



Chiropractic

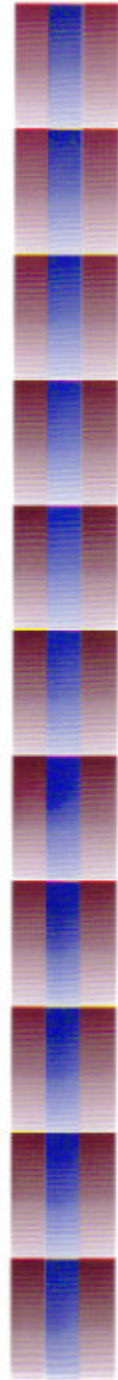
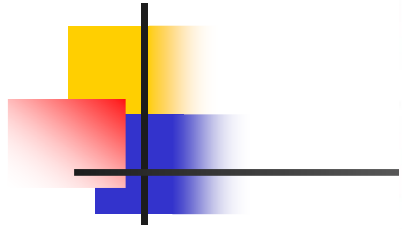
Cost Related Literature and
Information



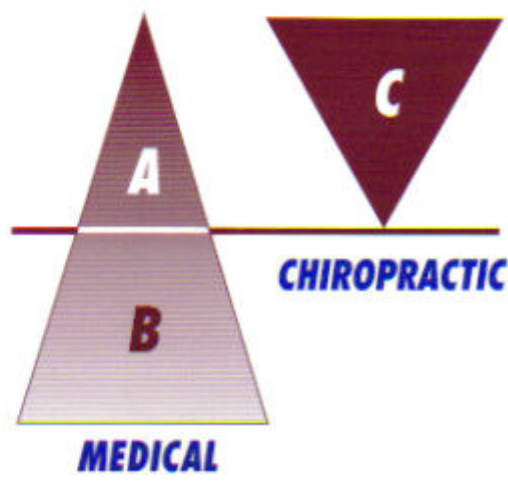
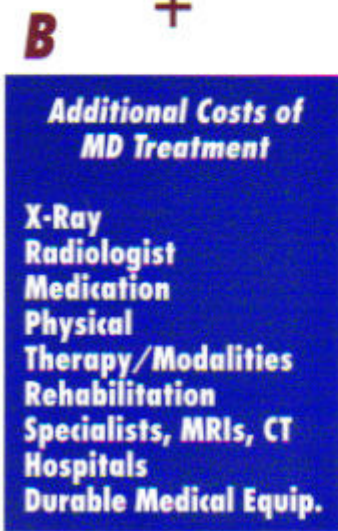
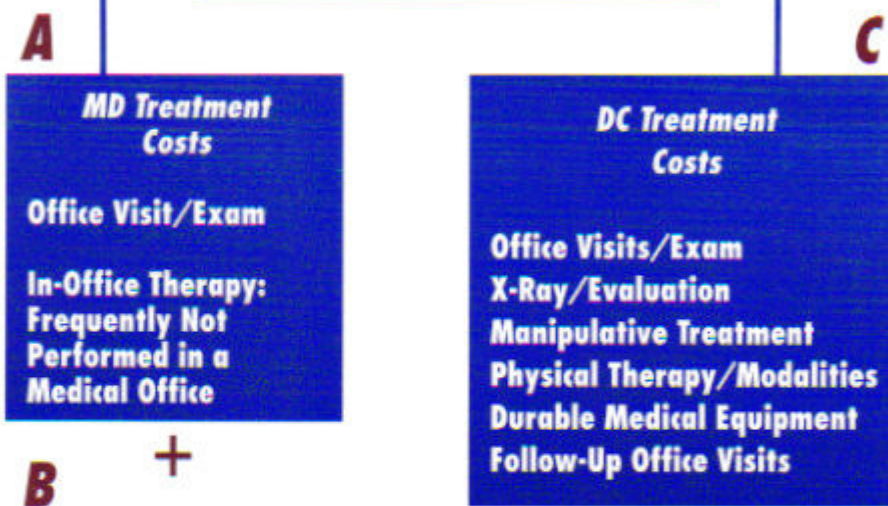
Cost Issues

What is the financial impact of
Chiropractic Healthcare? What is
the impact of medical errors and
drug shadow costs?

"A" IS JUST THE TIP OF THE MEDICAL ICEBURG



PATIENT WITH BACK PAIN



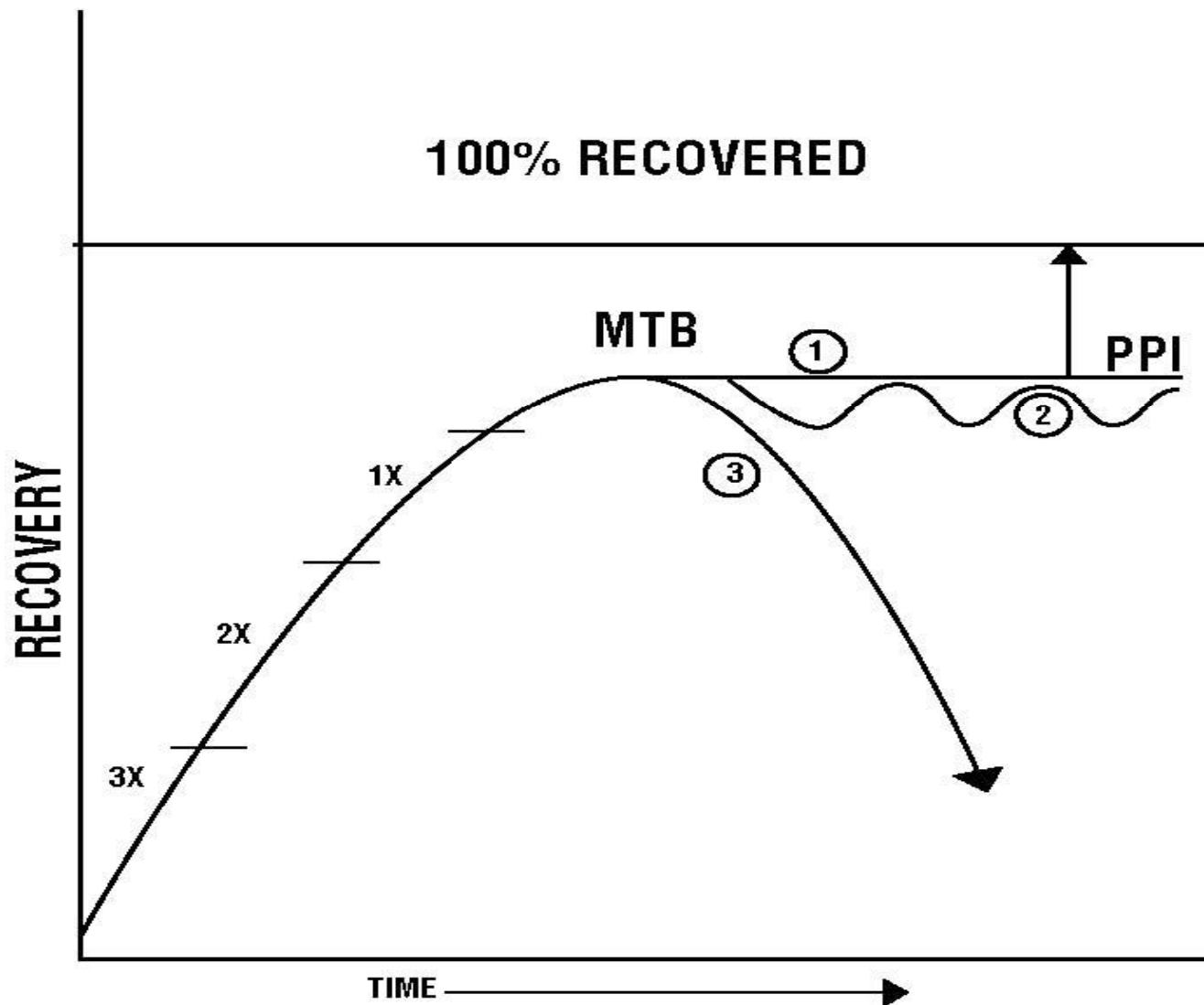


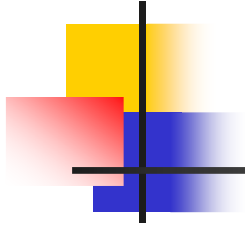
Basic Chiropractic Management

“Typical Visit “

- Consultation
- Examination
- X-ray
- Diagnosis
- Treatment Plan

TYPICAL CHIROPRACTIC MANAGEMENT





Recent studies...

A review of the literature.

“DC’s as Primary Care Providers”

(Interview with James Zechman, Part 1, condensed summary)



Editor’s note: In the December 1, 1999 issue, we interviewed the CEO of Alternative Medicine, Inc. (AMI), James Zechman. AMI had contracted with Blue Cross/ Blue Shield of Illinois, the state’s largest managed care plan, to give its more than 700,000 enrolled members the option of having AMI’s chiropractors as their primary care physicians.

The following interview highlights were reported in the February 12, 2001 issue of Dynamic Chiropractic.



Zeckman (cont'd)

Our theory was to accurately test a preventive health care system based on a non-pharmaceutical/non-surgical entry point.

We have no limit on the number of visits, treatments or procedure. Anything which takes place within the doctor's own office is unencumbered.



Zeckman (cont'd)

- Waiting to see a physician until disease is present adds costly tests, procedures and pharmaceuticals to health care bill that could have been avoided through a strong and integrated preventive care program.
- We believe this is the only rational choice: to create a true prevention-based health care system as opposed to after-the-fact disease care system. It is this system of truly integrated medicine that precludes the need for restrictive guidelines and disruptive oversight of chiropractic care. We believe once you identify quality- the rest takes care of itself.



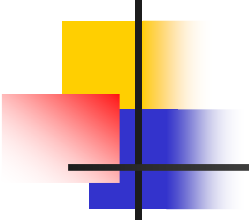
Zeckman...The Results

- Compared to normative values in the greater Chicago area for all other allopathic IPA's our network has reduced hospitalizations by approximately 60 percent over a 24-month consecutive period.
- We have reduced outpatient surgery and procedures by approximately 85 percent over a 24- month consecutive period.
- We have reduced pharmaceutical usage by approximately 56 percent over a 24-month consecutive period.
- Of interest to note is that we have no C-section deliveries over a two-year period, as compared to a network average of over 22 percent.



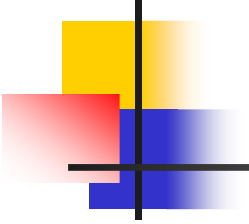
Zeckman...Conclusion

- AMI's primary care chiropractors are showing the world what the profession has always believed since its inception:
- Chiropractic has an ability to impact a person's health in a very profound manner.



Mosley, Cohen, DC, Arnold, MD. American Journal of
Managed Care 1996;2:280-282.

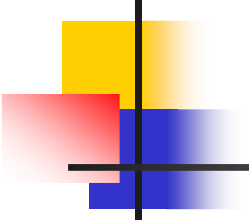
Retrospective study of patients at an independent physician model HMO in Louisiana evaluating cost of care for acute low back pain or neck pain for patients who sought chiropractic care or other treatment. Also looked at surgical rates, use of diagnostic imaging (MR and CT) and patient satisfaction on claims paid Oct. 1, 1994 – Oct. 1, 1995.



Mosley, Cohen, DC, Arnold, MD. American Journal of
Managed Care 1996;2:280-282.

Results: Cost of care for BP and NP was substantially lower for DC patients than non-DC patients. Use of prescription drugs and diagnostic imaging were significantly greater in non-DC group whereas surgical rates and patient satisfaction were nearly identical.

Conclusion: DC care outcomes are equal to those of non-DC care at substantially lower costs. MD patients got 2x as many prescriptions. Study demonstrates that DC services were well integrated in an HMO and has proven satisfactory to patients and providers as well as cost-effective for BP and NP. The system offered self-referral for DC services.



Mosley, Cohen, DC, Arnold, MD. American Journal of
Managed Care 1996;2:280-282.

If half of the patients treated by traditional care received DC care, annual savings would have exceeded \$215,000. We recommend its wider application by the managed care industry and physician community. [Emphasis Added.]



Muse Study\Medicare

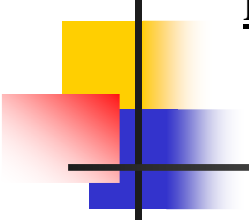
The Muse study compared the most recently available CMC Medicare cost and utilization data for those beneficiaries that received chiropractic care versus those beneficiaries that only received traditional medical care. **The Muse study found that the global per capita Medicare expenditures for chiropractic patients were significantly lower than the same costs for non-chiropractic patients.**



Muse Study\Medicare (cont'd)

The Muse study concluded,

"Chiropractic care significantly reduces per beneficiary costs to the Medicare program. The results of the study suggests that chiropractic services could play a role in reducing costs Medicare reform and/or a new prescription drug benefit."



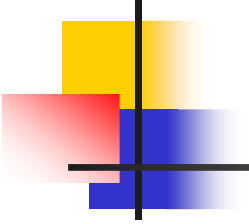
Comparative Analysis of Individuals With and Without Chiropractic Coverage
Patient Characteristics, Utilization, and Costs. Legorreta, Metz, Nelson, Ray, Chernicoff,
DiNubile, MD Arch Intern Med. 2004;164:1985-1992.

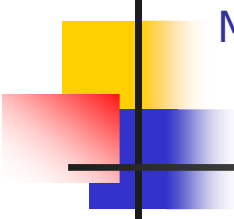
Methods: A 4-year retrospective claims data analysis comparing more than 700,000 health plan members with an additional chiropractic coverage benefit and 1 million members of the same health plan without the chiropractic benefit.

Results: Members with chiropractic insurance coverage, compared with those without coverage, had lower annual total health care expenditures (\$1463 vs \$1671 per member per year, $P < .001$).

- * Less total annual health care costs at the health plan level.
- * Lower utilization (per 1000 episodes) of plain radiographs
- * Less low back surgery
- * Less hospitalizations
- * Less magnetic resonance imaging.
- * Lower average back pain episode-related costs (\$289 vs \$399, $P < .001$).

“Chiropractic Care: is it substitution care or add-on care in corporate medical plans?” Metz, et al. J. Occupational Environmental Medicine. 2004;46:847-855.

- 
- The results “indicate that patients use chiropractic care as a direct substitute for medical care.”
 - 4 year study: 1997-2001
 - Not a survey....used actual claims data.
 - 1,394,070 patients; 174,209 were DC pts; 332,548 were medical pts; 887,313 were medical pts w/o DC coverage.
 - Results: nearly half chose DC care when offered a choice.
 - “Within a MC setting, the inclusion of a DC benefit does not increase the overall rates of pt. complaints....pts appear to be directly substituting DC care for medical care”.



“An Evaluation of Medical and Chiropractic Provider Utilization and Costs: Treating Injured Workers in North Carolina JMPT September 2004 • Volume 27 • Number 7 Shawn P. Phelan, DC, Richard C. Armstrong, DC, David G. Knox, DC, Michael J. Hubka, DC, Dennis A. Ainbinder, MD

- Objective: To examine utilization, treatment costs, lost workdays, and compensation paid workers with musculoskeletal injuries treated by medical doctors (MDs) and doctors of chiropractic (DCs).
- Design: Retrospective review of 96,627 claims between 1975 and 1994.
- Results Average cost of treatment, hospitalization, and compensation payments were higher for patients treated by MDs than for patients treated by DCs. Average number of lost workdays for patients treated by MDs was higher than for those treated by DCs. Combined care patients generated higher costs than patients treated by MDs or DCs alone.
- Conclusion These data, with the acknowledged limitations of an insurance database, indicate lower treatment costs, less workdays lost, lower compensation payments, and lower utilization of ancillary medical services for patients treated by DCs. Despite the lower cost of chiropractic management, the use of chiropractic services in North Carolina appears very low.



United Kingdom back pain, exercise, and manipulation, randomized trial: Cost-Effectiveness of physical treatments for back pain in primary care. UK BEAM Trial Team. BMJ Online First, Nov. 29, 2004

Researchers examined the cost-effectiveness of adding SMT, exercise, or both to the usual “best care” practice for back pain. (Best care: based on the country’s national acute back pain guidelines)

Conclusion: SMT would be “a cost-effective addition to ‘best care’ for back pain in general practice,” and that, “manipulation alone probably gives better value for money than manipulation followed by exercise.”

“The cost-effectiveness of both manipulation and combined treatment may be better than we have reported.”



The Cost Effectiveness of Chiropractic for Back and Neck Pain

- Estimates and pattern of direct health care expenditures among individuals with back pain in the US. Luo, Pietrobon, Sun, et al. Spine 2004;29:79-86
- Medical Data International. Market and Technology Reports. US Markets for Pain Management Products, Report RP-821922, June 1999.
- Effects of a managed chiropractic benefit on the use of specific diagnostic and therapeutic procedures in the treatment of low back and neck pain. Nelson, Metz, et al., JMPT, October 2005;28:564-569.
- Cost effectiveness of medical and chiropractic care for acute and chronic low back pain. JMPT October 2005;28:555-563



The Cost Effectiveness of Chiropractic for Back and Neck Pain (cont'd)

- Compared to medical care, DC care appears to offer benefits identical or superior to those provided by medical care, while reducing many of the costs and extraneous procedures associated with the medical approach to back and neck pain treatment.
- Office costs higher for DC care (acute and chronic), but factoring in referrals and imaging by MDs, TOTAL costs the differences were much lower.
- Chiropractic treatment appeared much more effective.
- Chiropractic patients reported greater satisfaction.



The Cost Effectiveness of Chiropractic for Back and Neck Pain (cont'd)

- At 12 months, the cost-effectiveness of DC care for **chronic** LBP patients appeared even more evident.
- “Chiropractic patients with chronic LBP showed an advantage over medical patients in pain, disability, and satisfaction outcomes without additional costs.”
- “Chronic pain and disability outcomes were clinically important in the short term and of lesser magnitude in the long term...with their mission to increase value and respond to patient preferences, health care organizations and policy makers need to re-evaluate the appropriateness of chiropractic as a treatment option for LBP.”



The Cost Effectiveness of Chiropractic for Back and Neck Pain (cont'd)

- Rates of surgery (13.7% lower)
- Advanced imaging (20.3% lower)
- Inpatient care (24.8% lower)
- Plain-film radiography (2.2% lower)

When the claims data was analyzed, the researchers found that **“the rates of surgery, advanced imaging, inpatient care, and plain-film radiographs were all lower in the cohort with chiropractic coverage”** compared to plans that didn't offer a chiropractic benefit.



The Cost Effectiveness of Chiropractic for Back and Neck Pain (cont'd)

- Rates of surgery (32.1% lower)
- Advanced imaging (37.2% lower)
- Inpatient care (40.1% lower)
- Plain-film radiography (23.1% lower)

On a per episode basis the results were even more dramatic.

“Among employer groups with chiropractic coverage compared with those without such coverage, there is a significant reduction in the use of high-cost and invasive procedures for the treatment of LBP and neck pain. The presumed mechanism of this effect is the substitution of chiropractic care for medical care for the treatment of back and neck pain. The resultant chiropractic care is far less likely to lead to the use of these invasive procedures.”



Clinical and Cost Outcomes of an Integrative Medicine IPA

Surat, et al. JMPT 2004

Objective: PCPs specializing in nonpharmaceutical/nonsurgical approach and using CAMs, integrated with allopathic medicine would have superior clinical and cost outcomes compared with PCPs utilizing conventional medicine alone.

Results: 21,743 members over a 4 year period,

- * 43.0% decrease in hospital admissions/1000
- * 58.4% decrease in hospital days/1000
- * 43.2% outpatient surgeries and procedures/1000
- * 51.8% pharmaceutical cost reductions



Clinical and Cost Outcomes of an Integrative Medicine IPA

(cont'd)

Conclusions:

“In the limited population studied, PCPs utilizing an integrative medical approach emphasizing a variety of CAM therapies had substantially improved clinical outcomes and cost offsets compared with PCPs utilizing conventional medicine alone.”



Research... oldies but goodies!

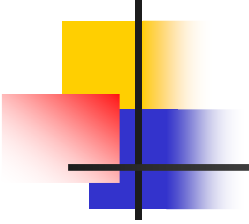
A review of past literature.

Topic: Bed Rest

Waddell. A New Clinical Model for the Treatment of Low-Back Pain. Spine. 1987;12:632-644

- Little scientific or clinical evidence supports the value of bed rest.
- Only four controlled studies
- Bed rest is the most harmful treatment ever devised and a potent cause of iatrogenic disease.

Topic: Bed Rest

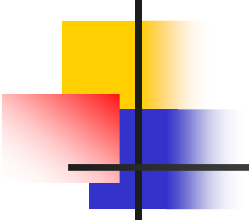


AHCPR. Lee. Publication No. 95-0643; December 1994, pp. 2.

Extended bed rest could be harmful. Resting in bed for more than 4 days can weaken muscles and bones and delay recovery.

RAND Study

Shekelle, et al. “The Appropriateness of Spinal Manipulation for Low Back Pain: Indication and Ratings by a Multidisciplinary Expert Panel.” 1991; RAND/UCLA Monograph No. R-4025/2-CCR/FCER.



“Spinal manipulation is the most commonly used conservative treatment for back pain supported by the most research evidence of effectiveness in terms of early results and long-term effectiveness.”

2/3 of patient visits were to chiropractic providers for a total cost of \$2.4 billion in 1988. Conversely, 1/3 of the visits for back pain were to medical providers (MD) for a total cost of \$8 billion.

94% of manipulation is performed by doctors of chiropractic.



AHCPR

Acute Low Back Problems in Adults: Assessment and Treatment

Proven Initial Care: Patient education, patient comfort (NSAIDs), and SPINAL MANIPULATION.

Unproven Therapies: Traction, physical modalities (massage, diathermy, US, cutaneous laser, biofeedback, TENS, acupuncture, trigger point injections, facet injections, steroid or lidocaine injections, shoe lifts, exercise machines, stretching.

Harmful treatment: Best Rest.

Utah Study

Jarvis, et al. Cost per Case Comparison of Back Injury Claims of Chiropractic Versus Medical Management for Conditions with Identical Diagnostic Codes. *Journal of Occupational Medicine*. 1991; Vol. 33, No. 8, Aug., pp. 847-851.

In 3,062 separate cases:

- Chiropractic care took an active approach with 8 times more visits.
- Medical care took a passive approach prescribing medication and rest.



Utah Study (cont'd)

Conclusion:

- Chiropractic care was 73% more cost-effective per case.
- The average distribution cost per office visit was 67% less for chiropractic than for the medical office visit.
- Patients seeing doctors of chiropractic were able to return to work 10 times sooner than those under medical care.
- For the total data set, cost for care was significantly more for medical claims—Compensation costs were ten-fold less for chiropractic claims.

Australian Study

Ebrall. Mechanical Low Back Pain: A Comparison of Medical and Chiropractic Management Within the Victorian WorkCare Scheme. Chiropractic Journal of Australia. 1992; Vol. 22, No. 2, June pp. 47-53

- Compensation days with Chiropractic management are $\frac{1}{4}$ the days of claims with medical management.
- The “occurrence of chronicity” was greater with medical management (6 fold greater progression to chronicity-11.6% to 1.9%).
- Cost of claims: \$2,038 Medical/\$963 Chiropractic.
- Average compensation payment is 4 times greater with medical management.



Australian Study (cont'd)

Conclusion: Financial and social savings could be maximized by:

- Increased participation rate by DCs in the WorkCare.
- Increased early referral from medical doctors to Chiropractic doctors.

British Study

Meade, et al. Low Back Pain of Mechanical Origin. Randomized Comparison of Chiropractic and Hospital Outpatient Treatment. BMJ. 1990; Vol. 303, No. 6737. June pp. 1431-1437

- 10 year multicenter trial.
- Conclusion:
 - Chiropractic treatment was significantly more effective, particularly with patients with **chronic and severe pain**.
 - Results were long-term throughout the two-year follow up period.
 - The potential economic, resources, and policy implications of the results were extensive.
 - **Patients treated by Chiropractors...almost certainly fared considerably better and maintained their improvement for at least two years.**



Canadian Study

Manga et al. The Effectiveness and Cost Effectiveness of Chiropractic Management of Low-Back Pain. Manga Report to Ontario Ministry of Health. August, 1993.

Conclusions: The “Constellation of evidence” demonstrates:

- The treatment effectiveness and cost effectiveness of Chiropractic care.
- The untested, questionable, or harmful nature of many current medical therapies.
- The economic efficiency of Chiropractic care versus medical care.
- The safety of Chiropractic.
- Higher patient satisfaction.



Canadian Study

Manga (cont'd)

Summary:

There should be a shift in policy to encourage the utilization of chiropractic services for most patients with back pain...

A very good case can be made for making chiropractors the gatekeepers for management of low-back pain the worker' compensation system.

Virginia Study

Schifrin. Mandated Health Insurance Coverage for Chiropractic Treatment: An Economic Assessment with Implications for the Commonwealth of Virginia. January, 1992

- “By every test of cost-effectiveness, the general weight of evidence shows that Chiropractic provides important therapeutic benefits at economical costs.”
- “These benefits are achieved with minimal, even negligible, impact on the costs of health insurance.”
- “Chiropractic services are widely used and appreciated by a growing segment of Americans.”



2nd Virginia Study

Dean, et al. “A Comparison of the Cost of Chiropractors versus Alternative Medical Practitioners.” Virginia Chiropractic Association. January 1992.

- “Chiropractors see their patients more frequently but have lower overall costs for most of the conditions considered.”
- “Chiropractic care requires fewer referrals for specialists and outside procedures.”
- “If Chiropractic care is insured to the same extent as other specialties, it may result in a decrease in overall treatment costs for neuro-musculoskeletal conditions.”



Medstat Project

Stano et al. MEDSTAT Data Base Review. The Journal of American Health Policy. 1992; Vol. 2 #6.

Conclusions:

- Plans which have limited or no chiropractic coverage have the highest total costs per patient.
- Broader coverage of chiropractic services results in dramatically lower health care cost as follows:

35% lower hospital admission rates.

42% lower inpatient payments.

23% lower total health care costs.



US General Accounting Office

“Access to Health Insurance: State Efforts to Assist Small Business.” GAO-92-90; May 1992; pg. 33

- “Mandates determined not to add significantly to the cost of health insurance include services for in-vitro fertilization, acupuncture, and cleft palate, as well as services provided by Chiropractors and home health nurses. It is these low cost mandates, however that are often cited by the business community as examples of the added wasteful expense mandates cause for business.”



Journal of American Health Policy

Stano et al. “The Growing Role of Chiropractic in Health Care Delivery.” *Journal of American Health Policy*. 1992 Nov-Dec. pp. 39-45.

- “Plans which do not cover Chiropractic have the highest payments per patient.”
- “Increased availability of demonstrated cost-effective alternatives would increase access and would reduce costs.”



Journal of Family Practice

**Cherkin et al. “Family Physicians, Chiropractors, and Back Pain.”
The Journal of Family Practice. 1992; Vol. 35, No. 5, pp. 551-555**

- Chiropractic doctors are well-trained and well-accepted by both patients and insurers.



Western Journal of Medicine

Cherkin et al. "Patient Evaluation of Low Back Pain Care from Family Physicians and Chiropractors." Western Journal of Medicine. 1989; Vol. 150, No. 3, March pp. 351-355.

Conclusion:

- Chiropractic doctors were highly rated compared to medical doctors in critical patient care areas for the treatment of low back pain.
- Patients gave DCs a 3:1 advantage in five important areas of patient satisfaction.
- Chiropractic patients reported quicker recoveries.

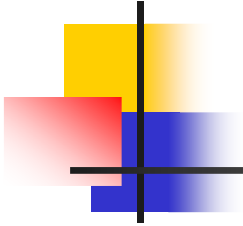


British Medical Journal

Smith. “Where is the Wisdom? The Poverty of Medical Evidence.”

BMJ. 1991; Vol. 303, October pp. 798-799.

“Only about 15% of medical interventions are supported by valid medical evidence...Many treatments have never been assessed at all.”



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