Chapter 5:
Cost of Chiropractic Compared to Medical Care

Introduction

Here we explore the cost of chiropractic care versus the cost of care provided by medical doctors, often referred to as primary care physicians (PCPs), for comparable injuries and complaints such as low back pain (LBP). There exists a general misperception that the cost of chiropractic care exceeds that of PCPs. This false notion is partially the result of comparing apples to oranges, in terms of the care provided, and partially the result of misleading billing practices on the part of PCPs. In order to better understand the root of this misperception, and ultimately to put it aside, one must examine the treatment which underlies the costs being compared.

For both chiropractors and PCPs alike, the cost of the initial visit with diagnosis is typically higher than the subsequent individual treatments which follow. However, the diagnostic tools of each provider and the differing treatment modalities employed results in a wide disparity in total costs for diagnosis and treatment between the two, even for similar complaints reported. For chiropractors, the cost of diagnosis often includes motion palpation, x-rays, and increasingly digital-motion x-rays. For PCPs, diagnostic costs may also include x-rays in addition to other advanced imaging techniques such as MRIs, CT scans, and the like.[1]

Once a diagnosis has been made, both chiropractors and PCPs then plan an appropriate course of treatment in their respective scopes of care. PCPs often write prescriptions for pharmaceutical drugs (typically non-steroidal anti-inflammatory drugs or NSAIDS) as their primary or sole method of treatment, whether to decrease inflammation or to mask pain.[1] Prescription drugs may be followed by a regimen of physical therapy which, if not effective, may then lead to surgery where deemed appropriate.[1] Chiropractic treatment, by contrast, commonly employs spinal manipulative therapy (SMT), traction, heat therapy, and home exercise.

It should be pointed out that the actual cost of treatment, whether by a chiropractor or a PCP, is actually far greater than the total dollar amount billed to patients or their insurers. To measure the true costs of treatment one must look beyond just the monetary costs and examine the broader costs to both patients and society. These additional but non-obvious costs depend largely on the efficacy of the treatment plan and modalities employed. Such societal costs are not just financial, but may be physical and emotional as well. Some examples of societal costs include the length of time a patient remains in pain, his or her diminished ability to conduct daily routines, the number of lost work days, additional expenses for living assistance and home exercise equipment, the stress felt by family members providing care for their loved ones, and overall patient satisfaction. Of course, some of these societal costs are subjective and therefore cannot be quantified in objective terms. For those costs which are objectively measurable, it will be shown below that chiropractic care costs less than that provided by PCPs.

The full explanation of the cost disparity between Chiropractors and PCPs also requires the exposure of a very misleading practice used by PCPs in calculating the costs of their treatment. The cost for a month's supply of a single NSAID prescription is between $25 and $280.[1] PCPs prescribe NSAIDS as treatment for their patients who often fill their prescription at their local pharmacy. The pharmacy then bills the patients or their insurers for the cost of the prescription, a cost of treatment which is not attributable to the prescribing PCP, but to the pharmacy. This practice unfairly misrepresents the true costs of treatment provided by PCPs by systematically reducing the cost of care by PCPs by $25 to $280 for each NSAID prescription written. This form of "off-book" accounting caused a clamor in both the U.S. financial markets and the U.S. Congress when Enron and Arthur Anderson were exposed for the practice,[1] and patients and insurers should have the same reaction here.

The false apples-to-oranges comparison is further manifested in the nature of the differing treatment modalities provided by chiropractors and PCPs. Chiropractic care is physical in nature and seeks to remedy the underlying cause of the injury or complaint. However, the treatment from PCPs is too often chemical in nature, due to their reliance primarily on pharmaceutical drugs, and thereby limited

to treating symptoms only. In addition, it should be noted there are a plethora of side effects which often accompany the use of NSAIDS which range from very minor to life threatening, [2] and there remain questions about their overall effectiveness for treating LBP. [2] It is not clear whether the costs for treating any resulting side effects or complications from pharmaceutical drugs are tacked onto the costs for treating the underlying complaint, such as LBP.

Some would argue that any treatment regimen which focuses on correcting dysfunction rather than symptoms is of more value to the patient, even where the actual costs of such treatment are somewhat higher than symptom-focused treatment. Fortunately, however, that argument is not necessary as there is a great deal of research to suggest that chiropractic care is generally less costly and more efficacious than treatment provided by PCPs for similar complaints. Below is a brief survey of some of the latest research, which illustrates these points with our emphasis added:

Presented on the Michigan Association of Chiropractors website[3]

"The Manga Report

The Manga Report is the most comprehensive analysis of low-back pain to date. Commissioned by the Ontario Ministry of Health, the report ***shows chiropractic treatment is cost-effective, safe, has a high rate of patient satisfaction, and is more effective than medical treatment for low-back pain.***

The report recommends management of low-back pain be moved from medical doctors to chiropractors and found that ***injured workers with low-back pain returned to work much sooner when treated by chiropractors than by medical doctors. The report also notes evidence that patients are much more satisfied with chiropractic management of low-back pain than with medical management.***

The Manga Report concluded: "There would be highly significant cost savings if more management of low-back pain was transferred from physicians to chiropractors. Users of chiropractic care have significantly lower health care costs, especially inpatient costs, than those who use medical care only."

Archives of Internal Medicine Study

A study published in the October 11, 2004 edition of the *Archives of Internal Medicine* compared 700,000 health plan members with a chiropractic benefit with 1 million members of the same plan who did not have the chiropractic benefit. The study found that ***members with chiropractic coverage had lower annual total health care expenditures per member per year.*** Having chiropractic coverage was associated with a 1.6% decrease in total annual health care costs at the health plan level. Also, ***patients with chiropractic coverage had lower average back pain episode related costs.***

The AMI Study

In this study, a chiropractic network in which DCs performed all patient examinations, treatments, and procedures at their own discretion was constructed. Recommended follow-up visits, choice of appropriate treatment, and ancillary therapies utilized did not require approval from an MD. The original study, which focused on the years 1999-2002, found ***decreases of: 43 percent in- hospital admissions per 1,000; 58.4 percent in hospital days per 1,000; 43.2 percent in outpatient surgeries and procedures per 1,000; and, 51.8 percent in pharmaceutical costs***. It noted that: "The AMI experience seems to indicate that a nonpharmaceutical/nonsurgical orientation can reduce overall health care costs significantly and yet deliver high quality care."

This study was updated in 2007, covering the years 2003-2005. ***The results of the original study were confirmed, with demonstrated decreases of 60.2 percent in in-hospital admissions, 59 percent in hospital days, 62 percent in outpatient surgeries and procedures, and 85 percent in pharmaceutical costs.***

The Stano Study

This study, conducted by Oakland University Economics Professor Dr. Miron Stano, found that, when costs of advanced imaging and referrals to physical therapists and other providers were added, ***chiropractic care costs for chronic patients were 16 percent lower than medical care costs.*** If the study would have included hospitalization or surgical costs, two very expensive medical treatments for low-back pain, or over-the-counter medications, the savings from chiropractic would have been even greater. Additionally, ***chiropractic patients showed an advantage over medical patients in pain, disability, and satisfaction outcomes***.

The British Medical Research Council Study

The British Medical Research Council conducted a 10-year study that showed chiropractic care was significantly more effective than medical treatment for patients with chronic and severe pain.

The Annals of Internal Medicine Study

This study compared the effectiveness of manual therapy, physical therapy, and continued care by a general practitioner in patients with nonspecific neck pain. The success rate at seven weeks was twice as high for the manual therapy group (68.3 percent) as for the continued care group. Manual therapy scored better than physical therapy on all outcome measures. Additionally, patients receiving manual therapy had fewer absences from work than patients receiving physical therapy or continued care, and manual therapy resulted in statistically significant less analgesic use than continued care.

The Texas Workers' Compensation Report

The Texas Chiropractic Workers' Compensation Report found ***the average claim for a worker with a low-back injury was $15,884. If a chiropractor provided at least 90 percent of the care, however, the average cost declined by more than 50 percent, to $7,632.***

American Journal of Managed Care Study

This study found ***chiropractic care was substantially more cost-effective than conventional care. The authors also concluded that properly managed chiropractic care can yield outcomes, in terms of surgical requirements and patient satisfaction, that are equal to those of non-chiropractic care, at a substantially lower cost per patient.***

The Utah Study

The Utah Study compared the cost of chiropractic care to the cost of medical care for conditions with identical diagnostic codes and found that ***cost was almost 10 times higher for medical than for chiropractic claims. Also, the number of work days lost was nearly ten times higher for those who received medical care.***

The Florida Study

The Florida Study showed patients receiving chiropractic care rather than medical care had lower treatment costs by more than 50 percent.***"*** [2]

Workers Compensation Research Institute Interstate Comparison

For the years 2003 and 2004 The Workers Compensation Research Institute (WCRI) conducted a 13-state comparison of medical claim costs and utilization by provider type. The provider types included Physician, Chiropractor, PT/OT, Hospital outpatient provider, and other medical providers. The WCRI surveyed claims in which there was more than seven (7) days of lost time, and adjusted for injury and industry mix over a 12 month average. The WCRI survey results, are published on its website.[2]

The WCRI survey contains many stunning observations which require special mention. Those observations are highlighted here:

- The 13-state median cost of chiropractic care was less than all other provider types (except for "Other medical providers," a category which includes physician's assistants, nurses, counselors and medical equipment suppliers);
- The 13-state median cost of care provided by Physicians and Hospital outpatient providers was nearly triple that of Chiropractors ($3,244 and $3,541 vs. $1,333, respectively);
- The 13-state median shows that Chiropractors provided more treatment visits than all other provider types, and nearly doubled that of Physicians (18.3 treatments by Chiropractors vs. 10 treatments by Physicians);
- The 13-state median shows that Chiropractors provided more services per visit than all other provider types except PT/OT (3.4 by Chiropractors vs. 3.6 by PT/OT), but Chiropractors still provide the most services overall when multiplied by the number of treatment visits;
- The 13-state median shows that Chiropractors had the lowest payment per treatment of all the provider types surveyed.

The WCRI Interstate Comparison can be easily summarized in the following way: **Chiropractors provide the most treatment at the lowest cost.**[4]

Health maintenance care in work-related low back pain and its association with disability recurrence.

After controlling for demographic factors and multiple severity indicators, patients suffering nonspecific work-related LBP who received health services mostly or only from a chiropractor had a lower risk of recurrent disability than the risk of any other provider type.

Even without an improvement in days until recurrent disability, our findings seem to support the use of chiropractor services, as chiropractor services generally cost less than services from other providers.

"***After controlling for severity and demographics, no health maintenance care is generally as good as chiropractor care***."

Chiropractic patients had "fewer surgeries, used fewer opioids, and had lower costs for medical care than the other provider groups."[5]

Maintenance Spinal Manipulation after the initial intensive manipulative therapy

Spinal Manipulation Therapy (SMT) is effective for the treatment of chronic nonspecific low back pain (LBP). To obtain long-term benefit, this study suggests maintenance spinal manipulation after the initial intensive manipulative therapy. This study demonstrated that SMT is an effective modality in chronic nonspecific LBP for short-term effects.

We suggest that maintained SMT is beneficial to patients of chronic nonspecific LBP particularly those who gain improvement after initial intensive manipulation to maintain the improved post treatment pain and disability levels.[6]

A retrospective analysis of 70,274 member-months in a 7-year period within an IPA, comparing medical management to chiropractic management, **demonstrated decreases of 60.2% in-hospital admissions, 59.0% hospital days, 62.0% outpatient surgeries and procedures, and 85% pharmaceutical costs when compared with conventional medicine IPA performance.** This clearly demonstrates that chiropractic nonsurgical nonpharmaceutical approaches generates reductions in both clinical and cost utilization when compared with PCPs using conventional medicine alone.[7]

Medical spine-related expenditures have increased substantially from 1997 to 2005, without evidence of corresponding improvement in self-assessed health status. [8]
The estimated proportion of persons with back or neck problems who self-reported physical functioning limitations increased from:
1997 – 20.7%
2005 – 24.7%
Medical care expenditures:
1997 - $4,695
2005 - $6,096

Chiropractic Care: Is It Substitution Care or Add-on Care in Corporate Medical Plans?
An analysis of claims data from a managed care health plan was performed to evaluate whether patients use chiropractic care as a substitution for medical care or in addition to medical care. For the 4-year study period, there were 3,129,752 insured member years in the groups with chiropractic coverage and 5,197,686 insured member years in the groups without chiropractic coverage. These results (of this file review) indicate that patients use chiropractic care as a direct substitution for medical care.[9]
Access to managed chiropractic care may reduce overall health care expenditures through several effects, including (1) positive risk selection; (2) substitution of chiropractic for traditional medical care, particularly for spine conditions; (3) more conservative, less invasive treatment profiles; and (4) lower health service costs associated with managed chiropractic care. Systematic access to managed chiropractic care not only may prove to be clinically beneficial but also may reduce overall health care costs.[10]

Compared to those who did not use Complementary and Alternative Medicine (CAM), CAM users were more likely to rate their health as 'Excellent'
Based on 23,393 respondents, we found 37% of U.S. adults used complementary and alternative medicine and 63% did not use any CAM. Compared to those who did not use CAM, CAM users were more likely to rate their health as 'Excellent'. Similarly, CAM users were more likely to report their health as 'Better' than in the prior year.
There was a significant association between CAM use and self-rated excellent health and health improvement over the prior year. Prospective trials are required to determine whether CAM use is causally related to excellent health status and better health than in the prior year.[11]

Chiropractic services offered at on-site health centers
These results suggest that chiropractic services offered at on-site health centers may promote lower utilization of certain health care services, while improving musculoskeletal function.[12]

Chiropractic and Veterans
67% of patients met or exceeded the minimum clinically important difference.
Mean chiropractic clinical outcomes were both statistically significant and clinically meaningful for this sample of veterans presenting with neck pain.[13]

Post-Surgical Chiropractic Care
The results of this study showed improvement for patients with low back pain subsequent to lumbar spine surgery who were managed with chiropractic care.
When stratified by surgical type, the mean change in pain was most remarkable in patients who underwent a surgery that combined lumbar discectomy, fusion, and/or laminectomy, with an average NPS pain reduction of 5.7 of 10. No adverse events were reported for any of these postsurgical patients.[14]

Mercer Report

Using data from high-quality randomized controlled EU trials and contemporary US based average unit prices payable by commercial insurers, we project that insurance coverage for chiropractic physician care for low back and neck pain for conditions other than fracture and malignancy is likely to drive improved cost effectiveness of US care. For neck pain it is also likely to reduce total US health care spending. These favorable results would likely occur within a 12-month timeframe. The validity of our estimates depends on the equivalence between the US and EU of relative differences in the cost-effectiveness of chiropractic and medical physician services. In combination with the existing US-based literature, our findings support the value of health insurance coverage of chiropractic care for low back and neck pain at average fees currently payable by US commercial insurers.[15]

Adding chiropractic manipulative therapy to standard medical care for patients with acute low back pain

Chiropractic manipulative therapy in conjunction with standard medical care offers a significant advantage for decreasing pain and improving physical functioning when compared to standard care alone, for men and women between the ages of 18-35 with acute low back pain.[16]

Low Back Pain Natural History

One of the original articles to which the self-limiting nature of LBP can be traced comes from Dixon [17], where a "90% recovery" of acute LBP was found and was based on a record review in one general practice. However, the inference that a patient has completely recovered based on record review is clearly not supportable. In fact, there is no evidence supporting the claim that 80–90% of LBP patients become pain free within 1 month and strong evidence that refutes such claim.[18-29]

Some investigations have identified that a minimum of 75% of patients with acute uncomplicated LBP will continue to have problems. At 3 and 12 months follow up, only 39/188 (21%) and 42/170 (25%) respectively will be recovered.[19] In a 5 year follow up of 254 people (81% of the original sample) with non-specific low back and neck pain, Enthoven et al,[20] reported that 52% of the sample reported ratable neck and low back pain and disability. Further, 63% of the 254 patients reported recurrence and/or constant pain.

In a 5–year study, back pain prevalence was 33.2% at baseline. In the follow-up surveys, mean prevalence was 37.7%, mean incidence 19.6%, and mean recurrence 69.0%. The most frequently observed courses across 5 years were those with a constant status: BP always absent (n = 1346, 34.7%) or BP always present (n = 538, 13.9%). BP recurrences increased with increasing numbers of previous consecutive years with BP from 46.9% (1 year of previous BP) to 88.1% (at least 4 years of previous BP).[25]

In one of the longest follow up surveys to date, Kaaria et al[26] reported on the initial, 5, 10, and 28 year low back pain prevalence and incidence in a population of Finish metal workers. Initially, 54% of the cohort reported low back pain (LBP) and 25% reported radiation into the lower extremity (LEP). In the group with LBP, 75%, 73%, and 88% reported pain at 5, 10, and 28 year follow-up respectively. In the group with LEP, 66%, 65%, and 69% reported pain at 5, 10, and 28 year follow-up respectively. Kaaria et al reported odds ratios of 6.0 (LBP) and 8.5 (LEP) for the likelihood of those with LBP and LEP initially reporting the same pains at long term follow-up. Thus, LBP and LEP are not self-limiting conditions that remit on their own over time; the initial presence of pain is a strong risk factor for future pain.[26]

Conclusion

The collection of research presented above should cure even the most misinformed or skeptical of readers of the misperception that the cost of chiropractic care exceeds that provided by PCPs. The research above hails from a variety of institutions and geographic locations. Included were studies published in respected research journals and conducted by universities, independent researchers, non-profit organizations, and even state workers compensation agencies. The studies themselves were conducted in all corners of the United States, and one from Britain. Despite this variety of organizations

and locations, all the studies reached a single, consistent conclusion: Chiropractic care costs less than the care provided by PCPs for similar complaints, even without considering the misleading accounting that does not include the cost of medications ordered by the PCP.

The findings above are not limited however to just the financial costs of care but also concern some of the other costs paid by both patients and society. Several studies found that patients had greater satisfaction with chiropractic care over medical care. This finding is likely explained by many of the other positive results of chiropractic care found by the various studies. A number of studies reported dramatic decreases in lost work days, hospital admissions, length of hospital stays, pharmaceutical prescriptions, and surgeries for patients treated by chiropractors compared to those treated by PCPs.

Despite the financial, personal, and societal discounts that chiropractic care is shown to provide, there is yet another measurement which arguably holds the greatest value to patients. It is the efficacy of chiropractic care which is truly most valuable. The effectiveness of chiropractic care to alleviate patients' pain and get them back to their work and their lives is the source of chiropractic care's greatest cost-savings to both patients and insurers. It is of great value to insurers because it keeps costs down, and an even greater value to patients because their suffering is relieved with substantially less financial hardship.

The use of spinal manipulative therapy in clinical practice as a cost-effective treatment when used alone or in combination with other treatment approaches.[30]

Recommendation:

1) The effectiveness of chiropractic care to alleviate patients' pain and get them back to their work and their lives is the source of chiropractic care's greatest cost-savings to both patients and insurers.
2) Chiropractic therapy in conjunction with standard medical care offers a significant advantage for decreasing pain and improving physical functioning when compared to standard care alone.

Strong recommendation: The panel is confident that the desirable effects of adherence to a recommendation outweigh the undesirable effects.

GRADE: Factors influencing decisions and recommendations

- Quality of Evidence
- Balance of desirable and undesirable consequences
- Values and preferences
- Cost

GRADE: Quality of evidence – Moderate

Desirable effects

- Health benefits
- Less burden
- Savings

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