

## Chiropractic Benefits: From I-Ching to "Ka-Ching!"

Anthony Rosner, PhD, LLD [Hon.], LLC

I remember back in college, and especially in graduate school at Harvard, countless, endless bull sessions (some influenced by wine; some egged on a bit further by pitchers of beer, in which I was, like, totally transported into the subjunctive) that were shaped by our ethical and spiritual values as to how we might actually change the world. One of our hallowed symbols of this period (emerging from the late 1960s) was the *I-Ching*,<sup>1</sup> an ancient Chinese divination manual full of symbolism and poetic text. This was to be our vision of the world order, motivated by a strong moral commitment.

Now, of course, so many of these lofty goals are driven by money - seen in globalization, publishing conglomerates, the Disney entertainment empire, or the postings each week in *USA Today* of the top-grossing movies from Hollywood. (This used to be just a specialty item published in *Variety*, rather than an issue of national consciousness.) And so it is with health care, and chiropractic, in particular. This occurs against the background of the beleaguered U.S. health care system (spending upward of twice as much per capita, yet ranking lower than France or Japan, and holding 37<sup>th</sup> place in an overall list of 1,912), which struggles to keep pace with major inflationary pressures within the health care industry.

On one hand, the efforts of the chiropractic research community to document the theory and practice of chiropractic - in no small part due to the efforts of FCER - have been amply recognized in the indexed literature as having enabled the profession to approach mainstream status.<sup>3,4</sup> However, the economics of chiropractic care seem far less established, to date. This is not at all helped by the fact that out of a total of 50,000 randomized clinical trials in health care, only 121 (0.2%) were reported just a little over a decade ago to have included economic analyses.<sup>5</sup> In terms of what appears to have captured public attention, a stream of reports from the Workmen's Compensation Research Institute in recent years,<sup>6,7</sup> as well as from the California Workers' Compensation Institute (WCRI),<sup>8</sup> have all suggested that chiropractors are a major cost driver in at least two states (California and Texas), and consequently require strict controls.

Here is the problem, painted in broad strokes: What are the leading alternatives to chiropractic services for back care? We know that the total expenditure for back pain in the United States is over \$90 billion annually. We also know that the costs of prescription drugs runs about \$14 billion annually, more than 15% of that \$90 billion total, with expenditures increasing more rapidly than health service outlays such as inpatient or outpatient care, office-based visits, emergency room, or home health.<sup>9</sup> On top of this, we can graft the rate of all surgeries (17.6%) found to be unnecessary by the Congressional Committee on Interstate and Foreign Commerce.<sup>10</sup>

Plugging in the number of lower back surgeries in the United States, found to exceed \$250,000 per year at a hospital cost of \$11,000 per patient,<sup>11</sup> this would mean that the total number of

unnecessary back surgeries in this country could approach 44,000, with a total cost of \$484 million. As far as prescription drug expenditures are concerned, with total spending doubling from 1995-2000, tripling from 1990-2000, and identified as a key factor spiking U.S. health care costs in recent years,<sup>12</sup> costs associated with chiropractic would seem like small potatoes indeed.

If we are going to argue dollars and cents, then the chiropractic community has a significant issue to deal with - a challenge to which the FCER has risen. Beginning with an appearance in Harrisburg in November 2001 at the Pennsylvania state legislature, I have been rebutting the arguments put forth by the WCRI,<sup>6,7</sup> and have just returned from Austin, where I put in a similar appearance before the Select Interim Workers' Compensation Senate Committee of Texas for the same purpose. In both California and Texas, chiropractic workers' compensation benefits have been getting hammered, based on evidence that is far from convincing. To quote Tom and Ray Magliozzi on National Public Radio ("In my humble opinion ...), these are the major flaws in the WCRI arguments erroneously used to downgrade chiropractic services in workers' compensation systems:

1. Sampling frames have to be clearly identified: In California, where similar trends have been presented by the California Workers' Compensation Research Institute,<sup>8</sup> it has been suggested that the large number of visits observed can be attributed to just 3% to 5% of chiropractors who are responsible for 80% of the costs.<sup>13</sup> Until we see a complete set of data allowing us to verify that the sampling frame of chiropractors chosen is truly representative of all practitioners within Texas, and what the distribution of the costs, number of visits, and numbers of procedures is within this sampling frame, we cannot draw any meaningful conclusions.
2. Data on actual comparative outcomes in comparison years is lacking: There is no indication in the WCRI data as to what the comparative levels of disability were at the workplace, when the worker returned to his or her place of employment. If the worker had returned in a shorter period of time and/or performed at a higher efficiency in the more recent years, the increase in WC payments would have been offset by higher worker productivity, with lower costs for replacement training and long-term rehabilitation. This simply has to do with good medicine, rather than with simply closing the books on a claim at an arbitrary time/point without validation.
3. Bundling and billing of services are problematical: Bundling of all germane costs for an episode of care remains elusive - whether for ancillary issues, such as the actual costs of all medications, laboratory or hospital services; or for indirect costs, such as workdays lost by patient; retraining for replacement labor; caregiver to assist in domestic duties; iatrogenic events associated with treatment; and legal (malpractice) settlements and premiums. Previous studies have never fulfilled all these criteria,<sup>14</sup> although a recent report from CIGNA comes closer than most.<sup>15</sup> A report from a leading health care economist commissioned by the Ontario Provincial Government has concluded that, in a typical patient's visit to the office of an MD, 20% of medical services lie within the office visit itself, while 80% of the charges are billed to ancillary services. For visits to the chiropractor's office, these two percentages are almost diametrically opposed - as most costs are contained within the chiropractor's office.<sup>16,17</sup> The data from the WCRI studies<sup>6,7</sup> bear no resemblance to these proposed ratios, and raise further questions as to precisely how they were calculated. The caveat is to avoid splitting up the actual treatments for non-DC patients into separate categories, when, in fact, they are linked to the same episode and must consequently be bundled. Finally, surgical costs were omitted in one report<sup>7</sup> while drug costs, the notorious driver of the high costs of health care mentioned earlier,<sup>12,18-20</sup> seem vastly underestimated, as suggested by postings of \$7 or "insignificant" amounts per episode in Connecticut.<sup>7</sup>
4. Data on case severity and case mix are conspicuously lacking: Other than a general weighting of different states, there is no primary data evident that adequately define the

allocation of case mix and severity between provider groups or years being compared. Regarding back pain alone, one must ask, for instance, whether the incidence of specific conditions or injuries (such as a herniated disc) changed from earlier to later periods. Should the more difficult cases (such as a herniated disc) have appeared more frequently in later years, they would be expected to require the more exhaustive treatment periods and assortments of procedures reported.

5. Data on permissible scopes of practice in the comparison years are lacking: The increase in the number of procedures reported may have to do with changes in the permissible scope of practice during that period. Also, the number of procedures/cases for other health care professions should be reported for comparison.
6. WC benefits paid to chiropractors represents a minuscule proportion of the total: From the WCRI's own sampling frame of 12 representative states, the actual distribution of medical payments per claim to chiropractors is a paltry 4% of the total, substantially less than the 31% given to physicians, the 10% allocated to PT/OTs, or the 36% earmarked for hospitals.<sup>6</sup> In Georgia, chiropractors workers' compensation cost recoveries were just 0.8% of the benefits disbursed to physicians in 1997 and 1998,<sup>21,22</sup> while low-back pain costs have been estimated to consume between 16-33% of workers' compensation distributions.<sup>23</sup>

These are but a few of the problems with the recent reports from the WCRI<sup>6,7</sup> which I have deconstructed elsewhere, addressing the WCRI, in particular,<sup>24</sup> and workers' compensation issues, in general.<sup>25</sup> So, where should the limited number of health care dollars be spent? We can applaud the advances of heroic medicine, but in these times, we must maintain our focus on those aspects of chiropractic health care that are designed to minimize the onset of more costly and invasive procedures further on. Although a couple of encouraging studies that could be interpreted as suggestive of the benefits of maintenance care have appeared in the journals,<sup>26,27</sup> far more attention has to be paid to the fact that the lion's share of the current cost burden upon health care systems is not within the chiropractic realm at all. This problem can only be solved with properly designed cost-effectiveness studies, which, to date, lack all the elements needed to capture the true direct and indirect costs of an episode of illness.<sup>14</sup> Furthermore, far more research to document the potential benefits of maintenance care is needed.

Once this is achieved, the incessant din of "ka-ching!" in health care might be silenced enough for us to be able to devote more time to the entire well-being of the patient. Who knows? This might even entail being able to revisit some forgotten tenets of the *I-Ching*.<sup>1</sup>

## References

1. *I Ching, or Book of Changes*. Wilhelm R, Baynes CF (translation), 3rd edition, Bollingen Series XIX. Princeton, New Jersey: Princeton University Press, 1967.
2. Fezchem RG. Health systems: more evidence, more debate (editorial). *Bulletin of the World Health Organization* 2000;78(6):715.
3. Meeker WC, Mootz RD, Haldeman S. Back to basics ...the state of chiropractic research. *Topics in Clinical Chiropractic* 2002;9(1):1-13.
4. Meeker WC, Haldeman S. Chiropractic: a profession at the crossroads of mainstream and alternative medicine. *Annals of Internal Medicine* 2002;136:216-227.
5. Adams ME, McCall NT, Gray DT, Orza MJ, Chalmers TC. Economic analysis in randomized clinical trials. *Medical Care* 1992;30:231-243.
6. Eccleston SM, Zhao X. The anatomy of workers' compensation medical costs and utilization: trends and interstate comparisons, 1996-2000. Cambridge, Massachusetts: Workmen's Compensation Research Institute WC-0304, 2003.
7. Victor RA, Wang W. Patterns and cost of physical medicine: comparison of chiropractic and physician-directed care. Cambridge, Massachusetts: Workmen's Compensation Research Institute, WC-02-07, 2002.

8. California Workers' Compensation Institute, Bulletin 03-06, March 20, 2003.
9. Luo X, Pietrobon R, Sun SX, Liu GG, Hey L. Estimates and patterns of direct health expenditures among individuals with back pain in the United States. *Spine* 2003;29(1):79-86.
10. Leape LL. Unnecessary surgery. *Annual Review of Public Health* 1992;13:363-383.
11. Herman R. Back surgery. *Washington Post* (Health Section), April 18, 1995.
12. Report from the Department of Health and Human Services, reported in the *New York Times*, Jan. 8, 2002.
13. Walen W. E-mail sent to *Dynamic Chiropractic*, Sept. 19, 2003 and printed in the same publication, 2003;21(22):38.
14. Branson RA. Cost comparison of chiropractic and medical treatment of common musculoskeletal disorders: a review of the literature after 1980. *Topics in Clinical Chiropractic* 1999;6(2):57-68.
15. Schaffer WA, Margoshes B. *The Disability and Health Care Connection. How Strong Is the Link?* Report from CIGNA Corporation, 2004.
16. Manga P. Economic case for the integration of chiropractic services into the health care system. *Journal of Manipulative and Physiological Therapeutics* 2000;23(2):188-122.
17. Manga P. *Enhanced Chiropractic Coverage Under OHIP as a Means for Reducing Health Care Costs, Attaining Better Health Outcomes and Achieving Equitable Access to Health Services*. Report to the Ontario Ministry of Health, 1998.
18. Health Care and Financing Administration, as reported in the *New York Times*, Oct. 29, 1999.
19. National Institute for Health Care Management Research and Education Program, prepared by the Barents Group LLC, July 9, 1999.
20. Findlay S, National Institute of Health Care Management, as reported by Anjetta McQueen, *The Boston Globe*, May 8, 2001.
21. [www.ganet.org/sbwc/about/](http://www.ganet.org/sbwc/about/)
22. Smith JC. E-mail notice of Aug. 11, 2000.
23. Hooper P. Cost of musculoskeletal injuries on the job. *Dynamic Chiropractic*, Dec. 2, 1994;12(25).
24. Rosner A. *Workmens' Compensation Issues and Chiropractic Care: Response to Workmen's Compensation Research Institute Data*. Report released to the Congress of Chiropractic State Associations, Oct. 9, 2003.
25. Rosner A. Workers' compensation costs and chiropractic: taking a position on center stage. *Journal of the International Association of Industrial Accidents, Boards and Commissions* 2004;41(1):22-49.
26. Coulter ID, Hurwitz EL, Aronow HU, Cassata DM, Beck JC. Chiropractic patients in a comprehensive home-based geriatric assessment, follow-up and health promotion program. *Topics in Clinical Chiropractic* 1996;3(2):46-55.
27. Rupert RL, Manello D, Sandefur R. Maintenance care: promotion services administered to US chiropractic patients aged 65 and older, part II. *Journal of Manipulative and Physiological Therapeutics* 2000;23(1):10-19.

Anthony Rosner, PhD  
 Brookline, Massachusetts  
 rosnerfcer@aol.com

JULY 2004