

9. Given his professional background Ian Coulter, PhD, one of the sociologist researchers for the Kelner, Hall & Coulter study and subsequently a president of the Canadian Memorial Chiropractic College during the 1990s, is naturally a strong supporter of combining quantitative and qualitative research. From this background he has recently provided by far the best description of the chiropractic clinical encounter from a patient's perspective – and therefore the prime factors that will produce strong patient satisfaction. In a chapter titled *Communication in the Chiropractic Health Encounter* in Haldeman's *Principles and Practice of Chiropractic*[1] that is concise, clear and rewards thorough study he notes:

a) **Pre-encounter factors.** The full context of chiropractic care includes important pre-encounter factors that are highly relevant to patient satisfaction with treatment later received. These include:

i) Push Factor. This exists for many patients, and is dissatisfaction with prior use of other forms of care for their specific problem. Implications are that the patient comes to chiropractic with a basis to compare and judge the performance of the DC, that the DC is dealing with an already dissatisfied patient, and that the major focus of the patient is going to be on the results. DCs often interpret dissatisfaction as a general dissatisfaction with medicine but, as Coulter explains, research shows that is wrong – the great majority of new chiropractic patients remain satisfied with medical care in general and "dissatisfaction is highly focused on the patient's specific problem or health complaint".

ii) Pull Factor. The majority of chiropractic patients have a pre-existing positive recommendation for chiropractic care – for 1 in 3 (30%) this is from a family member. The patient has accepted the recommendation. The DC has a specific role model to build upon – the patient making the recommendation.

iii) Social Context. For most patients, even when following a recommendation, the choice of chiropractic is a step into the unknown. There is no automatic legitimacy and familiarity as for medical care, which has been experienced by most people directly (as patients) and indirectly (portraits in the media) since early childhood. This means that the "medical encounter" has shared expectations and meaning for doctors and patients

This is generally not so for the first "chiropractic encounter", which has important consequences. Is the patient going to be asked to disrobe, to be given a blood pressure examination, to be given an intrusive examination by hand? A first chiropractic visit is more problematic for both the patient and doctor. It calls for, and in response DCs provide, much more explanation – first of the specific problem and its treatment, but second also of the whole basis of chiropractic care. With respect to social context a further issue, still relevant in many countries, is the history of medical opposition to chiropractic care. Many patients arrive with concerns from that quarter.

In summary, the social context means chiropractors need to assume that they must establish confidence and legitimacy with patients during the initial visits. This clearly means two things are vital – good communication and good results, with results at least as good as previous other care for the same problem.

iv) The Patient's Health Problem. The last pre-encounter factor given by Coulter is the type of health problem first presented

by patient. These problems are "overwhelmingly neuro-musculoskeletal in nature". When patients in his Canadian study were asked to listed the conditions suitable for chiropractic care 57% listed 4 or fewer complaints, with back and spine conditions predominating. When the Health Department of Western Australia surveyed a representative sample of 310 adults in 1990: [22]

• Approximately 1 in 3 (104) had visited a DC, most commonly for back problems (61%), neck problems (23%), extremity problems (11.5%) and headache (7%). The highest non-NMS reason was breathing/asthma (2%) and 1% had visited for health maintenance.

• Of the 206 who had never visited a chiropractor the majority (68%) said they would be prepared to do so. When asked what for, most common responses were back, neck, spine (60%), joints (24%), muscular pain (20%) and headaches (7%). No non-NMS conditions rated over 1% and only 4% would visit a chiropractor "to maintain good health".

• Asked if DCs had an important place in health care system 3 out of 4 of all respondents (72%) agreed. Asked if DCs should diagnose general health conditions in a similar way to MDs 92% of them disagreed (79%) or said they did not know (13%).

In the US Hurwitz et. al.[23] reported in 1998 that 68% of chiropractic patients sought care for low-back pain. Non-NMS conditions accounted for less than 1% of recorded reasons for care. Gaumer's recent survey is remarkably consistent with this. In summary, patients first seek chiropractic care for very focused reasons – there are focused expectations for the doctor of chiropractic to meet.

b) **The Clinical Encounter.** We have already noted that good results are an important part of patient satisfaction, and specific aspects of chiropractic treatment have proven benefit. For example spinal adjustment/manipulation, rehabilitative exercises, and patient motivation/advice on postures and lifestyle have been primary evidence-based interventions for mechanical back and neck pain and headache since the mid-1990s. On this see, for example, the European guidelines for acute and chronic back pain available at www.backpaineurope.org .

But, as Coulter observes, these treatments and the various individual aspects of the 'chiropractic clinical encounter' are not unique. Patient conditions treated by DCs are treated by others also. Skilled spinal manipulation is performed by other health professionals, who also use exercises, nutritional supplements, electrotherapies, acupuncture and other supportive methods used by DCs. Aspects of the philosophy of chiropractic are shared by many other complementary health care providers. Yet chiropractic patients record the highest satisfaction levels. This leads Coulter to these conclusions:

• Uniqueness. The uniqueness of chiropractic is not located "in any single element of the encounter, but in all the elements taken together – the totality of the chiropractic health encounter."

• Quality of Communication. His sociologist's perspective of why patients perceive chiropractic care as unique, which in turn provides a foundation for effectiveness and strong patient satisfaction, is the high quality of communication by DCs and their staff during the chiropractic visit or overall health encounter. This communication responds closely to the pre-encounter needs just described. Two aspects are particularly important:

i) **Explanation of the health problem.** Quality communication is achieved through three methods used, which are:

• Concrete and clear language that demystifies the problem and is easily understandable. Much use is made of analogies (e.g. correcting a mechanical health problem similar to wheel alignment of a vehicle.)

• Visual Aids – virtually all DCs use printed materials, charts and skeletal models to reinforce explanation.

• Hands-on examination – this plays a powerful role. As DCs use skilled palpation with patients to reproduce pain and find stress points not previously detected by the patient "this provides powerful and instant confirmation that the chiropractor knows and understands the human body."

The net effect, in the words of another researcher Coulehan, "is a logical set of explanations which appeal to common sense, use scientific terminology, yet promote a natural, non-invasive, holistic approach to healing." [24] The patient's problem is validated, is confirmed as legitimate and detectable by others with appropriate training.

ii) **Concern for the patient and confidence.** The research demonstrates that patients consistently report that DCs have genuine concern for them and their problems, and confidence that chiropractic treatment will help. These, of course, are attributes that are known to influence and improve health. In the words of Coulehan, DCs have the "faith that heals", communicating strong belief in their profession and that they can help the individual patient.

This raises an interesting point concerning the significance of the philosophy of chiropractic to new patients. Many DCs devote time to explaining the theories and philosophy of chiropractic to patients and consider them important. These include the role of chiropractic care in prevention and future wellness. On one hand such explanations do not respond to the focused needs of the patient and the pre-encounter factors we have discussed, and research suggests that relatively few patients understand or recall what they were told. For example Coulter found that while the majority of DCs explain the philosophy of chiropractic to patients only 9% of patients "gave a definition with contained any chiropractic philosophy." In their interviews and focus groups Caplan et al. found that DCs described a major role in prevention, but there was not a single member of the public – including chiropractic patients – who mentioned prevention in relation to chiropractic. "They view prevention as important – but see it as related to self-help methods such as diet and exercise, not chiropractic care".

On the other hand this explanation of the broader value of chiropractic health care does have value. This is because it is interpreted by patients as confidence and commitment by DCs and even, as reported by Shapiro et al., [25] a special interest and concern for them – factors that do improve healing and satisfaction.

D. Conclusion

10. The most predominant reasons for high satisfaction with chiropractic care are the content and quality of communication by DCs and their office staff, and successful results. Some of the research discussed, which reports good satisfaction rates even amongst those without substantial improvement in their condition, suggests that results are of secondary importance to good communication.

It is true that much more remains to be learnt about the influence of other factors on patient satisfaction rates – items such as accessibility, duration of treatment, treatment frequency,

out-of-pocket cost of care – but current research suggests that none of them is of large importance. They may be important to access to and choice of chiropractic care, but they are not the main issues for satisfaction levels. For example:

a) In the UCLA back-pain trial mentioned (para 6) there was much higher satisfaction for DC patients than MD patients, but a multivariate analysis demonstrated that longer visits, more visits, current pain level and even pain improvement did not influence satisfaction level – major drivers were explanation of the treatment and the amount of self-care advice given – in other words the quality of information and communication.

b) In Gaumer's study factors that proved insignificant in relation to overall satisfaction included waiting time in the office, something which might be thought to be important for patient satisfaction, and advice about staying healthy and preventing illness. Factors that did correlate with overall satisfaction were explanation of health problems and choices in a understandable way and the patient's perception that the DC was concerned about him or her.

The primary message for practitioners is that the content and quality of communication is of central importance both to good clinical results and high patient satisfaction, and that key elements of effective communication should be response to the patient's immediate and practical needs, and confidence concerning the choice of chiropractic care. TCR

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