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1	Politics ahead of patients: the battle between medical and chiropractic professional
2	associations over the inclusion of chiropractic in the American Medicare system
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4	ABSTRACT
5	Healthcare professions struggling for legitimacy, recognition, and market share can
6	become disoriented to their priorities. Healthcare practitioners are expected to put the
7	interests of patients first. Professional associations represent the interests of their members.
8	So when a professional association is comprised of healthcare practitioners, its interests may
9	differ from those of patients, creating a conflict for members. In addition, sometimes
10	practitioners' perspectives may be altered by indoctrination to a belief system, or
11	misinformation, so that a practitioner could be confused as to the reality of patient needs.
12	Politicians, in attempting to find expedient compromise, can value a "win" in the legislative
13	arena over the effects of that legislation. These forces all figure into the events that led to the
14	acceptance of chiropractic into the American Medicare system. Two healthcare systems in a
15	political fight lost sight of their main purpose: to provide care to patients without doing harm.
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17	KEYWORDS
18	Healthcare policy, Medicare, Chiropractic, X-ray, Radiology, American Medical Association
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#### INTRODUCTION

The classical version of the Hippocratic Oath contains a well-known sentiment: "First do no harm." The oath set forth an idea that has become integral to healthcare professions, that the interests of patients supersede those of the practitioners. Medical physicians, chiropractors and others continue to administer a version of it upon graduation.<sup>2</sup> Yet, in struggling for legitimacy, recognition, and market share in a fee-for-service structure, professions can become disoriented to their priorities. Professional associations, which represent the interests of their members, who in this case are health practitioners, find that sometimes those interests conflict with the interests of their members' patients, or the public at large. In addition, sometimes practitioners' perspectives may be altered by indoctrination to a belief system, or misinformation, so that a practitioner could be confused as to the reality of patient needs. These forces all figure into the events leading to the acceptance of chiropractic into the American Medicare system. I believe this paper is the first scholarly work do explore these events. Themes of professionalization, professional identity, and legitimacy figure prominently. Chiropractic sought legitimation through wider acceptance by policymakers and other healthcare providers, and they wanted a share of the aged care market. Organized medicine sought to protect the public from what they considered a danger to public health, and they fought to control government reimbursement services. Legislators acted as they usually do, by weighing public opinion and lobbyist influence, then taking the expedient action. In the end, chiropractic was accepted into Medicare, but not to the degree they had hoped. Organized medicine inserted a "poisoned pill" into the legislation at the last minute, hoping to derail the entire process, but it did not work as anticipated. Legislators scored a victory, though, by passing a popular bill expanding Medicare with much more than just the addition of chiropractic. Richard Nixon, who was helped to re-election in 1972 by its passage, called it "landmark legislation that will end many old inequities and will provide a

new uniform system of well-earned benefits for older Americans, the blind and the disabled."<sup>3</sup> All participants in the chiropractic portion of the Medicare expansion process focused on their own interests rather than those of their patients and some patients were harmed, physically, mentally, and/or financially.

The [REDACTED] University Human Research Ethics Committee approved this research (approval number 2012/152). This paper draws on a variety of primary sources of information, including interviews with several key figures involved in the events described herein as well as their contemporaneous writings in professional publications, the Congressional Record, and one audio recording. I also utilized secondary sources like books, newspapers and journal articles accessed in public and private archives.

The history of health care in the United States of America (USA) involves disparate forces, including government, insurance companies, pharmaceutical and medical device manufacturers, doctors' groups, and professional associations. Emphasis on health promotion and consumerism have also affected policy decisions. There has been no unified national policy on healthcare in the USA, but rather many policies on various aspects of healthcare. This patchwork has resulted in entrepreneurship and research that has offered exceptional care to some, but not all, and it carries a massive economic cost. Healthcare spending in the USA is more than twice per capita the amount in the UK, and the overall outcomes are not as good. All the American government provider systems arose after a private insurance system was well-established, and were shaped to support that private system, with the fee-for-service model that was economically advantageous for doctors, hospitals, and medical groups. One of the most influential organizations in consolidating this structure was the American Medical Association (AMA) which had successfully opposed all forms of nationalized healthcare.<sup>4</sup>

Medical professional associations, including the AMA, have long been influential in

American healthcare.<sup>5</sup> In the mid-19<sup>th</sup> Century, a wide variety of 'irregular' health practitioners competed on a market basis with "regular" or orthodox physicians for patients. Many medical treatments at this time were either without effect other than placebo; others were simply dangerous.<sup>6</sup> This disorganized environment led a group of physicians to draft a set of ethical and educational standards for practitioners. The document became the 1847 Code of Medical Ethics of the AMA. It was a public proclamation that formed the basis of the fiduciary relationship between patients and practitioners. In exchange for the responsibility of ensuring trust in the uniform standards of skills and behaviour for physicians as well as acting in the public interest, it claimed autonomy for the profession. <sup>7</sup> But Sociologist Tracey Adams cites the fluidity in the definition of 'public interest' and notes changes in response to public demand over time. She also acknowledges incomplete understanding as to the true motivations of professions invoking the concept of public interest. Whether used in earnest or cynically to gain power and status, the social contract made the professional association more powerful.<sup>8</sup> Physicians were allowed to determine standards of skills and behaviour that one must demonstrate in order to become and remain a physician, and even the scope of what is considered medical practice. The 1847 pact formed the base on which were built the ideas of self-regulation and monopoly power which would eventually impact all alternative systems, including chiropractic, once it was founded in 1895. Sociologist and authority on professionalism Eliot Freidson noted that exclusivity of membership and special expertise supported by professional associations helped create public acceptance of a profession's self-regulation. The social pact could only be subsequently altered from within the association, and transgressors could be banished and left without its protections.<sup>10</sup>

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Alternative healthcare systems, which by definition were outside medical associations like the AMA, were viewed as rivals, marginalized with rhetoric, disparaging labels, and

later, legal action. Chiropractors were only one group among many, including osteopaths, homeopaths and Christian Scientists, who were called "quacks" and denigrated in various publications. <sup>11</sup> Beginning in 1870, organized medicine, led by the AMA, began to use its power in order to suppress these alternative systems. Legislators were lobbied to pass laws regulating the practice of medicine. Medicine became defined as provision of any type of healthcare by any type of practitioner. In 1906, the AMA was able to ensure that licensure was granted only to graduates of schools approved by their Council of Medical Education. <sup>12</sup> Thus, alternative practitioners could be prosecuted for practicing medicine without a licence. This was the beginning of a hegemonic process continued by the AMA for decades.

Professional autonomy is often moderated by government regulation. But calls for oversight have often come from within a profession. Regulation brings legitimation and additional enforcement mechanisms for exclusivity of access. That is, the public assumes that regulated practitioners are competent, and the profession can limit entry to its ranks, which can help ensure competence of practitioners. It can also decrease competition. This has been seen frequently with healthcare, where medical professional associations and the state work together, limiting the ability of alternative practitioners like homeopaths, botanical healers, apothecaries and others to provide services designated as "medical."<sup>13</sup>

A number of other factors also assisted medicine's rise to dominance. Medical anthropologist Hans Baer characterizes the hegemony of the AMA as a class issue, involving a coalition of interests with a common goal: "The emerging alliance around the turn of the century between the AMA, which consisted primarily of elite practitioners and medical researchers based in prestigious universities and the industrial capitalist class, ultimately permitted biomedicine to establish political, economic, and ideological dominance over rival medical systems." <sup>14</sup>

Scientific advancement, such as with inoculations, meant that patients became less

likely to understand how treatments worked, yet nonetheless were able to benefit from those treatments. Matthew K. Wynia, long-time Director of the AMA Institute for Ethics and Center for Patient Safety, posits that over time this led to pride, paternalism, loss of empathy and reduced standards of customer service in the medical profession. The growth of scientific medicine also achieved so many successes in cures and treatments that arguments against medical control of healthcare seemed almost ridiculous. Hubris and power combined to lead to a sense of entitlement. The AMA began to believe its judgment was infallible, and that the state was its enforcement arm.

The hegemonic process helped lead to the disappearance of some alternative therapies, but many still exist. Of all the complementary and alternative (CAM) health professions, only American osteopathy took the route of eliminating its alternative practices and beliefs. This resulted in the AMA removing its cultism label from osteopathy in 1961. The AMA even extended membership to osteopaths and allopathic residency programmes accepted osteopathic graduates. But the tradeoff for osteopathy was that by the 1970s it had lost its unique identity in America and was virtually indistinguishable from medicine. <sup>16</sup>

Several authors have touched on the chiropractic episode, but little historical analysis has been undertaken. Two contemporaneous authors and chiropractic supporters, AMA whistleblower William Trever and chiropractor Chester Wilk, adopted a position of outrage at the tactics of the medical opposition to chiropractic, and both related much first-hand information in their books. Wilk later became the main plaintiff in a successful anti-trust lawsuit against the AMA.<sup>17</sup> Trever included reproductions of internal AMA and state-based medical group memos as well as correspondence with legislators. Some of these documents were also used as exhibits in Wilk's suit. But neither author related the specific details of the Medicare episode.<sup>18</sup> Peterson and Wiese in *Chiropractic: An Illustrated History*, sociologists Holly Folk, Susan Smith-Cunnien and Walter Wardwell, and historian J. Stuart Moore only

briefly mention Medicare in their histories. 19

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None of the above sources explain the legislative manoeuvring that resulted in the outcome. None provide the details of how the traditional use of radiography in chiropractic enabled the AMA to develop the x-ray clause for the legislation, the mechanism by which the scope of practice was limited. A brief background on the traditional chiropractic healthcare paradigm is necessary for context.

#### THE ORIGINS AND DEVELOPMENT OF CHIROPRACTIC

Although manual manipulation of bones and joints as a healing art has existed for centuries, the particular method that came to be called chiropractic originated in the USA in 1895. For the first few decades of the its existence, chiropractic considered itself alternative rather than complementary to medicine, and some in the profession still do. The traditional chiropractic ideology or practice paradigm was a form of vitalism. Daniel David Palmer, known as D.D., was a Canadian-born merchant and self-styled "magnetic" healer living in Davenport, Iowa at that time. Palmer credited a mysterious force that he called Universal Intelligence, essentially a form of god, as responsible for life and health. This force manifested in humans as "Innate Intelligence" in the brain, and was transmitted as "nerve impulses" down the spinal column through nerves to all the organs and body parts. Therefore, if a vertebra was slightly out of place, a state he called "subluxation", it could impinge nerves, alter the flow of the impulses, and create ill health. D.D. held the opinion that 95% of disease was caused by subluxated vertebrae and the remaining 5% by subluxated peripheral joints, such as the elbow or ankle.<sup>20</sup> Palmer began teaching his new theory to others almost immediately, including to his son Bartlett Joshua Palmer, known as B.J. After D.D. suddenly departed Iowa for the west coast in 1902, B.J. assumed responsibility for the school his father had started, asserting himself as leader of the budding profession. In 1910 he made a decision that would have repercussions more than half a century later by incorporating x-ray into

chiropractic as a way to prove subluxations.<sup>21</sup>

Through the mid-20<sup>th</sup> century, chiropractic took steps toward professionalization.

Kansas and North Dakota were the first states to license chiropractors and by 1963 all but two states had chiropractic legislation, although scopes of practice varied. <sup>22</sup> The National Board of Chiropractic Examiners was established in 1961, and the Federation of Chiropractic Licensing Boards in 1968. <sup>23</sup> The Council on Chiropractic Education, formed in 1935 by the National Chiropractic Association (forerunner to the ACA) in an effort to standardize chiropractic education, was accredited by the Department of Health, Education and Welfare in August 1972. <sup>24</sup> Reforms led to the decline in numbers of teaching institutions from 42 in 1930, most with 18-month courses, to 15 in 1963, all with 4-year courses. These efforts seem to have been taken in a sincere effort to gain legitimacy. Donning the mantle of orthodoxy in organizational structures must also have made chiropractic more palatable by a wider swath of legislators.

Like other CAM professions, chiropractic has a schism that it has not yet reconciled. The two main groups of chiropractors have often been referred to as "straights" and "mixers." This division reflected an emphasis on treatments employed. Straights used manual manipulation or "adjusting" of the spine for all ailments. Mixers "adjusted" as well, but also used heat, cold, ultraviolet, massage techniques, and other ancillary measures not including drugs and surgery. In this paper, I change the focus of the division from treatment methods to aetiology of disease. Broadly, some within the profession hold to the traditional idea that subluxations are the predominant influence on health, and often radiography is considered the primary tool for detecting this "lesion." This group will be referred to as traditional or vitalistic chiropractors. The other group will be referred to as biomedically-oriented chiropractors. Generally, they believe in germ theory, the utility of vaccinations, judicious use of diagnostic imaging, and other mainstream healthcare tenets. They focus on manual

therapy for biomechanical conditions, view themselves as complementary rather than alternative, and seek integration with overarching health systems. In my opinion, it is more important to understand the paradigm a healthcare practitioner applies to health and disease than to focus on treatment methods. The overall paradigm is more revealing of a practitioner's comprehension of diagnosis, science, and evidence, and therefore gives greater insight into the differences in the chiropractic factions.

These groups do not neatly divide into the two main professional associations in the USA, the American Chiropractic Association (ACA) and International Chiropractors Association (ICA). There is overlap of health paradigm in both membership populations, although the ICA tends to have more traditionalists in its leadership and constituents, and the ACA more biomedicals. In the 1960s, the ACA had about twice as many members as the ICA. There were also "independents" who belonged to neither group, and in this group the paradigm varied as well. For purposes of this paper, the predominant paradigm of each association will be used in the understanding that uniformity of opinion did not exist, but tendencies did.

# THE AMA'S EFFORTS TO CONTAIN AND ELIMINATE CHIROPRACTIC

By the 1960s, most alternative health systems in the USA had either disappeared, like Thompsonians and naprapaths, had been marginalised into insignificance like Christian Scientists and naturopaths, or been incorporated into medicine like osteopaths. Chiropractors, however, retained their independence, and had gained a small but consistent part of the healthcare market. About 10% of Americans and Canadians have used their services.<sup>27</sup> Chiropractic became a particular target of the AMA. The AMA's methods were many and varied. They printed and distributed thousands of anti-chiropractic brochures to schools, colleges, medical practices and organizations. They sent fake prospective student applications to chiropractic colleges in order to expose weaknesses in the education system. They wrote

letters to professional journals and popular magazines, lobbied legislators at the local, state, and federal levels to try to exclude chiropractic, and they pressured members of influential committees.<sup>28</sup>

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In 1963, the AMA formed a Committee on Quackery to "[determine] the true nature of chiropractic and its practitioners, and to inform the medical profession and the public of its findings."<sup>29</sup> The product of this investigation was a pamphlet, entitled *Chiropractic: The* Unscientific Cult. In setting the tone for the Committee, the AMA House of Delegates issued the following statement: "Either the theories and practices of scientific medicine are right and those of the cultists are wrong, or the theories and practices of the cultists are right and those of scientific medicine are wrong." In 1967, H. Doyl Taylor, secretary of the Committee on Quackery and a leading figure in AMA efforts on chiropractic, spoke at a "quackery workshop" held at Ball State University in Indiana, framing the discussion with this statement: "As you know, [chiropractic] is a cult, about as far removed from scientific medicine, the diagnosis and treatment of human illness as it is possible to get."31 The ridiculing nature of these words de-legitimised chiropractors in the structure of the argument. It portrayed the AMA as representing the norm and chiropractic as deviant. Sociologists Yvonne Villanueva-Russell and Susan Smith-Cunnien asserted that by defining chiropractic as "deviant" and using derogatory terms like "unscientific cult," the AMA could frame itself as mainstream, reasonable, and scientific, for its own social and political benefit.<sup>32</sup>

Despite acknowledging that a variety of practice paradigms existed within chiropractic, the AMA's focus remained on the vitalistic chiropractors.<sup>33</sup> Some of the statements by the Committee on Quackery seem political or adversarial, rather than clinically detached: "With the establishment of the Committee on Quackery, in 1964, extensive study was made to determine exactly what chiropractic is and where it is most vulnerable to public exposure."<sup>34</sup> Trever expresses it this way: "the Committee lacked sufficient 'scientific proof'

to back their slanderous campaign."<sup>35</sup> Because of the extreme measures to ensure secrecy at the AMA, the totality of the information that the Committee obtained on chiropractic practices is not known.<sup>36</sup> However, the examples they cited were damning for chiropractic. The pamphlet included reproductions of advertisements claiming cures for various diseases including cancer and mental illness. Chiropractors were quoted making statements against the utility of vaccinations. Repeatedly noted was an epistemology invoking appeal to authority; the "authority" was usually either D.D. or B.J. Palmer. The Unit Plan also denigrated chiropractic educational standards, which were, in fact, inferior to those of medicine.<sup>37</sup> It further stated: "The prime mission of the Committee on Quackery at its founding was to be, first, the containment of chiropractic, and, ultimately, the elimination of chiropractic as a health hazard."38 Part of the plan was to influence legislative bodies. 39 It stated that "the Medicare-Medicaid rules on chiropractic [must be] drawn as tightly as possible."40 The *Unit Plan* described ghost-writing policy statements and distributing publications on behalf of various "independent" bodies such as the American Federation of Labor-Congress of Industrial Organizations (AFL-CIO) and the Consumer Federation of America in order to lend the weight of ostensible support from respected organizations to their message.<sup>41</sup> The AMA sponsored multiple regional conferences called "Health Quackery – Chiropractic" over a period of five years. They attempted to derail accreditation of chiropractic schools. Doctors and hospitals were forbidden from granting chiropractors any privileges including receiving referrals of patients for x-rays or blood tests. The Unit Plan did concede that after chiropractic ceased to exist, chiropractors, with their manual skills, might be able to be retrained "to serve as another extension of the physician's hands." 42

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At this point it could be argued that the AMA and other medical associations genuinely believed that they were acting in the public interest, fulfilling their fiduciary duty as they saw it, by attempting to limit public access to chiropractors, whom they viewed as

dangerous. Their later actions became more ethically questionable.

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# THE INCLUSION OF CHIROPRACTIC IN MEDICARE

In 1964, Lyndon Johnson won the presidency; his agenda included improving healthcare. 43 However, concessions had to be made to medical special interest groups, including coverage for physician outpatient services as well as hospital visits for both general and specialty practitioners. Physicians were given total freedom in diagnosis, treatment and prescription of medications. The fee-for-service model was retained, and people were able to see whichever doctor they wanted.<sup>44</sup> The bill with these provisions became the first iteration of Medicare, and it passed with AMA approval in 1965, 45 resulting in improved health and well-being for many people across the country. 46 Medicare quickly became popular, and other health professions, including chiropractic, optometry, social work, and eight others requested inclusion. Congress opened an investigation into the possibility of expanding Medicare. 47 In 1967, Wilbur Cohen, the Secretary of Health, Education, and Welfare (HEW), was tasked with undertaking the study. The government required the health professions to provide evidence of legitimacy. The Federation of Chiropractic Licensing Boards (FCLB) oversaw chiropractic licensing. Chiropractor Richard E. Vincent represented the FCLB in testimony to the House Ways and Means Committee, assuring Congress that there were professional standards as well as a mechanism for upholding them.<sup>48</sup> However, the assessment process turned out to be neither straightforward nor transparent. According to sociologist and HEW committee member Walter Wardwell, the report essentially had been written before the committee even met.<sup>49</sup> He also related that pressure was applied to members of the committee to adopt the AMA position. Wardwell later revealed all the anti-chiropractic documents and verbal recommendations from AMA members that he had received as a member of the committee.<sup>50</sup> Sociologist Catherine Biggs has indicated that in Canada, the government responded

to the tension between the popularity of chiropractic services and the opposition of the powerful medical lobby by calling for a Royal Commission or equivalent to study the matter. In Canada's case, the government reports provided rationales for including chiropractic in state-funded healthcare.<sup>51</sup> Not so in the USA. The final HEW report issued 28 December 1968 recommended that chiropractic not be included in Medicare, concluding:

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. Moreover, irrespective of its theory, the scope and quality of chiropractic education do not prepare the practitioner to make an adequate diagnosis and provide appropriate treatment.<sup>52</sup>

Upon receiving news of the report, the chiropractic professional associations responded with a White Paper, accusing Congress of a biased process and attempting to clarify what they perceived as mischaracterizations of the profession. Congress dismissed it as invalid.<sup>53</sup> The two main chiropractic associations, the ACA and ICA, embarked on a political pressure campaign. It was comprised of three elements: working to amalgamate the two associations, letter writing to Congress, and lobbying through personal connections. Being faced with a larger, better funded, and more politically connected lobbying organization in the AMA, it was of paramount importance for chiropractic to present a unified front to the world. In addition, experience had taught chiropractors that state and federal panels insisted on a single body of representation. ACA member James Cox remembers: "I've testified in my state of Indiana before House and Senate committees. If you go in there split, you know what they say: 'You get it together and then you come back.'"<sup>54</sup> This created the impetus to join the two chiropractic professional associations. The ICA had about 4000 members.<sup>55</sup> They were overt in their advocacy of a traditional, vitalistic view of

chiropractic and wanted the legislation to consider only the treatment of vertebral subluxation. The ACA had about 7500 members, and tended to be more biomedically-oriented. The ACA's position was that chiropractors should be reimbursed for all the services that they provided, not just for attending to vertebral subluxations. These services varied state to state, depending on the licensure regulations, but included therapeutic ultrasound, electrotherapy, massage techniques, and rehabilitation protocols. 57

The ICA insisted that the ACA agree to a definition of chiropractic known as the "Chicago scope of practice." It focused on spinal subluxations as the cause of all disease, with radiography for subluxation detection. Contemporaneous articles in chiropractic magazines included promotion of x-ray imaging for subluxation analysis by ICA chiropractors. For example: "It enables him to see inside and through the living body, pinpointing with accuracy, the health problem areas... This aid is necessary in visualising the misalignments of the spinal column..." The strength of this belief can be seen in its longevity and the language used by some of its proponents. In 1977, Leon R Coelho, chair of the ICA Radiation Control Committee and director of the Roentgenology Department of the Palmer College of Chiropractic wrote an article entitled "If spinography is dead, so is chiropractic" in an ICA publication and included the following:

Spinography is an imperfect system. Chiropractic is an imperfect system, yet growing and surviving in an imperfect world. *But do you know something?* IT IS THE BEST OF ALL SYSTEMS OF WHICH WE ARE CONSCIOUS. HAVE FAITH IN IT, NOURISH IT, LOVE IT, because it is all part of something much greater than us, and that something, within itself, is perfection. [All emphasis original.]<sup>60</sup>
In contrast, ACA members published articles on the mainstream use of the x-ray for

pathological diagnosis and railed against the idea of using ionising radiation as a screening

tool for all patients.<sup>61</sup> The ICA model for the radiographic visualization of subluxations was denigrated by ACA chiropractors including Joseph Howe, who noted that normal anatomical asymmetry, minor variations in osseous architecture, slight changes in patient position during radiography, and the physics of the x-ray beam all invalidated the idea that "subluxations" could be identified and quantified on radiographs. The tiny misalignments claimed by some chiropractors to be lesions causing disease were due either to illusion or imagination.<sup>62</sup> The schism in chiropractic was particularly stark on the use of the x-ray. The potential merger of the two chiropractic associations failed again.<sup>63</sup>

The ICA and ACA submitted separate statements to the government. The ICA requested reimbursement for spinal x-rays and spinal adjustments only. The ACA statement acknowledged the usefulness of standard physical examination and diagnostic tests and also discussed "subluxation," but as a biomechanical dysfunction, rather than a vitalistic entity, and without the necessity of radiography to identify. 64 The ACA statement also invoked the idea of freedom of choice in health care and requested recognition of states' rights in regard to scope of practice. That is, the ACA argued that Medicare legislation should reimburse for whatever services chiropractors were licensed to provide in each state, rather than be limited to adjusting spinal subluxations as the ICA advocated. This limit was viewed as overriding a state's right to determine the scope of practice for chiropractors. HEW denied this argument in 1969, citing lack of evidence for the effectiveness of chiropractic treatment and asserting that their responsibility for the "safety and welfare of beneficiaries" allowed HEW to determine the services to be reimbursed. 66

Because the two chiropractic associations portrayed chiropractic differently, the AMA was able to choose a portrayal of chiropractic that could serve to bolster its position opposing Medicare coverage for chiropractors. Hoyt B. Duke of the ACA recognised this, writing that the rigidity of the ICA's position and the infighting that it caused were making chiropractic

vulnerable to attack by the AMA.<sup>67</sup> There is no indication that either the ICA or ACA were acting cynically or simply playing for power; they both sincerely believed that their position was the correct one. The ICA believed that they were preserving chiropractic more truly to the founder's ideals. The ACA was less concerned with tradition and was trying to move chiropractic into a new phase of existence, embracing a more scientific approach to healthcare.

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The two chiropractic professional associations did cooperate on other lobbying efforts. David D. (Dave) Palmer, grandson of founder D.D. Palmer, was the president of the Palmer College of Chiropractic in the late 1960s and early 1970s. As such, his assent was considered necessary for consensus on any strategic chiropractic-wide project. Palmer met with ICA President William Day, ACA President Gerald Brassard, and other influential chiropractors in 1970 to discuss the "intensified Medicare-inclusion plan." It included an organized letter writing operation to encourage Congressional Representatives and Senators to support including chiropractic in the Medicare expansion bill. The sample letters distributed by the chiropractic associations highlighted the benefits of chiropractic and also appealed to sensitive areas in American politics: market freedom and American Exceptionalism.<sup>69</sup> American Exceptionalism was expressed by sociologist and political theorist Seymour Lipset as: liberty, egalitarianism, individualism, populism, and laissez-faire. Lipset noted that even before the rise of the neoconservatives, which started with President Ronald Reagan, the USA had lower rates of taxation, a less developed welfare state, and fewer government-owned industries than other industrialised nations. <sup>70</sup> The idea of freedom in the healthcare marketplace attained similar enshrinement and this was also present in the chiropractic community. 71 Chiropractors argued that the AMA and government policies were restricting peoples' freedom to choose the health care provider that they desired. William Day wrote, "It is the birth-right of every American citizen to have the right to choose his own particular type of health care, and it is our duty to make it possible for them to have the opportunity to choose chiropractic!"<sup>72</sup> The goal was to have 10,000 letters sent from chiropractors and patients. Ultimately, at least a million letters went out.<sup>73</sup> Because of this popular support, many House Members introduced bills on the subject. Congressman Wilbur Mills, who had been instrumental to the passage of Medicaid legislation, noted that this had influenced the decision to include chiropractic.<sup>74</sup>

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William Scott (Bill) Day was a particularly influential figure in the lobbying effort. Day had been a Washington State Representative from 1959-1969 before being elected to the State Senate from 1969-1980.<sup>75</sup> He was a graduate of the Palmer School (1947), and the son of two Palmer graduates. He took over the clinic in Spokane, Washington that his parents started, and his son Tim, also a Palmer graduate, has operated it since Day's death in 1984. Day helped ensure that traditional chiropractic was legislated as the scope of practice in Washington. <sup>76</sup> He also supported the traditional paradigm for chiropractic in Medicare, testifying to that effect as Legislative Chairman of the ICA in front of the Senate Finance Committee on September 16, 1970, along with other representatives of the ICA and ACA.<sup>77</sup> Steve Renner also attended the Palmer school, and was employed in Day's clinic from 1976 - 1982. He recalled discussing the matter with Day: "[Bill] became friends with Washington State's two U.S. Senators, Henry Jackson and Warren Magnuson. These two were high-ranking Democrats in Congress. So because Bill was subluxation-based and his connections with Jackson and Magnuson is how chiropractic became included in Medicare [sic]."<sup>78</sup> Richard Vincent, an ACA chiropractor and president of the FCLB at the time, recalls the situation similarly: "Bill Day was President of the [Washington] State Senate. Magnuson was the Senator from Washington to Federal Government, and he was chair of the Appropriations Committee, powerful. He was a driving force on healthcare. Now this is my

personal opinion: the influence that Bill Day had on Senator Magnuson was what drove the

subluxation [focus of the legislation]."<sup>79</sup> Day's perspective, as president of the ICA, was transmitted to the federal legislature through Senators Jackson and Magnuson. It limited chiropractic to the Chicago definition, that is, spinal subluxation relief requiring routine radiography to detect subluxations. Later, in December 1972, Palmer issued a statement disavowing the indiscriminate or routine use of x-rays, but affirming the remainder of the "Chicago definition" of chiropractic.<sup>80</sup>

The Congressional debate on chiropractic was robust. Influential Senator Ted
Kennedy opposed including chiropractic in Medicare. He cited cases of chiropractors
overstating their abilities to cure serious disease, like cancer, causing patients to avoid seeing
medical doctors, with tragic results. But other Senators countered that all health care
professions had a small percentage of incompetent or fraudulent practitioners. State
regulation, under which licensing/registration boards were established and maintained, was
considered adequate to protect the public in those professions and so it should be for
chiropractic as well.<sup>81</sup> A few legislators related positive personal experience with a
chiropractor, but freedom of choice proved to be a particularly powerful argument regarding
healthcare in Congress. Most legislators agreed that the government should not tell citizens
that they could not go to a chiropractor instead of a medical doctor if that was their choice. <sup>82</sup>

As sociologist Paul Starr noted, Americans were not willing to submit to the judgement of experts, even in the realm of healthcare. <sup>83</sup> In fact, there was little evidence of clinical effectiveness on which legislators could base a judgement. There were case anecdotes from the publications of the professional associations and patient testimonials in pamphlets, advertisements, and the letters to Congress. These "success stories" did not contain the level of clinical detail to be publishable in peer-reviewed journals. The first randomized controlled trial of chiropractic was not published until 1990. <sup>84</sup> The AMA gleaned evidence against chiropractic similarly, from advertisements, anecdotes of patients harmed by chiropractors,

and by the investigation the AMA did into chiropractic education.<sup>85</sup>

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The bill expanding Medicare was debated in the U.S. Congress for two years, passing in 1972, and it included chiropractic. 86 It contained 144 changes in welfare and health benefits, and was estimated to cost \$5 billion. Its effects were vast, including coverage for chronic renal disease, disabled people under 65, a Chiropractic was a very small part.<sup>87</sup> According to the New York Times (NYT), the House members of the conference committee wanted to delay inclusion of chiropractic in favour of another study of it, but Senate members wanted inclusion. Political "horse trading" ensued and the House yielded to the Senate in exchange for unknown concessions on other matters. In addition, the NYT reported that some sources said Wilbur Mills was annoyed at the AMA, and others indicated he "was tired of standing up almost alone to the pressure of the chiropractors."88 The AMA took action to try to neutralize chiropractic's inclusion just before final passage of the bill in Congress by leveraging the idea that "subluxations" were the cause of disease. Medical doctor Stephen Barrett, a leading figure in the fight against chiropractic for decades, wrote to the AMA and suggested that they bring a lawsuit, to "present to the court the impossibility of writing regulations to pay for something that did not exist." But he recalled receiving no response.<sup>89</sup> Instead, the AMA decided to try to amend the legislation just before passage.

# AMA EFFORTS TO LIMIT THE UTILITY OF MEDICARE FOR CHIROPRACTORS

After the House and Senate each pass their versions of a bill, any differences between the two are reconciled in a conference committee. This committee is usually composed of senior members of the House and Senate committees that originally considered the bill.

Amendments may be introduced during the conference committee, and after consensus is achieved, the final version of the bill is produced for a vote in both the House and Senate.

This is a straight yea or nay vote; no further amendments are allowed on any bill that has

been through conference committee. If passed, it is sent to the President to sign into law or to veto.

According to Stephen Barrett, wording from the AMA was inserted during the conference committee. <sup>90</sup> The specific clause allowed reimbursement to chiropractors only for manual manipulation of spinal subluxations that had been documented by x-ray. No other services were covered, nor was the cost of taking and interpreting the radiographs themselves. Thirty years after the Medicare legislation passed, Barrett recalled the episode:

A few weeks after the law was passed, Doyl Taylor, head of the AMA

Department of Investigation told me that when chiropractic inclusion

appeared inevitable, the "subluxation" language was inserted with the hope

of preventing chiropractors from actually being paid. The idea's originator

thought that because chiropractic's traditional (metaphysical)

"subluxations" were visible only to chiropractors, this provision would

sabotage their coverage. 91

The NYT reported on this amendment made during conference committee, but gives no attribution to any person(s) for the change. The amendment effectively nullified the practical utility of reimbursement for chiropractic services, and may have been another factor that allowed the House to accede to the inclusion of chiropractic in Medicare. At this point in the Medicare expansion process, any legislator objecting to one element in this massive and popular bill would have had to vote against the entire bill, a politically unwise move. The final bill, including the amendment to chiropractic, passed in both Houses. On 30 October, just a few days before the presidential election of 1972, President Richard M. Nixon signed it into law.

The regulations in the bill had been narrowly formulated so that chiropractors were considered "physicians" for the purpose of radiographically diagnosing and manually treating

a "subluxation" but not in any wider definition. Specifically, they were not "physicians" under U.S.C. 1395x (s)(3), the part of the law that provided reimbursement for taking x-rays. Reimbursement was also not given for physical exam or other diagnostic procedures. 93 Medicare reimbursed radiographs if a medical doctor ordered them, but the AMA forbade medical doctors and hospitals at the time from accepting referrals from chiropractors. 94 Chiropractors were licensed in all fifty states to take radiographs. But if they performed their own radiography, chiropractors would either have to absorb the cost themselves or ask patients to pay for them. Therefore this legislation caused potential financial harm to patients.

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Members of the ICA greeted the news of inclusion in Medicare with short-lived jubilation until they realized they would not be reimbursed for the mandated radiography. 95 But within the ACA, it caused an immediate division of opinion. Some members thought Medicare should be abandoned, rather than submitting to the codification in law of such a narrow scope of practice. Joseph Howe was an outspoken ACA member involved with the internal politics of the situation. He assessed the legislative outcome as deleterious and expressed his opinion to the leadership: "I said throw it back. Please don't tie us in to that idea of subluxation being the only thing we do. But they didn't [throw it back]. I think, personally, it's my opinion that Medicare has been a detriment to the profession from the beginning."96 However, the new law brought prestige, legitimation, and gave access to a new cohort of patients, even if chiropractors received inadequate reimbursement for those in that cohort. Ultimately, the ACA leadership decided to accept it, hoping that it might be broadened in the future. 97 James Winterstein, long-time president of National College of Chiropractic, and an ACA member at the time, acknowledges the dilemma: "I was supportive of inclusion of chiropractic medicine in the Medicare program, but not in the way it was statutorily developed [limiting the scope of practice to spinal subluxation relief and requiring x-rays]. That view was shared by most so called "mixers" of the time. We all thought,

however that this was the beginning that that as a profession we would be able to change the language to provide a far better functioning statute for the profession and our profession."98

# THE CHIROPRACTIC SOLUTION TO MEDICARE REQUIREMENTS

Chiropractors had many different definitions of vertebral subluxation, mostly tiny changes in position, not acknowledged as real by the medical community and unable to be reliably identified on radiographs by different chiropractors. <sup>99</sup> The ACA called for a meeting to standardize the definition of radiographically demonstrable subluxations. The meeting took place in Texas in November 1972 and became referred to as the Houston Conference. Within the ACA there existed a group of chiropractors with a special interest in diagnostic imaging. They undertook additional training as well as written and oral certification exams in order to achieve the Diplomate of the American Chiropractic Board of Radiology (DACBR). These "chiropractic radiologists" were called upon at the Houston Conference. <sup>100</sup>

The radiographic demonstration of subluxation was imaginary to at least some involved in the Houston Conference. There were deep misgiving and arguments on the subject. Many of the participants considered the "subluxation" to be a functional lesion of joint motion, rather than a displacement. For these chiropractors, there were no vitalistic implications of "the cause of all disease", but rather "subluxation" was a biomechanical dysfunction amenable to a variety of manual methods, of which chiropractic adjustments were only one. <sup>101</sup>

The new Medicare requirement ran counter to safety guidelines on the use of x-rays in requiring all patients to be radiographed. Joseph Howe wrote: "To demand that there be radiological evidence of vertebral subluxation in order to justify chiropractic treatment is irresponsible. It is totally contradictory to proper radiological health procedure which demands a clinical reason for any application of ionizing radiation to a human being." The x-ray requirement even seemed nonsensical to some legislators. Senator Mike Gravel

recognized that the AMA had put in place a requirement that ran counter to best medical practice. He wrote that the law "imposes an improper interference with the work and judgment of the Chiropractor. It does not guarantee the health and well-being of the patient; in fact, it may endanger it." <sup>103</sup> The idea that there was no safe dose of ionizing radiation, called the linear, no-threshold (LNT) model, had been introduced to the world by Herman Muller at his Nobel Prize acceptance speech in 1946.<sup>104</sup> Although there have been challenges to this model, <sup>105</sup> and it has never been fully accepted in the chiropractic community, <sup>106</sup> it became the dominant model in the ensuing decades. By 1956 the National Academy of Sciences (USA) had adopted it. Then, within a few years this paradigm "had transformed governmental regulatory agencies in many countries, including recommendations of the UN."107 The National Council on Radiation Protection and Measurements (NCRP) issued radiation protection standards in 1954, which were revised in 1957 and 1958. The 1958 edition introduced the risk/benefit calculation to the application of ionizing radiation, which later evolved into the ALARA (As Low As Reasonably Achievable) principle. 109 Despite this, formal training in radiation safety was spotty in medicine. However, by the time of the Medicare expansion in 1972 the potential hazards of x-rays, even at low, diagnostic doses, had been well-publicized, and should have been known to chiropractors, physicians, and legislators involved in the issue. There is evidence that this in fact was known in the medical community; a letter from the Lehigh Valley Committee Against Health Fraud, a group of health professionals including Stephen Barrett, to the United States Senate Finance Committee stated that they considered chiropractic x-rays to be "window dressing" and "a radiation hazard."111 This statement acknowledges both the understanding of the potential danger of low levels of ionizing radiation, as well as the fact that x-rays should not be used in the absence of clinical justification. In light of the comments above, key figures in both the medical and chiropractic communities did understand the safety issue and spoke out about it.

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It therefore seems more likely that the issue was ignored rather than unknown.

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Despite concerns, the attendees at Houston Conference decided to comply with the ACA leadership and tried to find a way to make the new legislation workable. Chiropractor and DACBR James Cox recalled: "While I felt apprehension about taking the program [the limited scope of practice as defined in Medicare] as it was... the consensus out of my profession and out of the ACA was that it was the proper step to take, so I supported that, because that's what my profession wanted to do."112 The DACBR solution was to use various medically recognized vertebral displacements and postural changes like spondylolisthesis and scoliosis, calling them "subluxation" purely to meet the Medicare requirement of radiographically documenting a positional change in one or more vertebrae in order to justify reimbursement for treatment. 113 James Winterstein remembered: "ACA developed a "Medicare Manual" [the Basic Chiropractic Procedural Manual] and Joe Howe and I wrote the section on radiography mostly at the kitchen table at my home office in West Chicago, Illinois. In the manual we defined "subluxation" and showed examples and drew radiographs from my practice as evidence for the various types of subluxation." <sup>114</sup> Joseph Howe added: "We came up with seventeen classifications, which was just foolishness, frankly."115 These were political, not clinical definitions of subluxation. The DACBRs and likely the ACA leadership knew that their "subluxations" were not the ultimate cause of disease. Irradiating patients in order to document these subluxations ran counter to the individual risk/benefit appraisal that should have been performed on each patient when considering the use of x-rays. But, chiropractors were then able to document their "lesion" as required by the law. The ACA published the "subluxations" in the Manual as well as in other media. 116 They also paid for several members to travel around the country giving presentations disseminating the system. 117 Some ACA members like Joseph Howe were uncomfortable with the situation, but participated nonetheless: "Jim Winterstein and I

developed slides of all those things. We made it up in a carousel [for slide presentation] and we set out, a group of us, to teach that across the world. Something I have regretted ever since."<sup>118</sup> Chiropractors had found a way to make the legislation workable, although they knew it was ethically questionable.

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Another potential harm to patients never mentioned by either side is the fact that in a proportion results from any type of diagnostic study there will be an anomalous result, often a false-positive, that requires further investigation. This often causes anxiety and further cost for patients needing additional studies, as was noted in the debate around mammography for breast cancer screening.<sup>119</sup>

Even under these dubious circumstances, inclusion in Medicare was a significant achievement for chiropractic. In 1972, few inroads had been made towards government reimbursement for chiropractic services anywhere in the world, nor were there chiropractors on staff in government hospitals. This event influenced contemporaneous registration and reimbursement inquiries on chiropractic in several countries, but at least one, New Zealand, stated that they "did not consider the formula applied in USA to be appropriate for their area." The places where chiropractic has had the best success with integration into government provision of healthcare are Denmark, Switzerland, and Canada. In those countries, chiropractors in subsequent decades decided largely to abandon traditional paradigms. Consequently, they are reimbursed equivalently with other practitioners. In addition, those countries, and particularly Alberta in Canada, have the highest utilization rates for chiropractic, about twice that of other areas. 121 The first government investigation of costeffectiveness for chiropractic was a study in Canada on low-back pain in 1993; it reported positive findings. 122 However, evidence for improved patient outcomes from chiropractic treatment based on the radiographic demonstration of chiropractic subluxations or postural changes has never been documented in a peer-reviewed, indexed journal.

In 1979 the U.S. House of Representatives held hearings on overexposure to diagnostic x-rays. Herman Olsen, president of the ACA, authored a submission representing both his organization and the ICA, urging the elimination of the mandate for x-rays. The General Accounting Office, a non-partisan bureau of analysts for the U.S. government, also submitted the following statement regarding the chiropractic x-ray requirement: "Since the x-ray serves no medical benefit... the patient is unnecessarily exposed to hazardous radiation solely to fulfil an administrative requirement. The cost of the x-ray can be an expensive burden to the Medicare beneficiary as well." But, this attempt to change the legislation failed. The x-ray requirement was not removed from the Medicare regulations until 1 January 2000, when components of the Balanced Budget Act of 1997 were enacted. Chiropractors remained reimbursable only for manual manipulation to remove spinal "subluxations," but the subluxations could be documented by means other than x-ray.

CONCLUSION

This episode highlights an inherent conflict of interest in professional associations that represent registered healthcare practitioners. Although the associations are bound to protect and promote the interests of their members, not the public, the boards of professional associations are largely comprised of professionals who are ethically bound to protect the public. The events described herein demonstrate that the focus by both organized chiropractic and organized medicine was not solely on public interest but rather more heavily on the interests of their respective professions. It shows the distortion of perspective that may result during a "turf war", in which two professions fight for, *inter alia*, public status and healthcare dollars, with inadequate consideration of the patients receiving their services.

During this conflict, the stakes were high on both sides. Organized medicine framed its position as protectors of the public from the "rabid dogs" and "killers" that were chiropractors. <sup>127</sup> Biggs portrayed this episode as a critical junction in the legitimization and

economic survival of chiropractic as a profession. Recognition under Medicare raised chiropractic's status and failure to be included would have meant that the cohort of Medicare patients may have gone on to receive services from other practitioners, like physiotherapists. But it had negative effects for the profession, as well. It reinforced the traditional chiropractic belief system and it did not conform to radiation safety guidelines. 129

All the professional associations involved in this battle lost sight of the civic duty that comes with being a healthcare provider. The AMA decided to bet that the altering the Medicare legislation would make it useless to chiropractors, but they lost the wager because chiropractors found a way to work within the limits of the legislation. The AMA did not adequately consider the consequences in the event that they lost.

Within chiropractic, the ICA had long promoted the use of x-rays for subluxation analysis, although there was, and still is, little evidence to support that belief. This meant that the scope of the legislation posed no ethical problem for them, but they were unhappy about the lack of reimbursement. Some chiropractors in the ACA, though, compromised their values on requiring clinical justification for the use of ionising radiation. The ACA advocated for a system that they did not really believe in so that they could gain the political "win" of becoming providers for Medicare patients.

For its part, the state took the expedient course. Legislators responded to the weight of popularity of chiropractic, rather than clinical evidence for its effectiveness. They also responded to strong emotions attached to the patriotic argument of freedom of choice. At least one Senator has indicated that the change requiring radiography of all chiropractic Medicare patients inserted into the conference committee report was considered insignificant in the scheme of the overall bill. Few Senators or Representatives would have been willing to vote against Medicare expansion because of a change to one element in one part of the bill, a large and popular piece of legislation.

Both medical and chiropractic professional associations put politics ahead of patients, and the state took a course of compromise, trying to please everyone and ending up pleasing no one. The damage from decades of x-rays being unjustifiably used on the Medicare population has not been quantified, but is certain to exist. It manifested in several ways: in potential damage to patients' health, the financial cost of x-rays, and by causing stress as well as further diagnostic testing for patients with false-positive x-ray results. All parties, including most importantly patients, would have benefitted if those involved in the battle for chiropractic inclusion in Medicare had looked to evidence-based practice paradigms and patient-focused care as their main objectives.

Notes

<sup>&</sup>lt;sup>1</sup> This is actually not word for word in the Oath, although the sentiment is. The phrase is: "I will keep them [the sick] from harm and injustice." Michael North [translator], "Greek Medicine – Hippocratic Oath," National Library of Medicine, 2002, available at: <a href="https://www.nlm.nih.gov/hmd/greek/greek\_oath.html">https://www.nlm.nih.gov/hmd/greek/greek\_oath.html</a>, (accessed 30 April 2019).

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 <sup>3</sup> Richard D. Lyons, 'Nixon Signs \$5-Billion Bill Expanding Social Security', *New York*

Times, 31 October 1972, 1.

<sup>&</sup>lt;sup>4</sup> Rosemary A. Stevens, "History and Health Policy in the United States: The Making of a Health Care Industry, 1948–2008," *Social History of Medicine*, 2008, 21, 461-83; Robin Bunton and Roger Burrows, "Consumption and Health in the 'Epidemiological Clinic' of Late Modern Medicine," in *The Sociology of Health Promotion: Critical Analyses of Consumption, Lifestyle and Risk*, ed. Robin Bunton, Sarah Nettleton, and Roger Burrows

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<sup>&</sup>lt;sup>5</sup> Jenny M. Lewis and Mark Considine, "Medicine, Economics and Agenda-Setting," *Social Science & Medicine*, 1999, 48, 393-405.

<sup>&</sup>lt;sup>6</sup> Charles Vincent, "Medical Harm: A Brief History," in Charles Vincent, *Patient Safety*, 2<sup>nd</sup> ed. (John Wiley & Sons, Ltd, 2010), 3-8.

<sup>&</sup>lt;sup>7</sup> Matthew K. Wynia, "The Short History and Tenuous Future of Medical Professionalism: The Erosion of Medicine's Social Contract," *Perspectives in Biology and Medicine*, 2008, *51*, 565-78.

<sup>&</sup>lt;sup>8</sup> American Medical Association, *Code of Ethics of the American Medical Association*, (Philadelphia: American Medical Association, 1848).

<sup>&</sup>lt;sup>9</sup> Eliot Freidson, *Professional Dominance: The Social Structure of Medical Care* (New York: Atherton Press, 1970), 18; Eliot Friedson, "Theory of Professionalism: Method and Substance," *International Review of Sociology, 9*, 117-29.

<sup>10</sup> Wynia, "Medical Professionalism."

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of Quackery in 1974," Quackwatch (blog), 2016, available at:

https://www.quackwatch.org/13Hx/humbug.html, (accessed 30 November 2017).

- <sup>13</sup> Tracey L. Adams, "Professional Regulation in Canada: Past and Present," *Canadian Issues*, 2007, 14-16.
- <sup>14</sup> Hans A. Baer, "The American Dominative Medical System as a Reflection of Social Relations in the Larger Society," *Social Science & Medicine*, 1989, 28, 1103-12.
- <sup>15</sup> Wynia, "Medical Professionalism."
- <sup>16</sup> James C. Whorton, *Nature Cures: The History of Alternative Medicine in America* (Oxford: Oxford University Press, 2002), 239-40; Norman Gevitz, *The D.O.s: Osteopathic Medicine in America* (Baltimore: Johns Hopkins University Press, 1982), 145.
- <sup>17</sup> Susan Getzendanner, "Chester A. Wilk V. American Medical Association," in *76 C 3777*, ed. United States Court of Appeals Seventh Circuit (1987).
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<sup>&</sup>lt;sup>21</sup> Bartlett Joshua Palmer, *Our Masterpiece* (Davenport, IA: Palmer School of Chiropractic, 1966); Palmer, *The Chiropractor's Adjuster*, 14-16.

<sup>&</sup>lt;sup>22</sup> Peterson and Wiese, *Chiropractic, an Illustrated History*, 180.

<sup>&</sup>lt;sup>23</sup> Federation of Chiropractic Licensing Boards, *History of Regulation*, available at: http://directory.fclb.org/About/HistoryofRegulation.aspx, (accessed 24 April 2019).

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<sup>&</sup>lt;sup>28</sup> Trever, *In the Public Interest*; Wilk, *Chiropractic Speaks Out*; H. Thomas Ballantine, Jr., "Will the Delivery of Health Care Be Improved by the Use of Chiropractic Services," *New England Journal of Medicine*, 1972, 286, 237-42; Anon., "Reports and Comments," *Medical Care and Research Review*, 1970, 27, 310-23; "A Call to Arms," *Journal of the American Medical Association*, 1971, 217, 959; "In the Wisdom of Congress," *Journal of the American Medical Association*, 1970, 211, 1002-3.

<sup>&</sup>lt;sup>29</sup> American Medical Association Department of Investigation, *Chiropractic: The Unscientific Cult* (Chicago, 1966), 3.

<sup>&</sup>lt;sup>35</sup> Trever, *In the Public Interest*, 2.

<sup>&</sup>lt;sup>36</sup> Trever, *In the Public Interest*, 2.

<sup>&</sup>lt;sup>37</sup> American Medical Association Department of Investigation, *Chiropractic: The Unscientific Cult*, 9-12.

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<sup>&</sup>lt;sup>48</sup> Richard E. Vincent, telephone interview with the author, January 21, 2016.

<sup>&</sup>lt;sup>49</sup> Wardwell, *Chiropractic*, 164.

<sup>&</sup>lt;sup>50</sup> Wardwell, *Chiropractic*, 165.

<sup>&</sup>lt;sup>51</sup> Biggs, No Bones About Chiropractic, 357-365.

<sup>&</sup>lt;sup>52</sup> Cohen, *Independent practitioners under Medicare*, 68.

<sup>&</sup>lt;sup>53</sup> Wilbur J. Cohen, *Independent Practitioners under Medicare: A Report to Congress (1968)*, available at: <a href="https://www.chirobase.org/05RB/HEW/hew00c.html">https://www.chirobase.org/05RB/HEW/hew00c.html</a>, (accessed 01 May 2019). I could not access the original documents, but found these reproductions and have no reason to doubt their veracity.

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<sup>&</sup>lt;sup>56</sup> Cohen, *Independent Practitioners Under Medicare*, 75.

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<sup>&</sup>lt;sup>61</sup> Joseph W. Howe, "Letter to the Editor," *Digest of Chiropractic Economics*, July/August 1971, 4.

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<sup>&</sup>lt;sup>74</sup> United States Senate, "92<sup>nd</sup> Congress, Second Session," 118, 159.

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<sup>&</sup>lt;sup>81</sup> United States Senate, "92<sup>nd</sup> Congress, Second Session," 118, 159. In reality, licensing/registration boards have little scope to act on their own and usually require a complaint to be made by a member of the public or of the profession. They are reactive rather than proactive, so someone has to be negatively affected by the actions of a healthcare provider before a licensing/registration board acts.

<sup>&</sup>lt;sup>82</sup> Ameringer, *The Health Care Revolution*, 55-58; United States Senate, "92<sup>nd</sup> Congress, Second Session," 118, 159; Peter Morrison, "Adjusting the Role of Chiropractors in the United States: Why Narrowing Chiropractor Scope of Practice Statutes Will Protect Patients," *Health Matrix*, 2009, *19*, 2, 493-537.

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