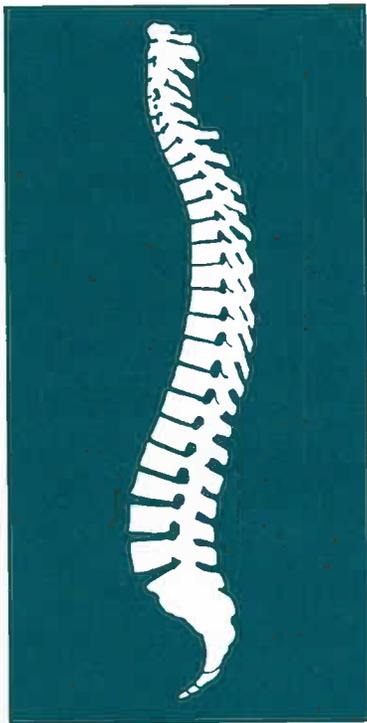


# THE CHIROPRACTIC REPORT

www.chiropracticreport.com

Editor: David Chapman-Smith LL.B. (Hons.)

July 2000 Vol. 14 No. 4



## PROFESSIONAL NOTES

### Chiropractic at FSU

In the Fall semester of 2001, Florida State University is to become the first US state university to establish a school of chiropractic.

The FSU program, in the College of Health and Human Sciences which includes a medical school, will commence with a class of up to 100 students. The full program is for up to 500 students, and tuition fees will be approximately half that of private chiropractic colleges. All of this became firm on May 30, 2000 when the Governor of Florida, Jeb Bush, signed a bill providing \$1 million for the Florida Board of Regents, which oversees the Florida university system, to make final preparations for a chiropractic program.

This important advance follows extensive negotiations led by the Florida Chiropractic Association (FCA) and supported by Representative Dennis Jones, a chiropractor who is current Speaker of the Florida House of Representatives. The FCA demonstrated that 700 students were leaving the state annually to study chiro-

*continued on page 4*

## MEASURING RESULTS WITH PATIENT QUESTIONNAIRES: WHY AND HOW

MRS. JONES has been seeing you three times a week for the past month for neck pain following a motor vehicle accident. Mr. Gonzales has had similar treatment for back pain at work. You have seen them improve, but they still have significant pain and some disability and, quite frankly, are discouraged. They are wondering if there has been much benefit and whether they should continue with chiropractic care. So does their employer, General Motors, which has them on limited duties at work.

How do you demonstrate to them that they have improved? How do you document this for GM and its health care managers, justifying extension of care? How do you know when you have reached the point of maximum therapeutic improvement? Later, after they have been discharged from care, suffered deterioration and returned for supportive/maintenance care, how can you easily and authoritatively demonstrate their relapse and need for ongoing care to avoid future pain and disability?

Very fortunately, there is now an easy, proven and acceptable way to do these things, ideally suited to chiropractic practice. Less fortunately, for chiropractors and other health professionals resisting the move to any standard measurement of results, today's health care marketplace is increasingly demanding that individuals and professions demonstrate competitive results through now proven and available outcome measurements—if not, patients will be encouraged to go elsewhere.

2. The key outcome measures in contemporary chiropractic practice are patient questionnaires on functional improvement/disability (e.g. Oswestry, Roland Morris, Neck Disability Index) and pain levels (e.g. Visual Analog Scales and Numerical Rating Scales). Many chiro-

practores already use these in daily practice, but many do not. This Report provides a comprehensive practical introduction to use of these forms. It also offers a package of information for chiropractors and their staffs which can have you using these key forms in practice immediately. Firstly, however, here is a brief review of background and principles.

### B. BACKGROUND AND PRINCIPLES

3. In *The New Medicine*,<sup>1</sup> a 1990 analysis of trends in U.S. health care that has proven remarkably accurate and insightful, analyst Russell Coile, Jr. MBA, saw 'outcome assessment' as one of the two most influential trends for the 1990s and beyond. The other was managed care. Both had huge potential for obtaining two prime goals—reducing health care costs and increasing quality of care. 'Outcome management' would be used under managed care for:

- Accurate assessment of the impact of care on patients.
- Analyzing that information to see which providers and procedures were actually effective and cost-effective.
- Substituting and using the services shown to have the best outcomes assessment.

Stated in simple terms, the vast health care marketplace was finally being subjected to normal business principles. This began in the U.S., but is now spreading to most countries and has major practical significance for the future success of individual chiropractors and the profession as a whole.

4. The chiropractic profession has responded impressively:

- a) In the early 1990s in the U.S. and Canada, representative consensus panels produced national clinical guidelines

that supported a traditional chiropractic approach to duration and frequency of care—but acknowledged that prolonged care for spinal pain syndromes should only be given where there was “significant documented improvement.”<sup>2,3</sup> The U.S. Guidelines therefore make this recommendation for patients being treated for acute uncomplicated pain:

“After a maximum of two trial therapy series of manual procedures lasting up to two weeks each (four weeks total) without significant documented improvement, manual procedures may no longer be appropriate and alternative care should be considered.” (*Recommendation 8.4.1—emphasis added*).

Chapters on Outcome Assessment in each of the U.S. and Canadian Guidelines then reviewed the scientific literature and recommended which outcome measures should be used in chiropractic practice to objectively demonstrate “significant documented improvement.” Priority was given to the use of proven patient questionnaires (assessing function, pain and satisfaction as perceived by the patient) because of their validity, general acceptance in health care and ease of use in chiropractic practice.

b) Chiropractic researchers developed and validated questionnaires for the conditions most commonly presented in chiropractic practice—back pain (the Revised Oswestry Questionnaire, John Hsieh, Reed Phillips et al.<sup>4</sup>) and neck pain (the Neck Disability Index which was modelled on the Oswestry Questionnaire, Howard Vernon and Sil Mior.<sup>5</sup>)

c) These outcome measures were increasingly used in chiropractic practice and research. In the Meade et al trial in the U.K., the large multicentre trial published in *The British Medical Journal* which demonstrated that chiropractic management of patients with acute and chronic back pain was significantly more cost-effective than standard medical management under the National Health System, the main outcome measure used was the Oswestry Questionnaire.<sup>6</sup>

In the World Health Organization’s *Low Back Pain Initiative*,<sup>7</sup> ongoing since the mid-1990s and having chiropractors from Life University, Atlanta, Georgia and rheumatologists from the International League Against Rheumatism (ILAR) as its main co-sponsors, there has been an in-

ternational effort to define the outcome measures most suited to research and practice in the field of back pain. The measures favored in this Initiative are:

- Oswestry Disability Index—assessing the extent to which an individual’s functional level is restricted by back pain.
- Visual Analog Scale for Pain—assessing current intensity of pain.
- Modified Zung Index—assessing the severity of current depression in patients.
- Schober’s Test—assessing back flexibility by sacral markers with the patient standing erect then flexed forward as far as comfortable.

The first three of these outcome measures have been translated into four languages—Arabic, Japanese, Portuguese and Russian—and are currently being further validated by studies at Life and university centres in Egypt, India, Japan, Brazil and the Russian Federation.

d) Last month representatives from the American Chiropractic Association and managers from Blue Cross/Blue Shield and other insurers met for a Claims Solutions Work Group in Washington DC. This was the second of a series of meetings to gain a consensus between third party payors and the chiropractic profession on what specific documentation was reasonable and necessary to facilitate the claims process for everyone. Insurers agreed that complex paper work to justify treatment was unreasonable. They asked for two things in chiropractic documentation to insurers:

- More specific information on the patient’s condition—using terminology all parties would understand.
- Concise information on improvement—specifically, valid measurements of changes in pain and/or disability.

5. Historically, practitioner measurements of outcomes (e.g. spine motion and muscle strength using standard equipment such as goniometers and dynamometers, analysis of x-rays, etc.) were regarded as scientific and ‘hard data’, whereas subjective patient reports of symptoms, behavior and satisfaction were regarded as less scientific and ‘soft data’. That has all changed for two reasons:

- Research has shown that carefully validated patient questionnaires and pain

**The Chiropractic Report** is an international review of professional and research issues published six times annually. You are welcome to use extracts from this Report. Kindly acknowledge the source. Subscribers may photocopy the Report or order additional copies (.75 cents each—minimum of 20 copies plus shipping) for personal, non-commercial use in association with their practices. However, neither the complete Report nor the majority or whole of the leading article may be reproduced in any other form without written permission. **Subscription:** for rates and order form, see page 8. For information on orders call 1-800-506-2225, or telephone 416-484-9601, fax 416-484-9665.

**Editorial Board**

- Daniele Bertamini DC, *Italy*
- Alan Breen DC PhD, *England*
- J. David Cassidy DC PhD, *Canada*
- Peter Gale DC, *United States*
- Scott Haldeman DC MD PhD, *United States*
- Donald J. Henderson DC, *Canada*
- Reginald Hug DC, *United States*
- William Kirkaldy-Willis MD, *Canada*
- Dana Lawrence DC, *United States*
- Miriam A. Minty DC, *Australia*
- Michael Pedigo DC, *United States*
- Lindsay Rowe MAppSci (Chiropractic) MD, DACBR, FCCR, FACCR, FICC, DRACR, *Australia*
- Louis Sportelli DC, *United States*
- Aubrey Swartz MD, *United States*

Changes of mailing instructions should be sent to The Chiropractic Report, 3080 Yonge Street, Suite 5065, Toronto, Ontario M4N 3N1, telephone 416-484-9601, fax 416-484-9665. Printed by Harmony Printing Limited, 123 Eastside Drive, Toronto, Ontario, Canada M8Z 5S5. Copyright © 2000 Chiropractic Report Inc. ISBN 0836-144

scales are every bit as scientific as practitioner measurements.

- Patient questionnaires go to the heart of the matter—actual improvements in pain levels and ability to perform daily functions including return to work, and overall satisfaction with care.

This applies particularly to areas relevant to chiropractic practice—neck pain, back pain and general health. As an example, Richard Deyo, MD MPH quotes these comparative rates for the reliability of different outcome measures in back pain trials—on a scale where 1.00 is fully reliable and perfect.<sup>8</sup>

<b>Physical Measurements</b>	<b>Reliability</b>
<i>(By professionals)</i>	
Anterior spine flexion	.50
Passive straight-leg raising	.78
Ankle dorsiflexion strength	.50
<b>Patient Survey Instruments</b>	
<i>Ability to perform daily activities</i>	
Sickness Impact Profile (SIP)	.90
<i>Pain Measurement</i>	
Visual Analog Scale (VAS)	.94

In summary, the clear message from science, third party payors and clinical reality is that the primary outcome measures to be used in chiropractic practice should be patient questionnaires and pain scales.

### C. BACK PAIN QUESTIONNAIRES

6. Over 40 patient questionnaires have been developed to measure levels of function and disability in patients with low-back pain and the effectiveness of treatment.<sup>9</sup> Promising new ones include the Bournemouth Questionnaire developed by Jennifer Bolton, PhD and Alan Breen, DC PhD at the Anglo-European College of Chiropractic.<sup>10</sup>

The five most established ones are the Sickness Impact Profile (SIP),<sup>11</sup> the Roland Morris Disability Questionnaire,<sup>12</sup> the Oswestry Low Back Pain Disability Questionnaire,<sup>13</sup> the Million Visual Analog Scale<sup>14</sup> and the Waddell Disability Index.<sup>15</sup> Two of these in common clinical use, and well suited to chiropractic practice, are recommended and now discussed in more detail—the Revised Oswestry and the Roland Morris.

**7. Revised Oswestry Questionnaire.** The original Oswestry Questionnaire was developed in the 1970s by Fairbank et al in Oswestry, Shropshire, England.<sup>13</sup> The Revised Oswestry Low Back Pain Disability Questionnaire (Revised Oswestry), validated by research that now includes chiropractic studies by John Hsieh et al. from LACC<sup>4</sup> and Mitchell Haas et al. from Western States,<sup>16</sup> is shown in Figure 1 (see page 6). It is noted:

a) **Format and scoring.** There are 10 categories, each with six possible responses—the patient chooses one. Scores of 0 (Response 1) to 5 (Response 6) are possible. Thus if all sections are completed a score of 50 (100%) is possible.

Example:  $\frac{16 \text{ (total scored)} \times 100}{50 \text{ (total possible)}} = 32\%$

If one section is not completed, score as follows:

Example:  $\frac{16 \text{ (total scored)} \times 100}{45 \text{ (total possible)}} = 35.5\%$

b) **When to use.** The overall goal of assessment is to measure change in the patient's condition over time. The questionnaire is therefore completed by the patient before treatment, usually at two week intervals during treatment, and at discharge from care.

c) **Who administers and scores.** With simple directions this can be your staff. The questionnaire has printed directions for the patient and takes a few minutes to complete. It can then be scored and filed.

Ensure that the patient has answered all questions before he/she leaves. Patients do not get copies—when they complete a repeat questionnaire in two weeks they should obviously be unaware of their earlier answers.

d) **How to use the information.** Overall ratings on the Oswestry and Revised Oswestry are:

0–20%	Minimal disability
20–40%	Moderate disability
40–60%	Severe disability
60–80%	Crippled
80–100%	Bedbound or exaggerating

The appropriate cut off scores for return to work or discharge from care will vary for individual patients. In their research Erhard et al. have suggested a score of 11% for patients with uncomplicated low-back pain.<sup>17</sup>

An improvement of 5% is regarded as significant. Meade et al., in their trial already referred to, give this example description of the impact of a 6% improvement: "Mild pain, ability to lift heavy weights without extra pain and ability to sit for up to one hour; *improved from* moderate pain, ability to lift heavy weights only if conveniently positioned, and unable to sit for more than half an hour."

Assume that Mrs. Jones, the patient mentioned at the beginning of this Report, has a score or rating of 32% prior to treatment, a score of 24% after four weeks and a score of 18% after six weeks. In these circumstances:

- Although she still has moderate disability after four weeks, by reference to her scores and her specific answers you can demonstrate to her how she has improved.
- At six weeks you can demonstrate to her, and any third party payor that may want to limit continuing coverage, that her level of disability is still consistently improving and is now relatively minimal.

e) **How has the original Oswestry been revised?** Firstly a section on Sex Life has been omitted, because experience showed it was often unanswered or answered inaccurately as 'normal'. That section has been replaced with one titled Changing Degree of Pain, giving more information on pain.

Section 1 on Pain Intensity has been improved by incorporating information on variance and duration of pain. The original Oswestry simply asked about pain "at the moment". In various other sections the questions have been amended for greater clarity and ease of use.

**8. Roland Morris Questionnaire (RMQ).** The RMQ is a 24 item survey that was developed from the larger Sickness Impact Profile (136 items) to produce a more efficient survey for use in practice specifically for patients with low-back pain.

The patient simply check/marks which items or statements apply at the time. Added together answers yield a score on a range of 0 to 24. The higher the score the worse the function. As the patient's health status improves the score decreases.

Recently there has been a revised version of the RMQ, known as the RM-18 because six items have been deleted to make it even more simple. Testing has shown that the RM-18 is also reliable and valid.<sup>18</sup>

The consensus of expert opinion is that the RMQ may be slightly more effective and sensitive in measuring improvement in patients with acute low-back pain, but that the Revised Oswestry is superior for patients with sub-acute or chronic low-back pain. If you are going to use one questionnaire for back pain patients in your practice it should probably be the Revised Oswestry.

*continued on page 6*

### Outcomes Assessment— The One Book You Need

For clinicians wanting an authoritative and practical guide on all aspects of measurement of results in chiropractic practice—subjective tests, objective tests, low and high tech rehab, all the forms, etc.—the outstanding new text in this field is *The Clinical Application of Outcomes Assessment* edited by Steven Yeomans DC, Appleton and Lange, 1999, US\$116.25. ISBN: 08-38515-282.

*Information and Orders:* Tel: 800-262-4729 (U.S. only), 800-565-5758 (Canada only), Fax: 1-614-759-3641 or [www.mghmedical.com](http://www.mghmedical.com).

*The Chiropractic Report receives no financial benefit from giving this endorsement.*

continued from page 1

## NORTH AMERICA

practic, and that for reasons which included cost minority groups were under-represented. In addition the FCA, in partnership with the Lincoln Chiropractic College Educational Foundation, raised a US\$2 million endowment fund to establish a chiropractic and biomechanical research chair at FSU, which is rated as a Category 1 research institution by the US federal government.

These developments obviously have major significance for chiropractic education, research and the public acceptance and use of chiropractic services in the US. Why? The fundamental reason can be found in an eloquent and powerful address to the annual meeting of the US Federation of Chiropractic Licensing Boards in Seattle on May 6 by Dr. Richard Vincent, a distinguished leader in the profession from Massachusetts. That address has now been published in the June issue of *The Chiropractic Journal of Australia*.

Vincent, a Past-President of both the FCLB and the National Board of Chiropractic Examiners, now entering his 50th year in practice, addressed the reasons why:

- The medical profession's image is relatively unshaken by a new report showing up to 98,000 deaths annually from medical errors in US hospitals, 11,000 of them from 2.2 million unnecessary surgical operations, and by individual cases of fraud and gross negligence by physicians, but:
- The chiropractic profession's image is completely shaken by extensive publicity given to a single incident of stroke, or a single case of fraud.

Referring to the 1982 Pulitzer Prize-winning book *The Social Transformation of American Medicine* by Paul Starr, Vincent discussed the carefully planned medical strategy which had transformed "a generally weak, obscure, divided profession, insecure in its status and income, to a sovereign power with consolidated, cultural, professional and social authority." Now that the medical profession has that authority, major shortcomings in medical education and practice tend to be seen as exceptional and acceptable. Without that authority, shortcomings in chiropractic education and practice are seen as the rule and indict the whole profession.

Vincent argues compellingly that the chiropractic profession, as divided and insecure in its status and economic power as medicine was several decades ago, must take bold steps in the areas of leadership, education and self-regulation if it is to gain the cultural, professional and social authority vital to the profession's future. Key areas for action are:

- Unity. That was a first step taken by the medical profession. "We should no longer tolerate the bifurcated tongue of two national associations . . . a profession that seeks authority must speak and act as a unified body."
- Firmer standards of licensure and self-regulation. (His address was to the licensing bodies, and was titled *The Role of the State Board in the Acquisition of Cultural, Professional and Social Authority*).

• Even higher minimum standards of education and an educational atmosphere that encourages greater academic excellence, competition, and integration into mainstream healthcare. The new FSU program, clearly, will be a major step in this area.

2. **U.S.—Consumer Reports Support for Chiropractic:** In the May 2000 issue of *Consumer Reports*, the monthly publication of the U.S. Consumer's Union, there is strong endorsement of chiropractic in an article titled *The Mainstreaming of Alternative Medicine*. This gives the results of a survey of 46,000 *Consumer Reports* readers (i.e. well-educated, information-seeking Americans) and finds that 35% used "alternative therapies" for at least one of their two worst health conditions during the past two years.

Of this 35%, 1 in 4 (25%) saw a chiropractor, principally for neck pain and back pain. Of those with back pain, 40% used chiropractic, which the survey found was superior to prescription drugs, physical therapy and acupressure/acupuncture. A new finding — showing changing attitudes in the US — was that over half of those using alternative medicine (60%) now told their MDs about it, and that nearly all MDs either expressed approval (55%) or were at least neutral (40%). In US surveys ten years ago, the great majority of MDs disapproved and the great majority of patients were not prepared to discuss their chiropractic care or other alternative health choices with MDs.

3. **Canada—True Forces Reaching the Vertebral Artery.** Common sense and things that seem intuitively right often are —but often are not. Chiropractic adjustive techniques in the upper cervical spine obviously transmit more peak force at the point of contact than passive movements by the patient. That is what takes the joint to the parapsychological zone. Many have assumed that the same is true in connection with the vertebral arteries—and therefore the alleged higher risk of upper cervical techniques using sudden thrust and greater range of motion. For the first time researchers are looking at this assumption —and initial evidence is that it's quite wrong. They have concluded that "it is impossible to physically tear a vertebral artery with the mechanical forces applied in spinal manipulative therapy".

The studies are taking place at the Faculty of Kinesiology, Human Performance Laboratory, University of Calgary under the leadership of Professor Walter Hertzog, PhD and feature sophisticated analysis of precise biomechanical forces reaching the vertebral arteries after a range of chiropractic adjustments. Speaking at a CCA/CCPA seminar in Toronto on June 10, Hertzog reported initial work soon to be published showing that maximum forces on the arteries from cervical adjustment are no greater than when the patient passively moves his/her head into full flexion. Peak adjustive forces would have to be magnified by a factor of 10—huge, and almost twice the safety factor of 6 used in engineering—to produce tissue failure in the vertebral artery.

This means that the primary cause of the very rare instances of vertebral artery injury after neck movements both sudden (e.g. sports, falls, manipulation) or slow but sustained (e.g. painting the ceiling, backing a car, intubation under anaesthesia, shampoo at the hairdresser's) is more likely underlying weakness in the artery than a specific form of neck movement. (For more on

this see Haldeman S, Kohlbeck FJ, McGregor M (1999) *Risk Factors and Precipitating Neck Movements Causing Vertebral Artery Dissection After Cervical Trauma and Spinal Manipulation*, Spine 24(8):785-794.)

## EUROPE

**1. Portugal—A New Era Dawns.** Dr. Antonio Alves, President, Associação Portuguesa dos Quiropráticos, representing Portugal's 17 chiropractors, reports the beginning of a new era for chiropractic in Portugal. The practice of chiropractic is currently unregulated. The last litigation against chiropractors for practising medicine without a licence, against Dr Lyle Grenz and Dr Joel Templeton of Estoril three years ago, was dismissed by the court on the basis that they were using a natural approach to health care that was not within the scope of medicine as controlled by the Portuguese Order of Medicine. In 1999 the Order tried to promote new legislation broadening the definition of health care to cover chiropractic. It was unsuccessful because of the opposition of many groups, including the Union of Nurses. Now the government has indicated its intention to recognise and regulate various forms of complementary care, including chiropractic. This is similar to recent developments in Belgium and Croatia, and now expected across Europe since adoption of the Lannoye Report by the European Parliament in 1997.

**2. U.K.—The New Bible on Occupational LBP.** All those wanting to be credible in the contemporary management of patients with occupational low-back pain will need to know of the March 2000 *Occupational Health Guidelines for the Management of Low-Back Pain at Work* funded by U.K. industry, supported by the U.K. government, and developed by an impressive interdisciplinary group convened by the Faculty of Occupational Medicine, London University. The complete Guidelines may be downloaded from the website [www.facocmed.ac.uk](http://www.facocmed.ac.uk). These evidence-based guidelines are not just about clinical care—they describe an overall management strategy which involves health professionals, employers and patients.

There are evidence statements and recommendations in the six areas of background issues; pre-placement assessment; prevention; assessment of the worker presenting with back pain; management principles for the worker presenting with back pain; management of the worker having difficulty returning to normal occupational duties at approximately 4-12 weeks.

**3. Research: NSAIDs—Death Risk 1 in 1200.** A recent study in *Pain* by British and Swiss researchers analysed 100 trials worldwide involving more than one million people and found that gastric complications were far more common than perceived. For patients taking NSAIDs for at least two months, common for those suffering joint pain from arthritis and other musculoskeletal pain, 1 in 5 has GI erosions and ulcers, 1 in 70 has stomach pains/symptoms, 1 in 150 has an ulcer that bleeds, and 1 in 1200 dies from that bleeding. (Source: *Medical Post*, April 4, 2000).

## OTHER WORLD REGIONS

**1. Cuba—Voluntary Service.** The British-based voluntary organisation, Chiropractic Overseas Relief (CORE), established in

1994 to deliver chiropractic care to people in the developing world, has a permanent clinic in Cuba. This clinic, which now has wide acceptance by the public and the local orthopaedic and health care communities, is seeking volunteers for two-week periods. Further details can be found at [www.chiropracticoverseas.org](http://www.chiropracticoverseas.org) or from the administrator of the project, Rupert Molloy DC, 24 Hensington Road, Woodstock, OX20 1JL, England; tel: 44 1993 811 815; fax: 44 1993 812 505; e-mail: [Rupert.Molloy@virgin.net](mailto:Rupert.Molloy@virgin.net).

**2. Japan: Major New Initiative by LACC.** In Japan, where the practice of chiropractic is not regulated, there are an estimated 20,000 persons with various levels of education practising as "chiropractors". After two years of negotiations, and in a move of great significance to chiropractic in Japan and internationally, the Los Angeles College of Chiropractic has recently entered into an agreement with the Kansai College of Spinology/Japanese Spinal Adjustment Society which represents one of the largest—approximately 4,000—and most powerful groups of Japanese-trained chiropractors. Under this agreement LACC will work with KCS/JSAC to enhance education to an international level through co-developing two forms of program — firstly, a two- to three-year Bachelor's Conversion Degree suitable for most of KCS/JSAS' 4,000 current graduates, and secondly, a five-year full time BSc program providing chiropractic education on a similar structure to medical and dental education in Japan.

On June 12, the Japanese Association of Chiropractors, which represents Japanese DCs from accredited colleges and has worked cooperatively with LACC on the above project, held a meeting at LACC to encourage other accredited chiropractic colleges to become involved in education in Japan in a similar way to LACC. Thirteen colleges attended — Cleveland, CMCC, LACC, Life, Life West, Macquarie, Marycrest (Colorado), National, Palmer, RMIT Melbourne, RMIT Japan, Sherman, Texas. (An electronic copy of a report on the meeting prepared by the World Federation of Chiropractic, LACC and the JAC can be obtained by e-mail request to the WFC at [worldfed@sympatico.ca](mailto:worldfed@sympatico.ca).)

**3. Saudi Arabia.** Dr Mario Shemali, President, Chiropractic Association of Saudi Arabia, reports that there are currently six chiropractors in the country, including the first Saudi national to gain a chiropractic licence, Abdul Rahman Al-Hashem DC who practises at the King Faisal Hospital in Riyadh. Dr. Shemali would like to hear from any Saudi nationals who are chiropractors or students. (Contact: Mario Shemali, DC, Sama Medical Group, P.O. Box 68323, Riyadh 11537, Saudi Arabia: Tel: (966) 1 462 6614. Fax: (966) 1 462 8983.)

**4. Uganda.** Dr Charles Sebwana, a 1995 graduate of the Anglo-European College of Chiropractic who subsequently practised in England, has now become the first Ugandan to return to practise chiropractic in his home country. His practice is at Mulago Hospital in the capital Kampala. He would appreciate contacts from any other Ugandan chiropractors or students, or others able to assist. (Contact: Charles Sebwana, DC, Department of Orthopaedics and Physiotherapy, New Mulago Hospital Complex, PO Box 7051, Kampala, Uganda).

## Low Back Pain and Disability Questionnaire (Revised Oswestry)

**Patient Name:** \_\_\_\_\_ **File #** \_\_\_\_\_ **Date:** \_\_\_\_\_

This questionnaire has been designed to give the doctor information as to how your back pain has affected your ability to manage everyday life. Please answer every section and mark in each section only the ONE box which applies to you. We realize you may consider that two of the statements in any one section relate to you, but please just mark the box which most closely describes your problem right now.

### SECTION 1 - PAIN INTENSITY

- The pain comes and goes and is very mild
- The pain is mild and does not vary much.
- The pain comes and goes and is moderate.
- The pain is moderate and does not vary much.
- The pain comes and goes and is very severe.
- The pain is severe and does not vary much.

### SECTION 2 - PERSONAL CARE

- I would not have to change my way of washing or dressing in order to avoid pain.
- I do not normally change my way of washing or dressing even though it causes some pain.
- Washing and dressing increase the pain but I manage not to change my way of doing it.
- Washing and dressing increase the pain and I find it necessary to change my way of doing it.
- Because of the pain I am unable to do some washing and dressing without help.
- Because of the pain I am unable to do any washing and dressing without help.

### SECTION 3 - LIFTING

- I can lift heavy weights without extra pain.
- I can lift heavy weights but it causes extra pain.
- Pain prevents me from lifting heavy weights off the floor.
- Pain prevents me from lifting heavy weights off the floor, but I manage if they are conveniently positioned (e.g. on a table).
- Pain prevents me from lifting heavy weights but I can manage light to medium weights if they are conveniently positioned.
- I can only lift very light weights at the most.

### SECTION 4 - WALKING

- I have no pain on walking.
- I have some pain on walking but it does not increase with distance.
- I cannot walk more than one mile without increasing pain.
- I cannot walk more than 1/2 mile without increasing pain.
- I cannot walk more than 1/4 mile without increasing pain.
- I cannot walk at all without increasing pain.

### SECTION 5 - SITTING

- I can sit in any chair as long as I like.
- I can only sit in my favorite chair as long as I like.
- Pain prevents me from sitting more than one hour.
- Pain prevents me from sitting more than half hour
- Pain prevents me from sitting more than 10 minutes.
- I avoid sitting because it increases pain straight away.

### SECTION 6 - STANDING

- I can stand as long as I want without pain.
- I have some pain on standing but it does not increase with time.
- I cannot stand for longer than one hour without increasing pain.
- I cannot stand for longer than 1/2 hour without increasing pain.
- I cannot stand for longer than 10 minutes without increasing pain.
- I avoid standing because it increases the pain straight away.

### SECTION 7 - SLEEPING

- I get no pain in bed.
- I get pain in bed but it does not prevent me from sleeping well.
- Because of pain my normal night's sleep is reduced by less than 1/4.
- Because of pain my normal night's sleep is reduced by less than 1/2.
- Because of pain my normal night's sleep is reduced by less than 3/4.
- Pain prevents me from sleeping at all.

### SECTION 8 - SOCIAL LIFE

- My social life is normal and gives me no pain.
- My social life is normal but increases the degree of pain.
- Pain has no significant effect on my social life apart from limiting my more energetic interests, e.g. dancing, etc.
- Pain has restricted my social life and I do not go out very often.
- Pain has restricted my social life to my home.
- I have hardly any social life because of the pain.

### SECTION 9 - TRAVELLING

- I get no pain whilst travelling.
- I get some pain whilst travelling but none of my usual forms of travel make it any worse.
- I get extra pain whilst travelling but it does not compel me to seek alternative form of travel.
- I get extra pain whilst travelling which compels me to seek alternative forms of travel.
- Pain restricts all forms of travel.
- Pain prevents all forms of travel except that done lying down.

### SECTION 10 - CHANGING DEGREE OF PAIN

- My pain is rapidly getting better.
- My pain fluctuates but overall is definitely getting better.
- My pain seems to be getting better but improvement is slow at present.
- My pain is neither getting better nor worse.
- My pain is gradually worsening.
- My pain is rapidly worsening.

### Pain Severity Scale:

Rate your usual level of pain today by checking one box on the following scale

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

No pain

Excruciating pain

9. **Neck Pain—Neck Disability Index (NDI).** The NDI was developed and first validated in 1990-91 by Howard Vernon, DC FCCS and Sil Mior, DC FCCS of the Canadian Memorial Chiropractic College, Toronto.<sup>19</sup> It is based upon the Oswestry Questionnaire, has very similar format, scoring and use, and is now in wide clinical use for evaluation of results for patients with cervical spine complaints.

#### D. HEADACHE—HEADACHE DISABILITY INVENTORY (HDI)

10. The HDI, developed by Jacobsen et al. in the early 1990s<sup>20</sup> is a questionnaire used to assess the impact on daily living of headaches, and the effectiveness of treatment. It is used for patients with cervicogenic headache, often together with the Neck Disability Index. Yeomans reports that it is also useful in cases of headache without a cervical component, such as vascular headaches.<sup>21</sup>

The HDI is a 25 question tool that includes 12 emotional and 13 functional questions. Possible responses to each question are no (0 points), sometimes (2) and yes (4) giving a total scale of 100% and two sub-scales for emotional and functional status.

#### E. PAIN SCALES

11. There is now extensive scientific literature on pain measurement. Pain has various dimensions, including severity (intensity), duration and frequency but the dimension that is most important and most commonly assessed in practice is severity. Common methods include:

a) **Visual analog scales (VAS).** These consist of a 10 cm line with a pain descriptor at each end. (e.g. 'no pain' to the left and 'unbearable pain' to the right). Patients are asked to mark the line at a point that represents their perceived pain intensity. These are proven and popular but have the drawback that patients must be monitored carefully to ensure they use a perpendicular line rather than a circle or other invalid mark.

b) **Numerical rating scales (NRS).** Similar to VAS, except that numbers replace the line. A patient may be asked to choose a number between 0 and 100 that represents their pain intensity. The numbers 0 to 10 may be shown in boxes with simple instructions as shown at the bottom of Figure 1. (*Please note:* The NRS shown in Figure 1 is a separate scale, not part of the Revised Oswestry. It has been put there for your convenience if you wish to copy that page for use in your practice).

A potential drawback of the NRS is the ability of some patients to memorize prior pain levels. However the NRS is of proven validity, the easiest to perform and score, and makes sense to patients. It is most reliable when, as here, patients are asked to report *usual* pain levels at present rather than their pain level at that moment.<sup>22</sup>

c) **Behavioral rating scales (BRS).** This type of scale typically has six levels, each with a description. The third level, for example, may be "pain present, cannot be ignored, but does not interfere with every day activities."

d) **Verbal rating scales (VRS).** These use single word descriptors in 3, 4, 5 or more ranks. One commonly used scale from the McGill/Melzack Pain Questionnaire is called 'Present Pain Intensity' and uses the words "none, mild, discomforting, horrible, excruciating" in a five level scale.

#### F. CONCLUSION

12. This Report has focussed on a few outcome measures only—subjective (i.e. patient-centered) and valid measures that are of prime importance in chiropractic practice.

There are, of course, many other subjective (e.g. patient satisfaction questionnaires) and objective (i.e. practitioner-based) measures. The new text *The Clinical Application of Outcomes Assessment* edited by Steven Yeomans, DC FACO provides an outstanding and practical review of these and includes copies of all relevant forms and clinical documentation. (For ordering information—see boxed item on page 3).

In their introduction to this text, Daniel Hansen, DC from the multidisciplinary Texas Back Institute, Sil Mior, DC, FCCS, Dean

#### Using Questionnaires—How to Get Started?

##### SPECIAL OFFER TO SUBSCRIBERS

The Chiropractic Report offers the following package approved by leading chiropractic clinicians in the U.S.A. and Canada.

##### Survey Forms/Instruments

**Back Pain** Revised Oswestry Questionnaire  
Roland Morris Questionnaire

**Neck Pack** Neck Disability Index

**Headache Satisfaction** Headache Disability Index

**Pain Assessment** Visual Analog Scale  
Numerical Rating Scale

**Satisfaction** A Chiropractic Satisfaction Questionnaire

##### Instructions

Instructions for you and your staff on how to use and administer the above forms.

##### Research Backing

- Best research papers supporting the scientific validity and acceptance of the above.
- Suggested letters for you to put on your letterhead and use with third party payors—referencing the literature and confirming the validity of your use of the above measures.

**Price:** U.S. and Canada **\$40.00** includes airmail shipping  
Elsewhere **US\$50.00** includes airmail shipping

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Check/Cheque  MC/Visa \_\_\_\_\_

Expiry: \_\_\_\_\_

Send order and payment to:  
The Chiropractic Report  
5065-3080 Yonge Street  
Toronto, Ontario M4N 3N1, Canada  
Tel. 416-484-9601: Fax. 416-484-9665  
E-mail: TCR@chiropracticreport.com  
Fax and e-mail—credit card orders only.

of Research, CMCC and Robert Mootz, DC, Associate Medical Director for Chiropractic, Department of Labor and Industries, Washington State, provide an incisive analysis of the new relationship between consumers and suppliers that we see developing in all markets—one based more strongly on customer needs and expectations. All manufacturing and service industries are surveying customers much more extensively and building and supplying products and services in response to their expectations. Industry leaders are those who measure and report better quality, customer satisfaction and competitive advantage. Hansen, Mior and Mootz then conclude with this advice for those wishing to succeed in practice today:

“A consumer-centered philosophy is what created and continues to drive *outcomes assessment* and *outcomes management* strategies and initiatives in the increasingly competitive health care arena.

Gone are the days when we could merely say “this is what our patients need” without actually doing the measurements and displaying the data for public consumption and analysis. And gone are the days when the supplier-customer interaction was just between the physician and the patient.”<sup>21</sup>

Have you taken the jump—are you measuring results/outcomes in your practice? If not, as a trial, start using the Revised Oswestry with your back pain patients now. Discover how easy it is, and the new answers it gives you with Mrs. Jones, Mr. Gonzalez, and their health insurance and workers’ compensation claims managers. Discover how much it tells you about the quality of your care.

TCR

**SUBSCRIPTION AND ORDER FORM**  
(6 bi-monthly issues) Year commences January

			<i>Check one</i>
US and Canada	1 year	\$84.00	<input type="checkbox"/>
(your currency)	2 years	\$160.00	<input type="checkbox"/>
Australia	1 year	A\$90.00	<input type="checkbox"/>
	2 years	A\$175.00	<input type="checkbox"/>
Elsewhere	1 year	US\$85.00	<input type="checkbox"/>
	2 years	US\$165.00	<input type="checkbox"/>

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Province/State \_\_\_\_\_

Country \_\_\_\_\_ Postal Code/Zip \_\_\_\_\_

Telephone (\_\_\_\_) \_\_\_\_\_

PLEASE CHECK ONE

Visa Card number \_\_\_\_\_

MasterCard Expiration date \_\_\_\_\_

Cheque/Check enclosed

**Payable to:** The Chiropractic Report  
3080 Yonge Street, Suite 5065  
Toronto, Ontario M4N 3N1 Canada  
Tel: 416-484-9601 Fax: 416-484-9665  
E-mail: TCR@chiropracticreport.com  
Website: www.chiropracticreport.com

REFERENCES

1. Coile RC. *The New Medicine: Reshaping Medical Practice and Health Care Management*, Aspen Publishers, Rockville, MD. 1990.
2. *Guidelines for Chiropractic Quality Assurance and Practice Parameters*, (1993) Proceedings of the Mercy Center Consensus Conference, ed. Haldeman S, Chapman-Smith D, Petersen DM, Aspen Publishers, Gaithersburg, Maryland, Chapter 13.
3. *Clinical Guidelines for Chiropractic Practice in Canada* (1994), ed Henderson DJ et al, Suppl. to J Can Chiropractic Ass 38(1): March 1994.
4. Hsieh CJ, Phillips RB et al. *Functional Outcomes of Low Back Pain: Comparison of Four Treatment Groups in a Randomized Controlled Trial*. J Manipulative Physiol Ther 1992; 15(1):4-9.
5. Vernon H, Mior S. *The Neck Disability Index: A Study of Reliability and Validity*. J Manipulative Physiol Ther 1991; 14(7):409-415.
6. Meade TW, Dyer S et al. *Low Back Pain of Mechanical Origin: Randomised Comparison of Chiropractic and Hospital Outpatient Treatment*, Br Med J. 1990; 300:1431-37.
7. *Low Back Pain Initiatives*. Eds. Ehrlich GE, Khaltayev NG. Department of Non-Communicable Disease Management, World Health Organization. WHO/NCD/NCM/CRA/99.1.
8. Deyo RA. *Measuring the Functional Status of Patients with Low Back Pain*, Chiropractic Technique. 1990; 2(3):127-137. Reprinted from Arch of Phys Med Rehab. 1988, 69:1044-1053.
9. Kopec JA, Esdaile JM. *Spine Update: Functional Disability Scales for Back Pain*. Spine. 1995; 20:1943-1949.
10. Bolton JE, Breen AC. *The Bournemouth Questionnaire: A Short-form Comprehensive Outcome Measure. I. Psychometric Properties in Back Pain Patients*. J Manipulative Physiol Ther. 1999; 22(8):503-510.
11. Bergner M, Bobbit RA et al. *The Sickness Index Profile: Development and Final Revision of a Health Status Measure*. Medical Care 1981; 19:787-809.
12. Roland M, Morris R. *A Study of the Natural History of Low Back Pain, Part II*. Spine 1983b; 8(2):145-150.
13. Fairbank JCT, Couper C et al. *The Oswestry Low Back Pain Disability Questionnaire*. Physiotherapy 1980; 66(18):271-273.
14. Million R, Hall W et al. *Assessment of the Progress of the Back Pain Patient*. Spine 1982; 7:204-212.
15. Waddell G, Main CJ. *Assessment Severity in Low Back Disorders*. Spine 1984; 9:204-208.
16. Haas M, Jacobs GE et al. *Low Back Pain Outcome Measurement Assessment in Chiropractic Teaching Clinics: Responsiveness and Applicability of Two Functional Disability Questionnaires*. J Manipulative Physiol Ther 1995; 18:79-87.
17. Erhard RE, Delitto A et al. *Relative Effectiveness of an Extension Program and a Combined Program of Manipulation and Flexion and Extension Exercises in Patients with Acute Low Back Pain Syndrome*. Phys Ther 1994; 74:1093-1100.
18. Stratford PW, Binkley JM. *Measurement Properties of the RM18: A Modified version of the Roland-Morris Disability Scale*. Spine 1997; 22:2416-2421.
19. Vernon H, Mior S. *The Neck Disability Index: A Study of Reliability and Validity*. J Manipulative Physiol Ther 1991; 14(7):409.
20. Jacobsen GP, Ramadan NM et al. *The Henry Ford Hospital Headache Disability Inventory (HDI)*. Neurology 1994; 837-842.
21. *The Clinical Application of Outcomes Assessment*. ed Yeomans SG. Appleton & Lange, Connecticut 2000, 79.
22. Bolton JE, Wilkinson RC. *Responsiveness of Pain Scales: A Comparison of Three Pain Intensity Measures in Chiropractic Patients*. J Manipulative Physiol Ther 1998; 21:1-7.