The Chiropractic Report

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Thank you

After 30 years of publication, this is the final issue of *The Chiropractic Report*.

It has been my unqualified pleasure to bring you this report since 1986, charting the progress of your profession during the exciting and dramatic era in which it has grown from a clinical art in a few countries to a mature global profession. See much more on that in this issue.

The *Report* has only been able to be part of this history because of the outstanding subscription support of so many of you – individual doctors of chiropractic and your associations and educational institutions. Most grateful thanks for this.

This issue contains many references to past issues, all of which may now be found and downloaded for your use without charge at www.chiropracticreport.com. That is the *Report*'s parting gift to a profession that has given it and me so much.

Sincerely,

David Chapman-Smith

Editor, *TCR*

Chiropractic Then and Now

30 Years in the Life of the Profession

A Introduction

"THERE IS NOW CLEAR EVIdence that chiropractic treatment is effective in the management and cure of both common and classical migraine. This has been accepted by government inquiries and medical researchers."

So begins the first issue of *The Chiropractic Report* (*TCR*) 30 years ago in November 1986, referencing the new chiropractic and medical research evidence in support.

Chiropractic was then moving from adolescence to adulthood. Serious research was at last underway.

After exactly 30 years of publication, bringing summaries of the most significant new research and professional developments to chiropractors everywhere every two months, this is the final issue of *TCR*. In his 70th year the editor is turning to other pursuits.

It reviews the complete transformation of the profession over the past three decades from an upstart, healthcare outsider in the English-speaking world to an established global profession with a leading role in the research and management of spinal health.

TCR has reported the unfolding history of the profession. As Dr Phillip Ebrall of RMIT University in Melbourne commented some years ago now, "for the history of the profession since the 1980s just see the past issues of *The Chiropractic Report*."

This closing issue of *TCR* provides an overview of this transformative era, then selects 10 of the most influential events and 10 of the most significant research studies.

B The Overview

2. An overview of the advance of the profession between 1986 and 2016 is given in three key areas – global growth, relationship with the medical profession, and research.

3. **Global Growth.** The profession was founded in North America in the 1890s and the pioneering generations of chiropractors deserve our profound respect for their achievements under relentless attack. That having been said, in 1986 the profession remained small, vulnerable, unrecognized, largely unregulated by law outside North America and under medical attack throughout the world. Thus:

a. *Education.* US and Canadian chiropractic schools were private and small, with no public funding for education and research, and with little research capacity and output. The only formal schools outside North America, all recently established, were one each in Australia, South Africa and the UK.

Today there are university-based schools in many countries in all world regions, the most recent being at Bahcesehir University in Istanbul, Turkey. There are chiropractic students taught in Danish, English, French, German, Japanese, Korean, Portuguese, Spanish and Turkish. Schools are about to open at Kenyatta University in Nairobi, Kenya and the Baptist University of Hong Kong.

Latin America, which had no schools and under 100 chiropractors in the whole region in 1986, now has six university-based schools in Brazil (2), Chile (1) and Mexico (3), with another planned for Buenos Aires in Argentina. To illustrate the growth this gives the profession Brazil, with two chiropractors for its population of 160 million in 1986, now has over 1,000 chiropractors, and is graduating approximately 250 annually.

b. *Legislation.* Thirty years ago the practice of chiropractic was recognized and regulated by legislation in only 8 countries (Australia, Canada, New Zealand,

Panama, South Africa, Switzerland, USA and Zimbabwe). Chiropractors were being prosecuted and convicted for the practice of medicine without a licence not only in Asian countries where the profession was little known, such as Korea and Taiwan, but also in major European countries such as France, Italy and Spain.

Now there is chiropractic legislation in over 40 countries, including France and Italy. (Spain remains without legislation, but has two chiropractic schools, no threat of prosecution, and has grown from 12 pioneering chiropractors to over 400. Similar growth is seen in many European countries.)

More importantly, the World Health Organization (WHO), the leading global agency for healthcare policy and development, which was unaware of the chiropractic profession until the mid 1990s, is today not only familiar with the profession but in 2005 published the *WHO Guidelines on Basic Training and Safety in Chiropractic* recommending to member countries that chiropractic practice should be recognized and regulated as an integral part of national healthcare systems.

Chiropractic is now established in over 100 countries in all world regions.

4. **Relationship with Medicine.** In the late 1980s there was still general rejection of chiropractic by the medical profession and therefore mainstream healthcare systems everywhere. While there were several reasons for this, a fundamental issue was the diametrically opposed views the professions had on the management of patients with back and neck pain.

• Medicine saw back pain as a *biomedical* problem, and rejected all spinal manipulation as wrongheaded, dangerous and to be avoided at all costs.

• Chiropractic saw spinal pain as largely a *biomechanical* or functional problem for which manipulation was often a first line treatment approach, and rejected medicine's approach of wait and see, medications and surgery.

In that climate cooperation between the professions was unlikely, quite apart from the aggressive turf care battles and severe politics of the healthcare world.

From the 1990s research and evidence-based guidelines have substantially vindicated the chiropractic profession's approach, and have modified the positions of both professions to agreement on a *biopsychosocial* model of care.

Chiropractic, medical and national clinical guidelines expressly support spinal manipulation for most patients with acute and chronic back pain, allied with patient education and early return to activity then exercises. Chiropractic management, formerly seen by others as alternative and unproven, is now seen as mainstream care for patients with spinal pain and disability. There is a clinical basis for full cooperation.

5. **Research.** A necessary hallmark of any mature healthcare discipline is a body of research that has made a significant contribution to scientific knowledge. In the 1980s there was not even the beginning of such research from the chiropractic profession. There were only three chiropractors in the world with PhDs – Drs Scott Haldeman and Reed Phillips in the US and Dr Lynton Giles in Australia. *The Journal of Manipulative and Physiological Therapeutics* (*JMPT*) was the profession's only peer-reviewed journal and was in its infancy. There was not a single specialty text, whether on radiology, orthopedics, pediatrics, sports chiropractic or other.

Medical journals refused to publish studies submitted by chiropractors. When Dr Howie Vernon submitted a controlled trial to Manual Medicine in 1984 the editor returned it with a curt one-line response that the journal did not accept a study from a chiropractor. When other professionals searched 'chiropractic' in medical indexes most references were to case reports of alleged vertebral artery injury and stroke.

All that has changed dramatically. The profession has had impressive growth of research capacity and has made a substantial contribution to health science, particularly in the basic and clinical sciences in the field of spine care. Denmark, where 27 or almost 5% of the nation's 550 chiropractors hold PhDs, was the first to lead the way.

Canada followed and, pursuant to a joint funding project of agencies of the Federal Government and Canadian Chiropractic Association, will have more than 50 DC PhDs when current candidates complete their studies. At present most large universities across Canada have a Chiropractic Research Chair, and there are 5 DC PhDs on the Faculty of Medicine at the University of Toronto.

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In the US the National Institutes of Health (NIH) has supported a Chiropractic Research Agenda Conference annually for the past 15 years. During that time the NIH has had a staff chiropractic research officer – currently Partap Khalsa DC, PhD – and has provided substantial grants for many RCTs led by chiropractic researchers.

See more on research below, when ten of the most influential research projects of the past 30 years for the profession are discussed.

6. Of course there is a considerable road ahead for the profession and much yet to be done, but this brief overview demonstrates the metamorphosis to maturity that has taken place in the two short generations since the late 1980s. Now we turn to the 10 most influential legal and professional developments during this time.

C Top 10 – Legal and Professional Developments

7.1. **Wilk *v* AMA Final Judgment – 1987** (*TCR*, November 1987). In 1976 five chiropractors led by Dr Chester Wilk of Chicago, and supported by

the profession, sued the American Chiropractic Association (AMA) and several related organizations (e.g.the American College of Radiology, the American College of Surgeons, the American Hospital Association). This was an anti-trust action alleging an illegal conspiracy to contain and destroy the chiropractic profession as a competitor in the American health care system.

The AMA represented over 200,000 MDs and was the most powerful medical organization in the world. However there was compelling evidence of such a conspiracy from pirated AMA documents that had been photographed and sent anonymously to the profession. The conspiracy included, for example, ethical rulings to prevent cooperation between MDs and DCs in education, research and practice; suppressing research favorable to chiropractic; subverting a 1967 US government inquiry into the merits of chiropractic; and an extensive misinformation campaign portraying chiropractors as cultist, unscientific, and having a philosophy incompatible with western medicine.

For 11 years the lawsuit went through hearings, appeals and re-hearings. Finally, on August 27, 1987, a US federal court with Judge Susan Getzendanner presiding found in favor of the plaintiffs. The AMA had maintained an illegal conspiracy from the 1960s to 1980, and had never "acknowledged the lawlessness" of its "systematic, long-term wrongdoing and intent to destroy a licensed profession".

The court delivered this far-reaching injunction or permanent restraining order against the AMA: "The AMA, its officers, agents and employees, and all persons who act in active concert with any of them…are hereby permanently enjoined from restricting, regulating or impeding…the freedom of any AMA member or any institution or hospital to make an individual decision as to whether or not that AMA member, institution or hospital shall professionally associate with chiropractors, chiropractic students, or chiropractic institutions."

Subsequent paragraphs in the injunction required the AMA to forward this injunction to all members and employees, publish it in JAMA, and take other steps to publicize it.

This historic judgment opened the gates to future cooperation between the professions, freeing MDs from fear of loss of their licenses or hospital privileges if they associated with chiropractors in practice, education and research.

To be sure, many in political medicine shifted gears to fight chiropractic in other ways, including restricting reimbursement rights. But difficult as continuing challenges were, they were small compared with the huge advances that were possible following this landmark judgment.

7.2. **Managing Low-Back Pain – Kirkaldy-Willis and Cassidy – 1988** (*TCR*, January 1987). It is not possible to overstate the importance to the profession of the decision by the prominent Canadian orthopedic surgeon Dr William Kirkaldy-Willis in the early 1980s to work with Dr David Cassidy and then other young chiropractic postgraduate fellows at the University Hospital in Saskatoon. At the time there was a firm medical ethic against any clinical cooperation. The redoubtable KW, as he was known, simply wrote to the registrar of the College of Physicians and Surgeons announcing that he would be working with chiropractors "and I do not expect to hear from you." He didn't.

Dr KW had launched the first edition of his much respected text *Managing Low-Back Pain* in 1983 and was soon to become President of the American Back Society (ABS). He had just started working with chiropractors at that time, and wrote the chapter on manipulation himself.

In the second edition in 1988 Dr Cassidy wrote that chapter, becoming the first chiropractic author of a chapter in a major medical text. In his short preface to the book, KW called for a combination of medical orthodoxy and new knowledge from complementary care in the improved management of LBP. This was understood by all to be a clear reference to methods of chiropractic diagnosis and treatment he had discovered at his University Hospital.

This and KW's continuing engagement with the profession opened many doors for chiropractic. Chiropractors were welcomed into the ABS then other spine specialty organizations that had been closed to them. *Managing Low-Back Pain* went to two further editions, greatly influencing medical and surgical leaders in North America, Europe and beyond.

Dr Cassidy, who now has doctorates in anatomical pathology and injury epidemiology, embarked on a career in which he has become one of the foremost spine care researchers in the world. Many other chiropractic researchers and clinical specialists emerged from KW's University Hospital program, and the first generation of chiropractic researchers worldwide in the 1990s was deeply influenced by him.

7.3. **World Federation of Chiropractic Formed – 1988.** The November 1998 *TCR* gave notice of the formation of a new international organization to represent the profession, the World Federation of Chiropractic (WFC) which was voted into existence on October 4, 1988 by delegates from 17 countries at an International Congress of Chiropractic in Sydney hosted by the Australian Chiropractors' Association.

Subsequent issues of *TCR* have tracked the growth and significance of the WFC, which now has member national associations in 88 countries, including both the ACA and ICA in the US. It has provided a much needed and successful vehicle for consistent development of the profession during an era of rapid international expansion – consistency for example in market identity (see paragraph 7.9), minimum educational standards, and in legislative scope of practice internationally to ensure the right to diagnose and primary contact status.

The WFC has also played a major role in promoting the international growth and acceptance of the profession, assisting its member national associations in many ways, such as:

• *Legislation*. It was the WFC, as a non-governmental organization or NGO in official relations with WHO since 1997, that partnered with WHO in 2002-05 in its production of Guidelines to member countries recommending legislative recognition and regulation of chiropractic practice. These Guidelines, translated into 11 languages through partnerships between WHO, the WFC and WFC member associations, have been extremely influential in persuading countries to recognize the profession – including those with few chiropractors such as Cyprus, the Philippines and the United Arab Emirates. In the Philippines the definition of chiropractic in the legislation regulating chiropractic practice is taken directly from the WHO Guidelines.

• *Growth of Education.* Every second year from 1998 the WFC, in partnership with the Association of Chiropractic Colleges, has held an international education conference for faculty and those considering a first chiropractic educational institution

in their countries, to expand and improve chiropractic education. The most recent conferences have been in Beijing (2008), Madrid (2010), Perth, Australia (2012), Miami (2014) and Montreal (2016).

• *Building of Research Capacity*. At the first WFC Council Meeting in Toronto in 1989 the profession's foremost researcher Dr Scott Haldeman was appointed Chair of a WFC Research Council comprised of leading chiropractic researchers, a position he held for the next 25 years as he and the Council masterminded the development of chiropractic research capacity and quality.

The WFC's Biennial Congresses, with their associated original research symposia and awards, have been the profession's premier research meetings during that time. See the WFC's website www.wfc.org for the bios of the current members of its Research Council, with Dr Greg Kawchuk of Canada as Chair, and Dr Christina Goertz of the USA as Vice-Chair.

7.4. **Mercy Center Conference and Chiropractic Guidelines – 1992** (*TCR*, May 1992). After a year of preparation a consensus panel of 35 chiropractors met for 4 days at the Mercy Center near San Francisco in January 1992 to produce the profession's first-ever national clinical practice guidelines. All chiropractic organizations in North America supported the conference and were represented, Dr Scott Haldeman chaired the meeting, and the 14 chapters of the guidelines covered all aspects of chiropractic practice including frequency and duration of care.

The Guidelines became controversial partly because of the predicted misuse of them by some third party payors to limit reimbursement unfairly. However this was far outweighed by important beneficial consequences which included:

• New credibility for the profession. The clinical guidelines movement was just beginning at the time. No other profession had such comprehensive national clinical guidelines. Dr Arlan Fuhr explained that, on the airplane home from the conference, he sat next to a healthcare manager who was astounded and impressed to hear that the chiropractic profession had imposed such clinical standards on itself.

• Inclusion of two of the Mercy Center Conference leaders, Dr Scott Haldeman and Dr John Triano, on the US government-funded Agency for Health Care Policy and Research panel that created the first US national guidelines for management of back pain the following year. With their influence these AHCPR Guidelines were the first medical or interdisciplinary guidelines to recommend spinal manipulation as a first line treatment for back pain patients. (See paragraph 9.4.)

• Accelerated involvement of the profession internationally in the development of clinical guidelines, and the maturity that brought to the profession. Canada produced similar guidelines the following year. The US established a permanent organization for the ongoing review and development of clinical guidelines, the Council on Chiropractic Guidelines and Practice Parameters (CCGPP), affiliated with the Council of Chiropractic State Associations (COCSA) as the most representative chiropractic organization in the nation.

7.5. **Lannoye Report – 1997.** Homeopathy was founded in Germany, and patients in Europe have always been more open to complementary and alternative medicine (CAM) than in developed countries in other regions. In 1997 the European Parliament adopted the Lannoye Report, named after MEP and Commission Chair Paul Lannoye of Belgium, which called for recognition and regulation of the major CAM disciplines – specifically including chiropractic - throughout Europe.

The European Chiropractors' Union (ECU), representing the profession in Europe, had recognized the importance a positive Lannoye Report would have and had presented formal submissions to the Commission. Until this time few countries in Europe had chiropractic legislation, and none amongst countries founded on Napoleonic law – for example Belgium, France, Italy, Spain and Portugal. All except Spain now do, and it was the Lannoye Report that paved the way for acceptance of chiropractic in those and other countries in Europe.

7.6. **Chiropractic for US Military – 2000** (*TCR*, May 2000). On October 30, 2000, in the biggest legislative victory for the profession in the US for over 25 years, President Clinton signed into law legislation mandating that chiropractic care be made available through the Department of Defence (DOD) to all active duty personnel in the US armed forces on a permanent basis.

This followed fierce lobbying and a five year demonstration project at 13 military treatment facilities which reported superior outcomes for patients under chiropractic care as opposed to traditional care (e.g. fewer hospital stays, improved 'military readiness', higher patient satisfaction). The American Chiropractic Association (ACA), assisted by the Association of Chiropractic Colleges, had led the charge.

The results of this have been dramatic, and include:

• Expanding availability of and funding for chiropractic services in the extensive DOD healthcare system in the years since. This is for all three branches of the military – army, navy and air force.

• Clinical, interdisciplinary and political opportunities at the most influential levels. Dr William Morgan, one of the chiropractors on staff at the National Naval Medical Center in Bethesda, Maryland which is adjacent to Washington DC, had a 2-day clinic weekly at the US Capitol for members of congress for many years until his recent appointment as President, Parker University.

• Even more significantly, expansion of chiropractic services to war veterans under the Department of Veterans' Affairs (the VA) in 2001. The VA is the single largest healthcare system in the US and over 50% of all MDs and dentists receive residency training in VA hospitals or facilities. By 2015 51 of these had onsite chiropractic clinics, and many more referred patients for funded offsite care.

To illustrate the significance of this, Dr Anthony Lisi, the National Coordinator for VA Chiropractic Services is at the Connecticut VA facility that provides clinical training for medical students at Yale University. During this they all rotate through his clinic, experiencing chiropractic care as they learn about management of neuromusculoskeletal conditions.

• Finally, and most significantly, in 2014 the VA began offering and funding one year postgraduate residencies for chiropractors in its facilities. In the US the optometry profession regards the establishment of VA residencies for optometrists 20 years ago as the key moment for the acceptance and devel-

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opment of optometry in the US healthcare system. There will be similar significance for chiropractic.

7.7. **Chiropractic Education at the University of Southern Denmark – 2003.** Having achieved legislation to regulate the practice of chiropractic in Denmark in May 1991 the Danish Chiropractors' Association (DCA) pursued a bold strategic plan to establish chiropractic as a respected mainstream profession in spinal and musculoskeletal health. This had ambitious goals in education, research, community and hospital-based clinical practice, and public funding for these on a similar basis to the medical profession. Today those goals have been realized and in many ways Denmark leads the chiropractic world.

A key to success, in a country that had no chiropractic education, was establishing education in a respected public university, strong in health sciences, and ideally with a medical school to promote cross fertilization and research. That happened in the Department of Sports Science and Biomechanics at the University of Southern Denmark (USD) in 2003, where chiropractic and medical students now share classes for their bachelors' degrees before branching out to chiropractic or medical training for their masters' degrees and licences to practice.

This achievement at USD, and the success of the overall DCA plan particularly in research, continues to have a huge impact in Europe and internationally. The first Swiss school of chiropractic, at the University of Zurich, is modeled on USD. Chiropractic researchers in Denmark are making a large contribution to the current best research in many aspects of adult and pediatric spinal health.

Importantly, it was visits to Denmark by leaders of the Canadian Chiropractic Association (CCA) that led to the CCA giving high priority and extensive funding to the development of research capacity and output during the past decade.

7.8. **Loss at Florida State University – 2003** (*TCR*, July 2000). Here is the one adverse event in this Top 10, arguably the biggest loss ever suffered by the profession. In May 2000 the Florida state government had voted $1 million for final preparations for a school of chiropractic due to open in September 2001 at Florida State University (FSU).

FSU, a large and powerful state university rated Category 1 for research funding by the Federal Government, was to be the first state university to have a chiropractic program. The Florida Chiropractic Association had led a thorough campaign, which included raising a $2 million endowment fund for a Research Chair in Chiropractic and Biomechanics at FSU. The profession could see that this would be the first of several chiropractic programs at state universities, fundamentally changing the status of chiropractic in the US.

Opponents could see the same thing and after a series of delays and battles the war was lost in late 2003.

7.9. **Global Consensus on Market Identity – 2005** (*TCR*, July 2005). Since the 1980s many consultants have warned the profession that it suffered from the lack of one, clear and appropriate identity in the healthcare marketplace, and needed to reach agreement upon one urgently. The forum for that fell naturally to the World Federation of Chiropractic (WFC). After a thorough 2-year consultation process, and at a Congress in Sydney, Australia in June 2005, the WFC membership of national associations throughout the world unanimously accepted the recommendations in the report of its 40-person Task Force.

This identity, reported in the July 2005 TCR and available with the full Task Force Report at www.wfc.org, had a number of important supporting statements but the essence was that chiropractors were "the spinal health care experts" in the mainstream healthcare system. Not expert in spinal pain, or rehabilitation, or surgery – but spinal health. This international agreement on a contentious issue after a grassroots, online, survey of chiropractors in over 50 countries was an achievement, but what makes this so significant is:

- Continued agreement and implementation of this identity by WFC member associations, most educational institutions and individuals since
- A consistent result from an equally thorough identity process subsequently undertaken by Palmer College of Chiropractic with its alumni and communities in the US and internationally in 2010-2012. Palmer's exact core identity statement for doctors of chiropractic – "the primary care professionals for spinal health and wellbeing".

7.10. **Chiropractic at the Vancouver Winter Olympics – 2010** (*TCR*, March 2010). There have been sports chiropractors with a growing number of national teams at the Olympic Games since the 1980s. What makes the Vancouver Winter Games so significant is that:

- This was the first time that a local organizing committee included sports chiropractors in the host medical services team providing care for all athletes, coaches and administrators at the games polyclinic. The profession has the Royal College of Chiropractic Sports Sciences (Canada), and the Medical Director Dr Jack Taunton, to thank for that.
- This led to inclusion of sports chiropractors in the host medical services at both the 2012 London and 2016 Rio Olympic Games, with such satisfaction from athletes, coaches and others in the medical team reported to the International Olympic Committee that it appears likely that future Olympics will be required to provide the same service.

Reasons why this advance of sports chiropractic is important for the whole profession include the celebrity and newsworthiness of elite athletes when they acknowledge their chiropractic care, and sports chiropractic's interdisciplinary model and focus on improved function and performance as well as management of injuries.

D Top 10 – Research

8. This top 10 list contains original research, clinical guidelines and research reviews. Publications are selected not only for quality but also immediate impact and subsequent significance for the chiropractic profession. Issues of *TCR* that reviewed the publications are given, and contain much further detail.

9.1. **British MRC Back Pain Trial Meade et al. – 1990**[1] (*TCR*, July 1990). This study by Meade et al. for the British Medical Research Council was a 10-year, multicenter, randomized controlled trial (RCT) comparing usual chiropractic and physiotherapy (hospital outpatient) treatment for patients with acute and chronic low-back pain. With a final number of 741 patients and a 3-year follow up period it was the largest and most thorough back pain trial ever when published in the British Medical Journal in June 1990. It was also the first com-

paring usual chiropractic and medical treatment in everyday clinical settings.

It concluded that chiropractic treatment was significantly more effective, particularly for patients with chronic or severe pain, that results were long-term and that "the potential economic, resource and policy implications of our results are extensive." "Consideration should be given", said Meade et al., "to oproviding chiropractic within the NHS (National Health Service) either in hospitals or by purchasing chiropractic treatment from existing clinics."

The trial was front page news in national papers in the UK and British chiropractors saw their practices literally double overnight. However the lasting significance of the trial is that it put not only spinal manipulation but also chiropractic treatment in the spotlight internationally for re-evaluation by the medical profession.

9.2. **Manga Report on Cost-Effectiveness – 1993**[2] (*TCR*, September 1993). By the early 1990s there had been several workers compensation studies in the US, Canada and Australia reporting the cost-effectiveness of chiropractic management of injured workers with spinal pain and disability, and indirect evidence from studies such as the Meade et al. trial just discussed, but no expert analysis and report.

In 1992 the Ministry of Health in the Province of Ontario, Canada, confronted with rising costs in its health care system and evidence of inefficient management of patients with back pain, commissioned just such an expert report from two of Canada's leading health economists, Professors Pran Manga and Douglas Angus from the University of Ottawa. Their August 1993 report concluded:

"In our view, the constellation of the evidence of:

a. the effectiveness and cost-effectiveness of chiropractic management of low-back pain

b. the untested, questionable or harmful nature of many current medical therapies

c. the economic efficiency of chiropractic care for low-back pain compared with medical care

d. the safety of chiropractic care

e. the higher satisfaction levels expressed by patients of chiropractors

together offers an overwhelming case in favour of much greater use of chiropractic services in the management of low-back pain. There should be a shift in policy to encourage and prefer chiropractic services for most patients with low-back pain."

In the following months and years the Manga Report was widely read by government and private third party payors in Canada, and also internationally because Manga was a respected consultant to governments in many countries. In Ontario the report led to immediate improved access to chiropractic services under workers compensation, and the Ministry of Health's subsequent Wells Report with many recommendations to improve the reimbursement and integration of chiropractic services in the healthcare system.

9.3. **Eisenberg on CAM – 1993 and 1998**[3 4] (*TCR*, March 1999). In 1990 Dr David Eisenberg and colleagues from Harvard University performed a first national survey of the use of complementary and alternative medicine (CAM) in the US, and this provided a major wake-up call to health authorities and the medical profession when it was published in the New England Journal of Medicine in 1993.

There was much greater use of CAM including chiropractic than had been realized. In 1990 Americans made more visits to alternative health care providers (425 million) than to primary care medical doctors. Further, about 1 in 2 or 50% of those seeking alternative care did not tell their medical doctors. In the repeat survey, published in 1998 and covering the period 1990-97, the findings included:

- 4 in 10 Americans used at least one alternative therapy in 1997. For adults aged 35-49 years, 1 of every 2 used CAM.
- Total annual visits for CAM increased between 1990 and 1997 by 47% to 629 million, exceeding visits to primary care physicians by 243 million. Annual expenditures rose by 45% (adjusted for inflation) and the $12.2 billion paid out-of-pocket by patients exceeded out-of-pocket expenditures for all US hospitalizations. CAM use was by all socio-demographic groups.
- Chiropractic was the most used form of CAM.

As we have seen this was the time of the Lannoye Report in Europe, and there were studies showing similar levels of use of CAM in Canada and Australia and New Zealand.

Following the demonstration of CAM's market significance by the Eisenberg surveys important benefits included greater public, medical and governmental exposure to and interest in chiropractic services, significant new NIH funding for chiropractic research, and wider coverage and reimbursement of chiropractic care under employee benefits plans.

9.4. **AHCPR and CSAG Back Pain Guidelines – 1994**[5 6] (*TCR*, January 1995). Two new sets of guidelines in 1994, *Acute Low Back Problems in Adults* in the US, and *Management Guidelines for Back Pain* in the UK, intentionally published together in December 1994, would lead to a fundamental change in the management of back pain. These were both government-sponsored, national, evidence-based clinical guidelines from multidisciplinary expert panels. Chiropractic scientists on the US panel were Drs Scott Haldeman and John Triano, on the UK panel Dr Alan Breen, principal chiropractic researcher in the Meade et al. trial.

The US Agency for Health Care Policy and Research (AHCPR) guideline was published separately and in three forms – the full Guideline (160 pages, 360 references), a Quick Reference Guide for Clinicians, and brochure for patients. It was the basis for a widely distributed Time Life video promoting its recommendations, in which one of the two leading experts most interviewed was a doctor of chiropractic, Dr Triano. It became more influential than the Clinical Standards Advisory Group (CSAG) guideline in the UK, which was published as an appendix to a broader report. However both were consistent, of pivotal importance at the time in calling for a complete change in the management of back pain, and were the basis of future research, guidelines, and practice.

Central points of importance included:

- Rejection of management based on rest and 'wait and see', which produced physical and psychological decline
- Recommendations against standard use of resource-intensive diagnostic workups - a good history and physical exam could identify those relatively few patients with red flags
- Recommendations against many usual but unproven and/or

harmful medical treatments, such as passive physical modalities, epidural and other injections, and various classes of medication including oral steroids, antidepressants, and opiates for more than 2 weeks

• Much tighter parameters for surgery, not justified until after 3 months of pain, and not unless imaging findings were supported by continued low and unimproved functional status

• On grounds of safety and effectiveness, recommendations in favour of only two treatments other than patient education and advice – non-prescription medications and spinal manipulation.

The AHCPR, as is noted in its Guideline, embarked on a guideline for low-back problems for 4 reasons – their prevalence, cost, increasing evidence that "many patients may be receiving care that is inappropriate" and a new body of scientific evidence allowing assessment of commonly used treatments.

Scottish orthopedic surgeon and back pain authority Dr Gordon Waddell, who had won a Volvo Award for a 1987 paper describing the 20th century medical management of back pain a 'disaster', and would soon write his 1998 text *The Back Pain Revolution,* was a consultant to both of the US and UK panels.

9.5. **Quebec Task Force Report on Whiplash – 1995**[7] (*TCR*, July 1995). In May 1995 a 17-person Quebec Task Force, so named but including experts from Canada, France, Sweden, Switzerland and the USA, delivered a report titled *Redefining Whiplash and its Management* that would do for neck pain what the AHCPR and CSAG reports would do for back pain.

It contained an outspoken indictment of education, practice and the lack of research in the field of whiplash. As Bogduk said in an editorial in Spine, which published an edited version of the report, the report was "a cogent and exhaustive summary of the state-of-the-art" but "on the topic of whiplash there is no decent epidemiology, nothing written on diagnosis, and barely any treatment works." As for back pain, the treatments with most evidence and recommended were NSAIDs, "short-term manipulation and mobilization by trained persons" and active exercises.

The Report reclassified whiplash-related disorders (WAD) into four categories that were widely adopted by the automobile insurance industry and the healthcare world. Beyond its support for an approach to management that was consistent with chiropractic practice, the Task Force launched two Canadian chiropractic researchers on careers that would place them amongst world leaders in the epidemiology of neck pain. One was Dr David Cassidy, a member of the Task Force, the other his colleague Dr Pierre Côté who today leads Canada's foremost center for epidemiology and policy advice on whiplash at the University of Ontario Institute of Technology.

9.6. **Anatomy of Cervicogenic Headache, Hack – 1995**[8] (*TCR*, May 1998). When the International Headache Society first recognized cervicogenic headache (CGH) in 1988 CGH was very narrowly defined, and most neurologists continued to doubt its existence or importance. One problem was that its anatomical basis was unclear.

Thus the importance of a new anatomical discovery reported by Hack et al., dental researchers from the University of Maryland, Baltimore, in Spine in 1995. In dissections of 11 cadavers they had found a connective tissue bridge joining the rectus capitis posterior minor and the dura between the occiput and the atlas. By the date of publication, as they explained in a letter to the editor, they had found a second myodural bridge at the atlanto-axial joint.

A new interdisciplinary North American Cervicogenic Headache Society with prominent chiropractic and medical leaders on its board was established that year, giving CGH the wider definition of: "Referred pain perceived in any region of the head caused by a primary nociceptive source in the musculoskeletal tissues innervated by the cervical nerves."

Encyclopedia Britannica's 1998 Medical and Health Annual featured this new discovery for the public, explaining how this gave a basis for successful chiropractic treatment of headaches. CGH was finally on the map.

9.7. **BJD Neck Pain Task Force Report – 2008**[9 10] (*TCR*, March 2008). This comprehensive, 220-page report from a multidisciplinary, international Task Force led by neurologist and chiropractor Dr Scott Haldeman from the University of California at Irvine built upon the work of the Quebec Task Force, but dealt with all neck pain and related disorders, not just whiplash.

Its goals were wider and more ambitious – to search and review of all the scientific literature; to complete original research on the risks associated with treatments; to examine patient preferences for and cost-effectiveness of treatments; to give evidence-based guidance on classification and management of neck pain and related disorders (e.g. headache). The work of the Task Force involved more than 50 researchers from 19 clinical and scientific disciplines and took 7 years.

On publication the report was heralded by all as the definitive new review in the field. Its importance is seen in that it is the only research ever to have been published simultaneously in both *Spine* and the *European Spine Journal*. It was also published in *JMPT*.

Chiropractic was well represented on the Task Force, and the findings were overall very positive for the profession. It found that manipulation and mobilization were safe, effective and appropriate treatments for most patients with disabling neck pain, and that personal and psychological factors had a larger role in neck pain and headache than in back pain. Therefore patient preference was more important, and patients should be fully informed of all effective treatment options and fully involved in treatment decisions.

Original research by the Task Force of particular significance to the chiropractic profession was the study by Cassidy, Boyle, Côté et al. comparing the incidence of stroke in neck pain patients after each of chiropractic and medical care. This comparison, never done previously, showed no difference, demonstrating that the rare cases of stroke after chiropractic and medical care appear to be *associated in time* with care but not *caused* by it.

9.8. **Bishop, Quon Back Pain Trial - 2010**[11] (*TCR*, January 2011). Twenty years on from the Meade et al. back pain trial in the UK, Paul Bishop DC, MD, PhD and Jeffrey Quon DC, PhD of Canada were the lead investigators for another RCT that was not only favorable to chiropractic but won the North American Spine Society (NASS) 2010 Outstanding Paper Award for Medical and Interventional Science.

This compared clinical practice guidelines-based care (NSAIDs and chiropractic manipulation for up to 4 weeks, early activity, avoidance of passive care and other medica-

tions) with usual medical care (which proved to be largely medications and referred care from PTs and others) for patients with acute low-back pain. Results were of particular interest in two areas:

• Demonstrating that CSG-based treatment gave significantly better improvement than usual medical care, both at the end of the 4-week treatment period and at 16 and 24 weeks follow up, improvement that was also clinically important

• Showing that the great majority of usual medical care was not in accordance the published and accepted CSG recommendations. For example there was much passive care (60% of patients), excessive use of opiates (80%), and little referral for chiropractic manipulation (6%).

9.9. **Primary Spine Care: Europe and USA – 2011**[12 13] (*TCR*, July and September 2011). In 2011 the readership of the British Medical Journal, the official journal of the British Medical Association, witnessed something never seen before, and which showed how much the management of back pain and the relationship between chiropractic and medicine had changed over the past 25 years.

This was a review in a leading medical journal jointly authored by clinical research leaders in chiropractic (Dr Jan Hartvigsen, Denmark), physiotherapy (Dr Nadine Foster, UK) and medicine (Dr Peter Croft, UK), and making the case that primary care for patients with back pain and other musculoskeletal problems should be transferred from general medical practitioners (GPs) to chiropractors, osteopaths and physiotherapists.

These conditions were not well-managed by GPs, they explained. This field was the main interest of these non-medical professionals, and they were driving much of the research and professional development. Non-medical professionals were well-accepted as primary care providers in oral and dental health, visual health and many aspects of mental health. Why not musculoskeletal health? Foster and Hartvigsen had a fuller version of their position published in the BMJ the following year.

Also in 2011, based on their clinical experience in the US and published online in *Chiropractic and Manual Therapies*, Drs Donald Murphy, Brian Justice and colleagues made a similar case and included a detailed review of the necessary skill set for those wanting to have a full, primary care role in spine care.

10.10. **Bronfort Neck Pain Trial – 2012**[14] (*TCR*, March 2012). "For neck pain, chiropractic and exercise are better than drugs" was the headline in the *New York Times* on January 3, 2012 when the final paper chosen for this Top 10 list was published in the Annals of Internal Medicine, official journal of the American College of Physicians.

In this large, high-quality RCT funded by NIH, Bronfort, Evans et al., a chiropractic and medical research team from Northwestern University of Health Sciences in Minnesota compared the effectiveness of medication, home exercises with advice, and chiropractic spinal manipulative therapy (CSMT) for patients with acute and sub-acute pain. The trial is important, apart from its quality and where it was published, because:

• Neck pain is one of the most common and costly complaints in primary health care

• To 2012 there had been no adequate evidence on the effectiveness of medication or home exercises for patients with acute neck pain, and only limited evidence for spinal manipulation. There was no treatment supported by good quality research.

• Results in the trial were that after 12 weeks of care patients using chiropractic care or exercises were more than twice as likely to be pain free as those relying on medication and usual medical care. These differences remained after 6 and 12 months. There was no significant adverse event after CSMT.

• The trial therefore provided the first strong research of effectiveness of any treatment for acute and sub-acute neck pain patients – CSMT and/or home exercises with advice.

Asked for comment by ABC television News Dr Lee Green, Professor of Family Medicine at the University of Michigan said: "It doesn't surprise me a bit. Neck pain is a mechanical problem, and it makes sense that mechanical treatment works better than a chemical one."

What a perfect illustration of the transformed status of the chiropractic profession, and medical attitudes towards spinal manipulation, with which to end this review – and the 30-year life of *The Chiropractic Report*. TCR

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