

Chiropractic: Still Controversial After Nearly 100 Years

Number 27, July 3, 1978

Whenever a journal article on chiropractic appears, there is a good chance it will bear a title similar to the one in the September 13, 1974 issue of *Science*—"Chiropractic: Healing or Hokum?"¹ Since 1895, when Daniel David Palmer, a Davenport, Iowa tradesman, founded the profession that advocates healing through spinal manipulation, chiropractic has been in the center of controversy. On one side are the chiropractors who say that millions of patients have found relief through chiropractic. On the other is the medical establishment, which advocates the view advanced in a 1968 report to Congress, *Independent Practitioners Under Medicare*, submitted by then Health, Education and Welfare secretary Wilbur J. Cohen, an eminent educator. The report concluded that "Chiropractic theory and practice are not based upon the body of basic knowledge related to health, disease and health care that has been widely accepted by the scientific community."² Yet, in spite of its lack of a scientific basis,

chiropractic is making increasing inroads into American health care.

According to *Dorland's Illustrated Medical Dictionary*, chiropractic is a system of therapy based on the belief that all disease is caused by the abnormal functioning of the nervous system.³ Chiropractic attempts to restore the normal functioning of the nervous system by manipulation and treatment of the structures of the human body, especially the spinal column. The word chiropractic is derived from the Greek and means "done by hand."⁴

Each year chiropractors see about 5 million patients, who come to them with a variety of complaints ranging from infectious diseases and physical handicaps to back ailments. A high percentage of patients is seen for musculoskeletal problems.⁵ When a patient visits a chiropractor, he or she usually receives a spinal X ray and examination.⁶ After the analysis of the problem has been completed, the chiropractor makes an "adjustment" to the patient's spine. This is accomplished through what

chiropractors call a "dynamic thrust," a quick movement that usually produces a "click" sound in the joint manipulated. Spinal manipulation is performed to adjust a subluxation or misalignment of the vertebrae. Practitioners believe that correcting the subluxation will cure the disease or condition being treated.

When chiropractic was introduced at the end of the 19th century, the health care professions in the United States, especially in the midwest and west, were relatively unregulated.⁴ There were several theories of healing, based on different philosophies of disease.⁵ Homeopaths, for example, followed the teaching of Samuel Hahnemann of Leipzig. In 1810 he originated a system of treatment that involved the administration of small doses of drugs whose effects resembled the effects of the disease being treated.

Shortly before chiropractic was established, Andrew Taylor Still founded osteopathic medicine.^{4,7,8} Still believed that the way drugs were used and surgery performed in his day did more harm than good. His school of thought placed emphasis on recognizing and correcting structural problems and advocated manipulative therapy as well as other types of treatment. Allopaths, or conventional medical doctors, made up the major group of practitioners. These doctors sometimes got their training in university medical schools, some-

times through apprenticeship to other doctors. In addition, magnetic healing, which combined the "laying on of the hands" with a form of hypnotherapy, and naturopathy, or drugless healing, were popular forms of health care.

Out of this unregulated environment, chiropractic emerged. By most accounts, D. D. Palmer, who started chiropractic, was a former grocer and fishmonger who felt he had a gift for healing.^{8,9} He operated a magnetic healing studio in Davenport at the time of his "discovery." One of Palmer's patients was Harvey Lillard, a janitor who had been deaf for some 17 years. Discouraged that magnetic healing was not helping Lillard, Palmer examined his patient and found a protruding painful area on his back near his spine. He decided that attempting to reduce the bump might bring the janitor some relief. Giving Lillard an adjustive thrust, Palmer reportedly properly aligned the patient's vertebrae and restored his hearing.

Scientists, however, object to the assertion that spinal manipulation cured Lillard's hearing. According to William M. Keane, a neurotologist at Philadelphia's Pennsylvania Hospital, Department of Otorhinolaryngology, nerves controlling hearing are self-contained in the skull and inaccessible to manipulation. Manipulation of the vertebrae might help some kinds of dizziness, but not hearing loss.

Nevertheless, from his treatment

members of the chiropractic community were the methods used by B. J. Palmer to promote the profession.^{5, 8} These methods brought criticism from outside of chiropractic as well. For example, in 1924, Palmer introduced a machine called the neurocalometer, which supposedly located the pinched

nerve as method of treating a patient.⁵ Neither group of chiropractors prescribes drugs or performs surgery, since both believe that disease is caused by nervous system disturbances that can be corrected by manipulation.

Since its inception, chiropractic has faced opposition, which has

continued to this day. Physicians reject what they see as a one cause-one cure profession and assert that there is no scientific evidence to support the profession's teachings. In addition, they attack the chiropractor's claim of being an entry point into the health care system comparable to the general practice physician. Until recently, opponents say, chiropractic education has been in such a shambles that graduates were hardly prepared to produce an adequate diagnosis and so not enough patients were referred to other members of the health care professions. Chiropractic treatment also delays the patient from seeking appropriate medical care, thus causing consequences that otherwise might have been avoided, they state. Far too many X rays are given as part of chiropractic diagnosis, critics continue, exposing patients to unnecessary levels of radiation. Manipulative therapy can sometimes be painful and is not without its hazards, they add.¹⁰

Despite the criticism, chiropractic has made steady gains throughout this century. Even as the health care professions came under state licensure (with regulations favoring medical doctors), chiropractic survived while alternative health care systems like "magnetic healing" died. In 1913, Kansas became the first state to legally recognize chiropractors. Several states followed suit, but not before many chiropractors were arrested for

practicing medicine without a license.⁹ In 1925, in an attempt to raise the quality of health care in their respective states, both Connecticut and Wisconsin passed "basic science" laws that required all practitioners to take exams in anatomy, bacteriology, chemistry and other sciences before they could apply to take their board examinations. Medical authorities hoped, and many chiropractors thought, that chiropractic was doomed to extinction by the stringent requirements.⁸ In fact, few chiropractors were licensed in those states immediately following the implementation of the boards. But basic science boards were not adopted by other states until much later, and so chiropractic flourished. By 1931, chiropractors were legally recognized in 39 states. Many of the states changed their laws and regulations regarding chiropractic through the years, often raising standards for licensing or wavering between the philosophies of the "straight" chiropractors and the "mixers."

By 1974, chiropractic had won licensure in Louisiana and Mississippi, the last two states to thus recognize the practice. At present, about 17,000 people practice chiropractic in the US and another 4,000 practice it in other countries. Switzerland, West Germany, New Zealand, South Africa and Bolivia all regulate chiropractic.⁵ In Britain, the practice of chiropractic is unlicensed, but it is not illegal.

Belgian chiropractors practice at the pleasure of the crown and French practitioners are unregulated. In Italy, a chiropractor must work under a licensed allopath. Nine Canadian provinces and one Australian province license the practice as well. From informal inquiries I have learned that chiropractic is not unknown in the USSR. It enjoyed a vogue in the past. The Soviet government does not license chiropractors. It would seem that chiropractic is tolerated, however.

Once the states accepted the profession, chiropractic turned its attention to the problems of federal recognition. In response to a seven-year effort by chiropractors and supporters, who lodged a vigorous mail campaign,¹⁰ Congress, in 1972, passed a law (PL 92-603) that said in part that Medicare payments could go to chiropractors for manual manipulation of the spine to correct a subluxation that appeared on an X ray. The coverage under Medicare was gained despite opposition by medical physicians and some senior citizens' groups.

Another victory came in 1974 when the US Commissioner of Education granted the Council of Chiropractic Education (CCE) the right to accredit chiropractic colleges as institutions of higher learning. The CCE is an autonomous corporation sponsored by the ACA and the Federation of Chiropractic Licensing Boards of the various states.⁵ The commissioner's action

made chiropractic colleges that were accredited eligible for federal funding. The American Medical Association contested chiropractic's recognition but was told that the Commissioner does not have to express an opinion on the usefulness or legitimacy of the field of training. Accredited institutions simply meet educational standards.¹¹

The CCE set up standards for chiropractic schools.⁵ For example, students admitted to an accredited school must have completed two years of a science curriculum in a college. A course of study that includes at least 1840 hours of basic science (anatomy, physiology, chemistry, pathology and hygiene) and 2080 hours of clinical science, including diagnosis, gynecology and obstetrics, principles of chiropractic and other such subjects, must be followed. Eighty hours in requirements selected by the college and 200 more hours in optional electives must also be taken, bringing the total number of hours required to 4,200 for the four-year course. The chiropractic profession feels that the upgrading of educational standards and formal accreditation of its colleges have done much to invalidate some criticisms by its opponents. However, it is still possible to question the value of an education based on an unproven theory.

At present there are four chiropractic colleges in the US that are accredited.⁵ They are the Los

ard, Illinois; Northwestern College of Chiropractic in St. Paul, Minnesota; and Texas Chiropractic College in Pasadena, Texas. Four more colleges in the US have achieved status as recognized candidates for accreditation. Three foreign colleges are also affiliated with CCE.

Besides qualifying for Medicare payments and federal funding for their accredited colleges, chiropractors have been eligible since 1974 for the National Institutes of Health grants for research into spinal manipulation.

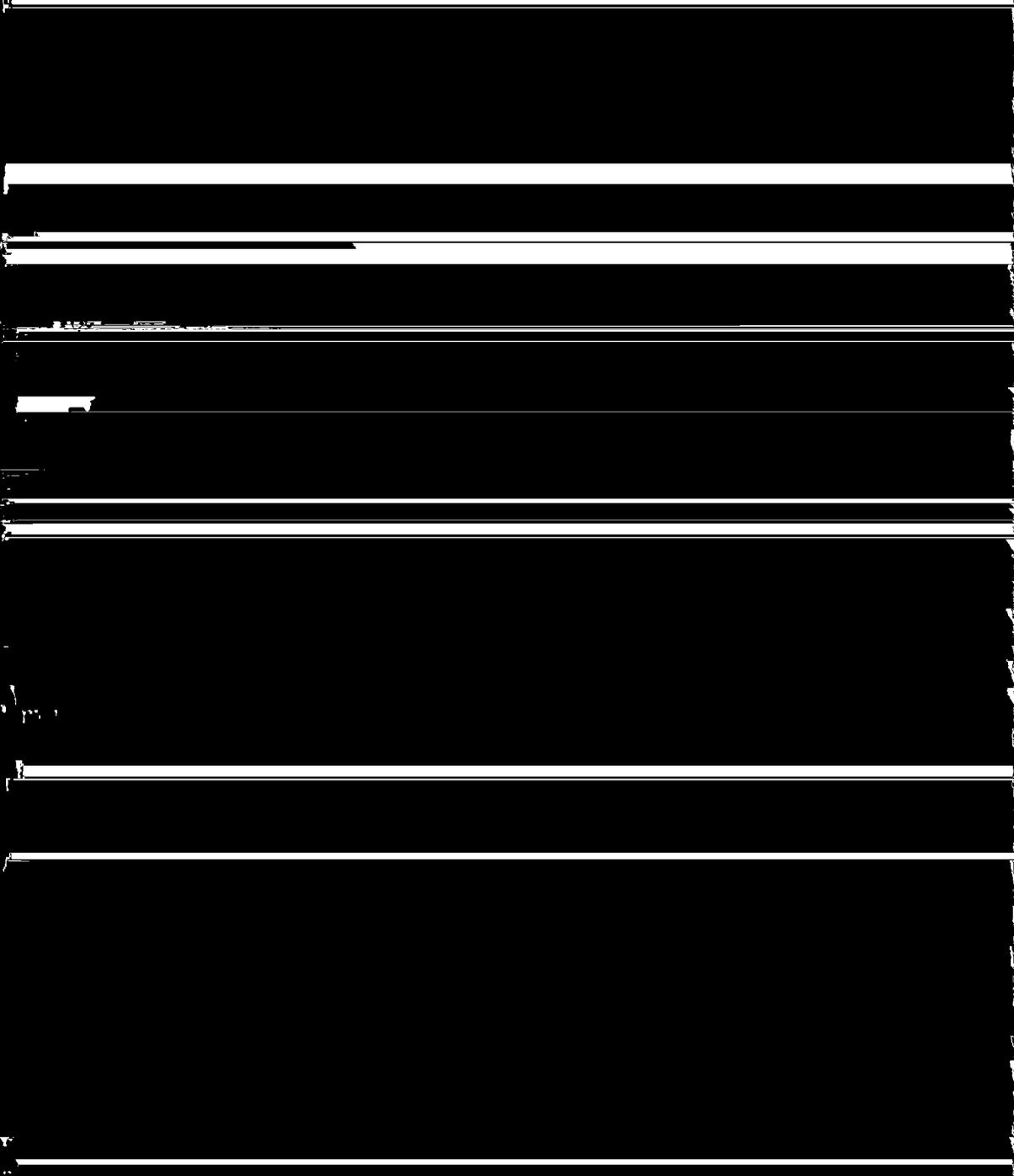
Lack of research has indeed been a resounding criticism against the profession. Chiropractors have responded that prejudice kept them out of the running for government grants, which support much of the medical community's research. Now chiropractors have at least a potential source of funding. Yet neither of the two grants awarded by NIH for research into spinal manipulative therapy has gone to a chiropractor.

The profession's stated concern with research is indicated by its establishment of the Foundation for Chiropractic Education and Research. This nonprofit institution makes grants for research and has supported projects at the University of Colorado at Boulder and the Rensselaer Polytechnic Institute in Troy, N.Y.⁵ In addition, chiropractic colleges are conducting their own research projects.

unknown to health care professionals in other disciplines. There are at least two major US chiropractic journals representing the two chiropractic factions: the *ACA Journal of Chiropractic* and the *International Review of Chiropractic*. In addition, almost every state and five Canadian provincial associations sponsor their own journals. Foreign journals of chiropractic are published in Australia, Britain, New Zealand, and Africa.

Chiropractic journals are not covered in the major indexing services, including *Index Medicus* and ISI®'s *Science Citation Index*®. Neither are they covered in *Current Contents*®. At ISI, we have not purposely excluded these journals. They have never been covered for several reasons. Lack of demand for their inclusion is but one. The primary reason is their lack of scholarly content. For example, the *International Review of Chiropractic* is little more than a newsletter. The *ACA Journal of Chiropractic* contains one or two "professional papers" in each issue, but none that I saw documented original research.

Despite the strides made by their profession, chiropractors feel they still have several stumbling blocks to overcome. The majority of chiropractors who are "mixers" note that all "usual and customary" chiropractic services are covered



Neurology. Several of these papers have concerned models of neuron networks, neuron configurations, and nerve compression.¹⁶⁻¹⁹ Other work reported a method of precision analysis of spinal X rays, which would enable researchers to record more accurate data on the exact positions of tissues of the spinal column.²⁰ Research findings have also

will provide a cure.

Lest there be any doubt about my opinion on this subject, let me reiterate. Much chiropractic, especially that which claims a cure for cancer or heart disease, is a palpable and dangerous fraud. The only controversy concerns the other possibly legitimate applications of spinal manipulation.

REFERENCES

1. Chiropractic: healing or hokum? HEW is looking for the answers. *Science* 185:922-3, 1974.
2. U.S. Dept. of Health, Education and Welfare. *Independent practitioners under Medicare: A report to Congress*. Washington, D.C.: HEW, 1969. 84 p.
3. *Dorland's illustrated medical dictionary*. Philadelphia: W.B. Saunders, 1974. 1748 p.
4. **Gibbons R W**. Chiropractic in America: the historical conflicts of cultism and science. *J. Pop. Culture* 10:720-31, 1977.
5. **Schafer R C, ed**. *Chiropractic health care*. Des Moines, IA: The Foundation for Chiropractic Education and Research, 1977. 118 p.
6. **Chimes M**. The healing art of chiropractic. *40 for the Chief Exec. Officer* 3(1):30-2, January/February 1978.
7. **Northrup G W**. History of the development of osteopathic concepts; osteopathic terminology. (Goldstein M, ed.) *The research status of spinal manipulative therapy: A workshop held at the National Institutes of Health, February 2-4, 1975*. Washington, D.C.: United States Department of Health, Education and Welfare, 1975.
DHEW Publication No. (NIH) 76-998, p. 43-52.
8. **Homola S**. *Bonesetting, chiropractic, and cultism*. Panama City, FL: Critique Books, 1963. 281 p.
9. **Maynard J E**. *Healing hands: The story of the Palmer family, discoverers and developers of chiropractic*. New York: Jonorm Publishing, 1959, 365 p.
10. Chiropractors: healers or quacks? Part 1: The 80-year war with science. Part 2: How chiropractors can help—or harm. *Consumer Rep.* 40:542-7; 606-10, 1975.
11. **Ballantine H T, Jr**. Federal recognition of chiropractic: a double standard. *Ann. Intern. Med.* 82:712-3, 1975.
12. **Crellin E**. A lethal chiropractic device. *Yale Scientific* 49:8-11, 1975.
13. **Firman G J & Goldstein M S**. The future of chiropractic: a psycho-social view. *N. Engl. J. Med.* 293:639-42, 1975.
14. **Crellin E**. A scientific test of the chiropractic theory. *Amer. Sci.* 61:574-80, 1973.
15. **Ballantine H T, Jr**. Will the delivery of health care be improved by the use of chiropractic services? *N. Engl. J. Med.* 286:237-42, 1972.
16. **MacGregor R J**. A model for reticular-like networks: ladder nets, recruitment fuses, and sustained responses. *Brain Res.* 41:345-634, 1972.
17. -----, Intrinsic oscillations in neural networks: a linear model for parallel, single-unit pathways. *Math. Biosci.* 17:121-35, 1973.
18. -----, **Sharpless S K & Luttges M W**. A pressure vessel model for nerve compression. *J. Neurol. Sci.* 24:299-304, 1975.
19. ----- & **Oliver R M**. A general-purpose electronic model for arbitrary configurations of neurons. *J. Theor. Biol.* 38:527-38, 1973.
20. **Suh C H**. The fundamentals of computer aided x-ray analysis of the spine. *J. Biomech.* 7:161-9, 1974.
21. **Luttges M W, Kelly P T & Gerren R A**. Degenerative changes in mouse sciatic nerves: electrophoretic and electrophysiologic characterizations. *Exper. Neurol.* 50:706-33, 1976.