The Chiropractic Report

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Professional Notes

LBP – Predictors of Chronic Disability

Low-back pain (LBP) is the most prevalent and costly work-related condition, and most of the cost relates to the small percentage of workers with acute injuries who progress to chronic disability.

Accordingly risk factors that are early predictors of chronic disability – particularly those that can be influenced – are important. However there have been few studies assessing these factors in a large population-based sample. An impressive new study from Turner, Franklin et al. at the University of Washington, does so and reports that one risk factor/predictor of chronic disability is choice of healthcare provider – and that "workers whose first health visit for the injury was to a chiropractor had substantially better outcomes".

1885 workers back injury claims involving at least four days of lost work time, and covered by the State Fund in Washington from July 2002 through April 2004, were interviewed by telephone three weeks after submitting a lost work time claim for back injury. Significant baseline predictors of one year work disability were subsequently found to be:

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New Best Practices for Chiropractic

Patient-Centered vs. Payer-Centered Care

A. Introduction

IN NORTH AMERICA THE RElentless upwards spiral of healthcare costs in the last quarter of the 20th century produced the current era of managed care.

There is no question that the excessive cost of American medical care needed to be reined in. There is also no question that third party payers in managed care have been ruthless in establishing rules and procedures based on financial targets rather than reasonable patient care.

Money that should be going to patient care is going to a bloated administration and managed care owners. In the US the ratio of physicians to administrators is now almost 1 to 1 (1 to 0.95)[1].

Research is quoted and used selectively. Valuable evidence of effectiveness of treatments from prospective studies, from individual randomized controlled trials (RCTs) and for subgroups of patients, is excluded or diluted in broad systematic reviews that typically make tentative conclusions only – allowing payers to assert there is insufficient evidence.

Crucial differences in quality of care are ignored. In the field of spinal manipulation for example, there are fundamentally different levels of education and skill for different health professions. This is apparent from trials such as Meade et al., [2,3] where chiropractors received significantly superior results for back pain patients than did physical therapists, and Carey et al., [4] where medical doctors given postgraduate training in spinal manipulation proved unable to assess and treat back pain patients successfully. Yet systematic reviews bundle all the trials together to provide one overall assessment of whether spinal manipulation is an effective treatment.

In this situation it is imperative that the chiropractic profession has its own defined set of best practices to guide and explain quality patient-centered care – and defend patients and clinicians against the inappropriate economic agenda of many third party payers.

2. This is the reason why the profession in North America has established the Council on Chiropractic Guidelines and Practice Parameters (CCGPP). The *Journal of Manipulative and Physiological Therapeutics* (JMPT) has now published some first products of this important Council, namely:

a) A *Best Practices Report on Chiropractic Management of Low-Back Disorders* by Globe, Morris, Whalen, Farabaugh and Hawk,[5] supported by a new literature review by Lawrence, Meeker, Branson et al. [6] – which is specifically on chiropractic management of low-back and related leg disorders, and is one of three research studies upon which the new best practices are based.

b) Literature reviews relative to chiropractic management of:

- Myofascial trigger points and pain syndromes – Vernon and Schneider.[7]
- Fybromyalgia – Schneider, Vernon, Ko, Lawson and Perera. [8]
- Tendinopathy – Pfefer, Cooper and Uhl. [9]

These are accompanied by a strong, clear and authoritative editorial by John Triano, DC PhD, formerly of the Texas Back Institute in Dallas, now Dean of Research, Canadian Memorial Chiropractic College, Toronto, and widely regarded as a leading international authority on the management of back pain. Triano's editorial is titled *What Constitutes Evidence for Best Practice?*[1] and makes many wake up and helpful statements such as:

"Under-treatment" is as much of a policy concern as "over-treatment", is often caused by economically-driven interpretation of evidence and guidelines

by third parties, and is now "a serious problem with evidence of association of increasing chronicity and expense".

"Evidence-based" was never intended to mean "evidence-enchained." As explained by Dr. David Sackett and other founders of evidence-based medicine, good practice involves a blend of "best external evidence" and "individual clinical expertise" – and as Sackett has said "neither alone is enough".[11]

In this issue of the Report we look at these new publications and their importance in clinical practice – but first some brief history of the CCGPP.

B. CCGPP - Background

3. In January 1992 all the major chiropractic organizations in the US, led by the Congress of Chiropractic State Associations (COCSA) because it was seen as the most representative of the profession, held a conference at the Mercy Center, San Francisco to agree upon the profession's first ever evidence-based consensus guidelines for practice. This led to the Guidelines for Chiropractic Quality Assurance and Practice Parameters (thereafter known as the *Mercy Center Guidelines*) published by Aspen in 1993.[12]

These Guidelines represented a major step forward, demonstrating a maturity that gave the profession new credibility in many circles. One result was appointment of two representatives of the profession, Dr. Scott Haldeman and Dr. John Triano, to the US government's AHCPR Panel that produced the first US national guidelines on management of back pain in 1994. Another result was that there was evidence-based support for many aspects of chiropractic practice, including management of patients with conditions sometimes labelled as contra-indications to chiropractic care by others – such as DJD, osteoarthritis, spondylolysis and spondylolisthesis.

However, these guidelines were promulgated at a time when the whole process of guidelines development and dissemination was not well understood and developed. They were not user friendly, and were misinterpreted and used inappropriately by many third party payers.

4. Over the last 15 years much has been learnt about the process of developing and disseminating and gaining acceptance of practice guidelines. One aspect of this has been more sensitive use of language – for example the differences between evidence-based and evidence-informed care, between standards and guidelines and best practices, etc.

5. Later in the 1990s the same US chiropractic organizations, again led by COCSA, formed the Council on Chiropractic Guidelines and Practice Parameters (CCGPP), as an independent organization with an elected Council and appointed Research Commission, and representative panels of expert and clinically experienced doctors of chiropractic asked to produce best practices reports for different fields of chiropractic practice. The papers now discussed are the first published best practices of the CCGPP, and related research reviews. Other evidence reviews and best practices are being developed for other areas of practice – preventive and wellness care, extremities, the cervical spine and non-musuculoskeletal disorder.

The overall goal of the CCGPP is to establish a fair basis for the provision of chiropractic healthcare services, and judgement of them by others – one based upon credible evidence and patient-centered care and not driven by selective evidence and other agendas. They are a shield for patients and providers for appropriate care – but also a sword for inappropriate and undocumented care.

C. Triano Editorial

4. Dr. Triano is a recognized leader in spine care because of a prominent career in both research and clinical practice. His doctoral degree is in spinal biomechanics. Following his participation on the US AHCPR Clinical Practice Panel he, with Richard Deyo, MD MPH from Washington, was one of the two featured experts on the Time Life Medical video *Back Pain* designed for public education. His editorial is important because of his reputation and the important and well-referenced conclusions he makes.

Triano starts by confirming that in the US "the system for delivery of healthcare services is broken", and that this specifically includes the management of patients with spinal pain. Points are:

a) Healthcare costs continue to rise. Administration/bureaucracy, meant to contain costs, is now part of this problem. It is also increasing distrust among all parties in healthcare, including between patient and provider.

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b) Because of the policies of managed care "under-treatment is a serious problem with evidence of associated increasing chronicity and expense." While over-treatment is also a legitimate health policy concern, "the social and economic impact of under-treated pain is a problem to patients and to society which is often ignored in deference to concerns of over-treatment."

c) In 43% of US households at least one member experiences chronic pain. For 1 out of 2 (48%) this is skeletal pain. Patients with low-back pain "are less likely to be under care than those with other disorders." (Although this editorial describes the situation in the US, there are clearly similarities in many other countries).

d) "The American Pain Society and the World Health Organization have called attention to both under-treatment of pain and the need for acceptable standards of care."

5. The two fundamental questions and issues for both quality of care and patient-centered care, explains Triano, are first "do patients get the care they need" and second "is the care effective when they get it." Clinical guidelines and pathways are commonly implemented by payers to answer different questions based on economics. The end result is the broken system – the level of administration and costs go up, health outcomes deteriorate, and everyone is frustrated.

Payers and policy makers will continue to substitute their own guidelines unless professions establish their own patient-centered, evidence-informed best practices. That is what Triano is explaining, that is what the chiropractic profession is doing through the CCGPP.

6. **Rigid Guidelines vs Best Practice Recommendation – and Individual Context.** Triano presents an expert analysis of why rigid guidelines and cookbook rules, often used by payers and focusing on fixed frequency and duration of care, are inadequate and therefore inappropriate. The bottom line is that they do not acknowledge *the individual context* for each patient and clinician and clinical decision. For reasonable and effective care, rigid guidelines or templates must be replaced by "evidence-informed best practice recommendations". That is why the new CCGPP recommendations are called best practices, and not guidelines or stadards. All guidelines/best practices must acknowledge the primacy of the individual context of each case. Elements of this context are:

a) **Limitations in the Best Available Evidence.** 85% of current healthcare practices remain scientifically unfounded. Even where there is good research evidence on the effectiveness of given assessments or treatment protocols, these methods are ineffective for many patients in the trials in which they were studied. Conversely, treatment methods found ineffective in other trials are effective for many of the individual subjects or patients. Finally much valuable research (e.g. well-designed prospective studies) is frequently omitted from systematic reviews of the evidence, making these research summaries unreliable. Reflecting a growing concern in the research world, Triano emphasizes the real limitations of randomized controlled trials, namely that:

- They ignore context and the skill of the provider of treatment
- They only minimally acknowledge the important and confounding effects of placebo healing properties
- They ignore patient actions, preferences, and beliefs, which may influence outcome
- Poorly performed RCTs are more misleading than well-performed cohort studies.

For these reasons, both the limitations of the research and the need to acknowledge that clinical decisions must be made giving primary consideration to the needs of the individual patient, the term 'evidence-informed' is now preferred by Triano and many other experts, rather than 'evidence-based'.

b) **Case Complexity.** This refers to the many personal, biomechanical and psychosocial risk factors that may complicate and delay recovery. Those established in the literature and mentioned by Triano are shown in Table 1. The obligation of the clinician is to discover and document these risk factors, the obligation for those developing or interpreting guidelines/best practices is to acknowledge the appropriateness of individual treatment plans reflecting them.

c) **The Provider's Expertise and Experience.** The importance of this should be self-evident to anyone who has been a patient – in other words everyone. An interesting parallel can be made with the legal system. Appeal court judges are very reluctant to overturn a finding of fact (as opposed to a finding of law) by a lower court judge. It is the lower court judge who saw the witnesses, heard the lawyers, had the best opportunity to make an appropriate decision. Over and again appeal judges say "I may have come to a different conclusion myself, but the lower court judge had a better opportunity to assess the evidence – appeal denied." There should be similar respect for and bias towards acceptance of the clinician's opinion in health care.

d) **The Patient's Preferences and Beliefs.** These are known to influence care given and results**.** Therefore, for example, the recent BJD Neck Pain Task Force Report[13,14] indicates that both medication such as NSAIDs and manual treatments such as spinal manipulation are supported by research as safe, effective and appropriate for most patients with neck pain (Grades I and II), that patients should be advised of both options (and others), and that the treatment given should be based on patient preference. Many patients prefer a more natural treatment that does not rely on medication, others are uncomfortable with a manual approach and prefer a pill. Respecting those preferences will produce the best results in individual cases.

7. **Natural History.** Many guidelines that provide benchmarks for appropriate care as based upon the presumed natural history for patients with back pain. This sounds reasonable but, as Triano explains, "natural history is widely misunderstood". The literature in the 1980s was misleading. Data now show more extensive chronicity than previously understood. Therefore for example:

a) Early evidence indicated that 40-50% of patients with back pain were improved in one week, 85-90% in 6-12 weeks, and that as many as 90% of patients had problems that resolved without intervention. However this is now known to present an incomplete picture. Many patients with acute low-back pain have persistent pain if followed for 1-2 years – as many as 62% will have one or more relapses during one year follow-up, and 40% report continuing back pain at six months.

b) With respect to workers' compensation injuries, many agencies use reports of return to work experience at one month but, says Triano, these are problematical and "do not capture the chronic episodic nature of back problems." In recent work such back pain patients were tracked for one year and, although 50% experienced no work time loss in the first month after injury, 30% of them had work absence on account of this injury by the end of one year. Further, among those who did have work absences within the first month but had returned, 19% had absence later in the year. Assuming an individual doctor of chiropractic has a typical case mix "the presence of symptoms and impairment beyond 12 weeks may be as high as 31% to 40%, not the typical 10% often quoted."

8. **Process of Care**. Main factors determining how a case progresses include timely and appropriate care, case com-

***Full text* – www.ccgpp.org**

For the full text of the literature syntheses and the low-back disorders best practices document referred to in this Report, and much other information on the Council on Chiropractic Guidelines and Practice Parameters, go to the above website.

The Chiropractic World

LBP – Predictors of Chronic Disability

continued from page 1

- injury severity – rated from medical records
- "specialty of the first healthcare provider seen for the injury" – obtained from administrative data
- worker reported physical disability – Roland Morris Disability Questionnaire
- number of pain sites
- "very hectic" job
- no offer of job accommodation (e.g. light work)
- previous injury involving a month or more off work

The single strongest predictor of one year work disability was self report of functional limitations on the Roland Morris Disability Questionnaire. Here is further evidence that use of validated patient questionnaires is of key importance.

Workers whose first healthcare visit for the injury was to a chiropractor "had substantially better outcomes". The percentage of those workers disabled at one year was 5% - this compares with primary care (12%), occupational medicine (26%) and other (23%). Additionally, for those disabled at one year, the average number of work disability days compensated during the year were:

Provider	*Average number of days off*
Chiropractor	14
Primary care	14
Occupational medicine	70
Other	30

The study did not look into details of care given after the first visit. Turner, Franklin et al. offer two possibilities for the better outcomes for those consulting a chiropractor – ". . . it is possible that workers who saw chiropractors differed in prognostically favourable ways . . . it is also possible that chiropractic care was more effective in improving pain and disability and/or promoting return to work." They simply conclude that "further research is needed to investigate the effects of early care on work disability."

(Turner JA, Franklin G et al. (2008) *ISSLS Prize Winner: Early Predictors of Chronic Work Disability: A Prospective, Population-Based Study of Workers with Back Injuries*, Spine, 33(25):2809-2818).

World Notes (*Source: World Federation of Chiropractic*)

Brazil: Last November we explained that, in response to efforts by the Brazilian Chiropractors' Association (ABQ) to have the government pass legislation to regulate the practice of chiropractic, the physiotherapy profession had mounted an aggressive campaign to have chiropractic declared a specialty of physiotherapy. Brazil has under 400 duly qualified chiropractors, there are over 90,000 physiotherapists. The PT campaign is being led by the CREFITO, the branch of the national regulatory body, COFFITO, for Brazil's most powerful and populous state of Sao Paulo.

Since August PT investigators had been visiting DC clinics, sometimes accompanied by the federal police, trying to pressure DCs to sign declarations acknowledging the illegal practice of PT and to cease practice. The ABQ and its lawyers were successful in getting an interim injunction to stop such harassment. In the months since there has been similar PT activity in other Brazilian states.

In Sao Paulo the CREFITO has sought to have the interim injunction removed. However on March 3, just as this Report is going to print, Federal Judge Diana Brunstein has not only confirmed the injunction, but has offered powerful and helpful reasons in support. Based on evidence and arguments presented by the ABQ she has ruled that chiropractic, although not recognized by law in Brazil, is established internationally as a profession, not a technique, and that it is not competent for physiotherapy to declare chiropractic a specialty. Judge Brunstein acknowledges that a proposal for legislation for chiropractic has been presented to the legislature, and that this is where this dispute should be resolved.

The ABQ's fight for the appropriate recognition of chiropractic in Brazil is important not only in that country, but throughout Latin America and internationally. That is why it has been supported by generous donations from chiropractic associations and individuals from around the world. Legal and legislative costs remain high for the ABQ, most of whose members have graduated during the past five years from Brazil's two, new, university-based chiropractic programs. Please consider giving financial support yourself. For more information, donation forms and list of donors to date, go to the Newsroom at www.wfc.org. See there also Judge Brunstein's March 3 decision.

United Arab Emirates: The World Federation of Chiropractic's 4th Annual Eastern Mediterranean Region Seminar was held in Dubai, United Arab Emirates, February 27-28. It was hosted by the Emirates Chiropractic Association (ECA) which represents the 20 doctors of chiropractic practising in the UAE.

Chiropractic practice is recognized and regulated by legislation in the UAE and most doctors work in interdisciplinary clinics. The majority, such as Dr. Travis Mitchell from South Africa, ECA President and Dr. Peter Jensen from Denmark, who has been at the Zayed Military Hospital in Abu Dhabi for 10 years, are expatriates. Others, such as Dr. Tarek Tawil, ECA Vice-President and a graduate of Cleveland College in Los Angeles, are from the UAE and elsewhere in the Middle East. Dr. Tawil is Chief of Staff of the Spine and Joint Unit of the Elaj Medical Centres, 20 large medical centres throughout the Gulf region.

The Dubai meeting was attended by DCs representing 10 countries – Cyprus, Egypt, Iran, Lebanon, Libya, Qatar, Saudi Arabia, Syria, Turkey and the UAE. The two countries in the region with legislation to regulate the practice of chiropractic, other than the UAE, are Cyprus and Iran. Dr. Gamal Giroush of Tripoli reported that Libya is about to enact chiropractic legislation.

Next year's WFC Eastern Mediterranean Region Seminar is to be held April 8-9 or 15-16 in Shiraz, Iran, hosted by the Iranian Chiropractors' Association. This will be a two day meeting and confirmed speakers are Dr. Scott Haldeman and Dr. John Triano. For further details after April 30 see www.wfc.org/Events.

*Dr. Travis Mitchell (*left*) and Dr. Tarek Tawil, President and Vice-President of the Emirates Chiropractic Association.*

Some of the delegates at the 4th WFC Eastern Mediterranean Seminar in Dubai

USA: Dr. Paul Dougherty (*right*) of New York Chiropractic College is featured in an article on the importance of bone and joint health and the prevention of musculoskeletal disorders in the March 2009 issue of *The Nation,* the influential monthly publication of the American Public Health Association that is widely read by health policy-makers in the US and internationally. The article is about the work of the US Bone and Joint Decade to raise awareness of the burden of bone and joint disorders – the leading reason for people seeking medical care, and affecting 107 million adults, in the US in 2005 – and to the need to develop preventive programs.

"One of the things we need to do is make public health practitioners more aware of musculoskeletal issues," says Dougherty in the Nation. "Because (chiropractors) are musculoskeletal specialists, it really makes sense we would be the ones talking to the public and educating them about these issues."

The reason Dougherty is being quoted is his leadership in community and public health work – he is a member of the Board of Directors of the US Bone and Joint Decade, representing the American Chiropractic Association, and Chair Elect of the Chiropractic Healthcare Section of the American Public Health Association. Specific projects he and NYCC have been involved in recently include:

- An education program for nursing home residents in Rochester on back pain, its prevention and management and the importance of remaining physically, mentally and socially active.
- In a joint project with the State University of New York, delivering a geriatric course for social work students in an assisted-living facility, educating both students and resident seniors about fall prevention and other related geriatric issues.

Dr. Dougherty serves on other multidisciplinary committees in his community and his NYCC colleague Dr. Jonathan Egan serves on the Seneca Falls Public Health Board. He explains that "the exciting thing about serving on each of these boards is that there is no discrimination against us as chiropractors – everyone is there for the same reason, the good of the public".

Dougherty believes that the profession has much to gain from public service and speaking out for public health as opposed to specific chiropractic issues. In the APHA he would like to see the Chiropractic Healthcare Section be the leaders in introducing increased awareness of the importance of musculoskeletal disease and its treatment and prevention.

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plexity, and confounding events outside the control of the provider and/or patient. These obviously cannot be assessed by simple benchmark numbers on frequency and duration of care. What they require is consideration of "the documented care process." On this important concept of process of care Triano explains that the management of a patient has only three alternatives:

- The patient progresses favourably and in reasonable similarity to relevant benchmarks
- Progress is below expectations but the provider *has* acted appropriately with diagnostic or therapeutic modifications
- Progress is below expectations but appropriate action *has not* been taken

As Triano concludes "where the process of care is reasonable it is counterproductive for third party intercession to hinder, stop or alter care." If due process has been followed, then provider decision-making should not be questioned.

Here, then, are many expert and referenced facts, concepts and findings from Triano. We now turn to consider the new evidence synthesis supporting the CCGPP's new best practices on low-back disorders.

D. Low-Back Disorders – Evidence Synthesis

9. The thorough new literature review relative to chiropractic management of low-back and related leg complaints [6] is by a representative group of leading US chiropractic scientists (e.g. Dana Lawrence, DC MMedEd, William Meeker, DC MPH, Gert Bronfort, DC PhD) and clinicians (e.g. Richard Branson, DC and Jeff Cates, DC MS, respectively in private practice in Minnesota and Oregon) and Mark Micozzi, MD PhD from the Georgetown University School of Medicine, Washington, DC. Points are:

a) Literature was reviewed according to the process adopted by the Cochrane Working Group for Low-Back Pain – with the notable exception that cohort studies were included as well as RCTs, systematic reviews and guidelines.

b) Each study was not only given an overall grade for strength of evidence - Grade A (good); Grade B (fair); or Grade C (limited) - but also a specific quality score based on set criteria. Therefore, most helpfully, a specific quality score or QS is given when a study is mentioned in the text.

c) There are pages of specific research conclusions, first relative to 'assurance and advice' and 'adjustment/manipulation/mobilization' and then for various treatment approaches under each of acute, sub-acute and chronic low-back pain, and sciatica/radicular/radiating leg pain. There is nothing suddenly new or surprising but summary main points are:

- There is fair evidence that high-velocity, low-amplitude procedures (HVLA – a term that includes both adjustment and manipulation) have "better short-term efficacy than mobilization or diathermy."
- For chronic low-back pain, there is fair evidence that HVLA is better than physical therapy and home exercises, and better than general medical care or placebo in the short term. Results are improved when exercises are added.

10. Significantly, there is a positive assessment of range-of-motion testing (ROM) – described as an examination procedure "used by nearly every chiropractor . . . to assess impairment because it is related to spinal function." The authors conclude the evidence supports use of ROM "as a means to monitoring improvement in function over time and, therefore, improvement as it relates to the use of SMT." Readers must consult the paper itself at www.ccgpp.org for many other specific findings.

E. Low-Back Disorders – Best Practices Report

11. This brings us to the consensus report from Gary Globe, MBA DC PhD, Craig Morris, DC, Wayne Whalen, DC, et al.[5] presenting best practices in chiropractic for the management of patients with low-back disorders. Although this also says nothing very new or surprising, it will be most important for all clinicians in the profession – both as a shield to defend reasonable patient-centered practice that goes beyond cookbook templates for care, but also as a sword in the hands of third parties to cut down extended patient care not supported by patient improvements, timely re-examinations and sound documentation. Points are:

a) This report is from a representative panel of 40 clinically experienced doctors of chiropractic in the United States.

b) The core background documents on research evidence, or the 'seed documents', given to them were the CCGPP literature synthesis just discussed, the *Clinical Practice Guidelines on Low-back Pain* from the American College of Physicians and American Pain Society,[15] and the expert review titled *Evidence Informed Management of Chronic Low-Back Pain with Spinal Manipulation and Mobilization* by Bronfort, Haas et al. recently published in *The Spine Journal.* [16]

Table 1. Risk Factors commonly attributed to the occurrence or persistence of low back-related musculoskeletal disorders

Adapted from Triano, JMPT 2008[1]

Category	*Factor*
Personal	Age (older)
	Sex (female)
	Severity of symptoms
	Leg pain > back pain
	Increased spine flexibility
	Reduced muscle endurance
	Prior recent injury (<6 mo) including surgery
	Prior surgery
	Asymptomatic atrophy of multifidus up to 5 y later
	Abnormal joint motion with or without abnormal electromyogram function of medial spine extensors
	Poor body mechanics
	Falling as mechanism of prior injury
Biomechanical	Prolonged static posture >20° (offs radio, 5.9)
	Poor spinal motor control
	Vehicle operation >2 h per day
	Sustained (frequent/continuous trunk load >20 lb
	Materials (handling (static work postures, frequent bending and twisting, lifting demands, pushing, pulling and repetitive exertion)
Psychosocial	Condition chronicity
	Employment history (<5 y, same employer)
	Employment satisfaction
	Lower wage employment
	Family/relationship stress
	Attorney retention
	Expectations of recovery

c) Panelists were given not only these seed documents but also 'seed statements' developed by a separate expert committee appointed by the CCGPP. These 27 seed statements related to various different aspects of care.

d) The panel then used a Delphi process to refine and agree on the appropriateness of the seed statements. 'Appropriateness' was rated using the RAND/UCLA process. This involved a scale a 1 to 9 (highly inappropriate to highly appropriate) and agreement on appropriateness was considered to be present when at least 80% of panelists marked 7, 8 or 9 and the median response score was 7 to 9.

e) The publication by Globe, Morris et al.[5] describes the process, then comprises the agreed statements and some supporting comment under the subheadings of:

- General Consideration
- Informed Consent
- Examination Procedures
- Severity and Duration of Conditions
- Treatment Frequency and Duration
- Initial Course of Treatments for Low Back Disorders
- Reevaluation and Reexamination
- Continuing Course of Treatments
- Additional Care
- Outcome Measurement
- Spinal Range of Motion Assessment
- Caution and Contraindications
- Conditions Contraindicating certain Chiropractic-Directed Treatments such as Spinal Manipulation and Passive Therapy
- Conditions Requiring Co-Management
- Conditions Requiring Referral

f) **Treatment Frequency and Duration**. Core concepts and terms used in all discussion of initial and continuing treatment are:

- **A therapeutic trial of treatment or care**. For new patients with a low-back disorder, whether acute or chronic, "a typical initial therapeutic trial of chiropractic care consists of 6-12 visits over a 2-4 week period, with the doctor monitoring the patient's progress with each visit to ensure that acceptable clinical gains are realized."

- **Reevaluation/reexamination**. "A detailed or focused reevaluation designed to determine the patient's progress and response to treatment should be conducted at the end of each trial of treatment.". However the patient's condition "should be monitored for progress with each visit", and "near the midway point of a trial of care the practitioner should reassess whether the current course of care is continuing to produce satisfactory clinical gains using commonly accepted outcomes assessment methods."

The purpose of the reevaluation at the end of the trial of treatment is to determine "the necessity for additional treatment" – which should be based on the response to the trial of care and "the likelihood that additional gains can be achieved."

- **Maximal therapeutic benefit.** This is the point where, even if there has only been partial resolution of the patient's problem, measurable response has ended following all reasonable treatment and diagnostic studies.

- **Continuing course of treatments.** This follows the initial trial of care, is given where there are "substantive, measurable functional gains" but "remaining functional deficits", and the patient is continuing to improve. Continuing care is different from and can be compared with:

- **Additional care**. This is subsequent care in cases of "exacerbation/flare-up", or "when withdrawal of care results in substantial measurable decline in functional or work status."

g) **Outcome Measurement.** "For a trial of care to be considered beneficial it must be substantive, meaning that a definite improvement in the patient's functional capacity has occurred." Examples of acceptable outcome measures are then given and include:

i) Pain scales, such as the visual analog scale and the numeri rating scale

ii) Pain diagrams that allow the patients to demonstrate the location and character of their symptoms

iii) Validated activities of daily living measures, such as the Oswestry Back Disability Index and the Roland Morris Back Disability Index, RAND 36, Bournemouth Disability Questionnaire.

iv) Increases in home and leisure activities, in addition to increases in exercise capacity.

v) Increases in work capacity or decreases in prior work restrictions.

vi) Improvement in validated functional capacity testing, such as lifting capacity, strength, flexibility and endurance.

This presents a clear requirement of objective documentation in contemporary chiropractic practice. Note that ROM testing, while approved for the purposes of determining patient response to a single treatment session, is not regarded as an overall valuable functional outcome measure.

h) **Contraindications**. These are given under the subheadings osseous conditions, neurologic conditions, inflammatory conditions, bleeding disorders and other. Under 'other', note that contraindications for the use of high-velocity manipulation include – importantly - "inadequate manipulative training and skills".

F. Other Evidence Syntheses

12. **Myofascial Trigger Points (TrPs)and Myofascial Pain Syndrome (MPS).** Comments on this expert review by Howard Vernon, DC PhD, Canadian Memorial Chiropractic College, Toronto and Michael Schneider, DC, School of Health and Rehabilitation Sciences, University of Pittsburgh, of the research evidence supporting chiropractic management[7] are:

a) The same methodology is used as for the low-back disorders and other CCGPP reviews.

b) Vernon and Schneider explain that ever since the work of Travell and Rinzler in 1952 the role of TrPs and MPS "has become an accepted part of musculoskeletal clinical practice." However, "interest in myofascial tenderness extends throughout the history of chiropractic" and "Nimmo's explanations in the 1950s of the pathophysiology of TrPs are still regarded as accurate and highly sophisticated." There are then references to works by other chiropractic authors – including Schneider, Perle, Hains and, of course, Hammer.

c) The helpful conclusion of the literature review is that "manual type therapies and some physiologic therapeutic modalities have acceptable evidentiary support in the treatment of MPS and TrPs.". With respect to modalities:

- There is substantial evidence supporting laser therapy for TrPs and MPS (Level A).

- There is moderately strong evidence for TENS for TrPs (Level B).

• There is limited evidence for other forms of electrotherapy and ultrasound (Level C).

• There is moderate evidence for acupuncture for TrPs and magnets for TrPs and MPS (Level B).

13. **Fibromyalgia Syndrome**. From eight systematic reviews of the trials, three meta analyses, five published guidelines and one consensus document, Schneider, Vernon et al.[8] conclude that there is:

• Strong evidence supporting aerobic exercise and cognitive behavioural therapy (Level A)

• Moderate evidence supporting massage, muscle strength training, acupuncture and spa therapy (balneotherapy) (Level B).

• Limited evidence supporting spinal manipulation, movement/body awareness and vitamins, herbs and dietary modification (Level C).

The authors conclude that all these treatments "have acceptable evidentiary support in the treatment of fibromyalgia syndrome."

14. **Tendinopathy.** The evidence review is by Mark Pfefer, RN MS DC, Stefan Cooper, DC and Nathan Uhl, DC, all affiliated with Cleveland Chiropractic College, Kansas City.[9] They note that chronic tendon pathology, a soft-tissue condition commonly seen in chiropractic practice, is often known as tendonitis. They prefer the term tendinopathy because the condition has not been association with inflammation. Their conclusions relative to chiropractic management are:

• There is limited evidence that manipulation and mobilization are beneficial for tendinopathy (Level C) and more research is needed on the combinations of manipulation, mobilization, facilitated stretching and other interventions most commonly used in chiropractic practice.

• There is good evidence that ultrasound therapy provides benefit for calcific tendonitis.

• There is an overall lack of evidence for all treatments for tendinopathy, including commonly used medical treatments such as NSAIDs and corticosteroid injections.

F. Conclusion

16. Here then, in research reviews and a best practices document, is the evidence base for current chiropractic management for low-back and leg-related disorders. Clinicians clearly owe a large debt of gratitude to the CCGPP, its volunteers and supporters for producing this and ongoing work. Here also, in Triano's editorial, is expert advice on how to use the evidence base. Where care is paid for by a third party there must be respect for three viewpoints, those of the patient, provider and payer. This requires respect for a reasonable but properly documented course of patient-centered care – a course of care in which the individual context requires at least as much consideration as the evidence base. TCR

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