

CHIROPRACTIC AND PUBLIC HEALTH: CURRENT STATE AND FUTURE VISION

Claire Johnson, DC, MEd,^{a,b} Rand Baird, DC, MPH,^c Paul E. Dougherty, DC,^d Gary Globe, MBA, DC, PhD,^e Bart N. Green, DC, MEd,^{f,g} Michael Haneline, DC, MPH,^h Cheryl Hawk, DC, PhD,ⁱ H. Stephen Injeyan, MSc, PhD, DC,^j Lisa Killinger, DC,^k Deborah Kopansky-Giles, DC,^l Anthony J. Lisi, DC,^{m,n} Silvano A. Mior, DC,^j and Monica Smith, DC, PhD^o

ABSTRACT

This article provides an overview of primary chiropractic issues as they relate to public health. This collaborative summary documents the chiropractic profession's current involvement in public health, reflects on past barriers that may have prevented full participation within the public health movement, and summarizes the relationship of current chiropractic and public health topics. Topics discussed include how the chiropractic profession participates in preventive health services, health promotion, immunization, geriatrics, health care in a military environment, and interdisciplinary care. (*J Manipulative Physiol Ther* 2008;31:397-410)

Key Indexing Terms: *Chiropractic; Public Health; Preventive Health Services; Health Promotion; Immunization; Geriatrics; Military Personnel; Delivery of Health Care, Integrated; Evidence-Based Medicine*

^a Editor, National University of Health Sciences.

^b Professor, Southern California University of Health Sciences.

^c Chair, WFC Public Health Committee.

^d Associate Professor, New York Chiropractic College.

^e Provost and Academic Chair, Cleveland Chiropractic College—Los Angeles.

^f Chiropractic Division, Department of Physical and Occupational Therapy, Naval Medical Center, San Diego.

^g Associate Editor, National University of Health Sciences.

^h Professor, Palmer College of Chiropractic West.

ⁱ Vice President of Research and Scholarship, Cleveland Chiropractic College—Kansas City and Los Angeles.

^j Professor, Canadian Memorial Chiropractic College.

^k Professor, Palmer College of Chiropractic.

^l Associate Professor, Canadian Memorial Chiropractic College.

^m Director, VHA Chiropractic Services.

ⁿ Associate Professor, University of Bridgeport.

^o Associate Professor, Palmer Center for Chiropractic Research.

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Submit requests for reprints to: Claire Johnson, MEd, DC, Editor, National University of Health Sciences, 200 E. Roosevelt Rd., Lombard, IL 60148 (e-mail: cjohnson@nuhs.edu).

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The fundamental principles of chiropractic care focus on health and the body's innate ability to heal itself. Some say the focus of chiropractic healing includes several elements, such as physical, psychosocial, emotional, and/or spiritual components, and that such a holistic view of health may still be a viable model in scientific practice.¹ This holistic chiropractic paradigm nicely matches the World Health Organization's (WHO's) definition of health, which states that health is "[a] state of complete physical, mental and social well-being, and not merely the absence of disease." Interestingly, the chiropractic profession had embraced a similar definition of health focus long before the WHO adopted their definition in 1946.² Chiropractic's historical approach has focused on the patient's innate, homeostatic powers, and capacity to heal itself. As stated by DD Palmer, the founder of the chiropractic profession, "Functions performed in a normal manner and amount result in health. Diseases are conditions resulting from either an excess or deficiency of functioning."³ With such a strong foundation in principles of wellness and health, it is surprising that the chiropractic profession had not been more involved in the public health movement.

To better understand chiropractic's role in public health, it is important to evaluate what has been accomplished in the past several decades and discuss how chiropractic may more

Fig 1. Coauthor contributions: topics related to chiropractic and public health.

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effectively embrace public health. This collaborative summary documents chiropractic's current involvement in the public health movement, reflects on past barriers that may have prevented chiropractic participation in public health associations and campaigns, and summarizes the relationship of chiropractic and current public health topics.

METHODS

Members of the chiropractic profession who have been active in areas of public health were invited to contribute concise summaries of topics of interest as they relate to chiropractic in public health (Fig 1).

RESULTS

The following sections provide summaries of key areas that chiropractic has or may have the potential to contribute to public health.

Chiropractic Integration Into the Public Health Arena: Crossing the Crossroads

Cheryl Hawk.

"Chiropractic ...has not come to a consensus on the implications of integration into mainstream health care... (the profession) stands at the crossroads of mainstream and alternative medicine. Its future role will probably be determined by its commitment to interdisciplinary cooperation and science-based practice."⁴

Integration into the arena of public health is an appropriate means for the chiropractic profession to resolve its conflicts on identity without compromising its integrity or losing its burgeoning emphasis on evidence-based care.

The definition of chiropractic proposed by the Association of Chiropractic Colleges is "a health care discipline which emphasizes the inherent recuperative power of the body to heal itself without the use of drugs or surgery...(it) focuses on the relationship between structure (primarily the spine) and function (as coordinated by the nervous system) and how that relationship affects the preservation and restoration of health."⁵ This definition is completely compatible with the definition of *public health*: "a society's efforts to protect, promote and restore health."⁶

The starting point for effecting this mode of integration is to refocus the profession on prevention and health promotion. This is in keeping with current trends in the wider world of health care. The national blueprint for improving the health of Americans, Healthy People 2010, places tremendous weight on disease prevention and health promotion. This initiative lays out 28 focus areas and 467 measurable objectives to guide federal, state, and local agencies; private organizations and businesses; health care providers; and private citizens to improve the health of the nation.⁷ Health care providers are integrally involved in meeting more than 60% of these 467 objectives,⁸ and chiropractors have not only an opportunity but a responsibility to participate in this effort.

The chiropractic profession can use Healthy People 2010 as a ready-made roadmap for integration into the health care mainstream. Whether chiropractors consider themselves spine specialists, primary care physicians, or wellness practitioners, they must still be aware of and contribute to the national priorities to prevent disease and promote health. These priorities are conducive to a wellness practice model. However, if chiropractic adopts a wellness model, it is essential that it be consistent with mainstream concepts and practice of health promotion and prevention.^{9,10} Such a model has been proposed to include manual procedures to promote optimal function, screening for risk factors, and health behavior counseling.⁹

Chiropractors, chiropractic colleges, and chiropractic organizations need to be more familiar with the Healthy People 2010 objectives to identify the activities congruent with their expertise and interests. This will lead naturally to their integration into public health activities. These activities may occur on a national basis, such as through the American Public Health Association (APHA) or through collaborating with actions of the National Arthritis Foundation. Implementation may occur locally, through state or county health departments. These health departments are under Federal mandates to work toward Healthy People objectives, such as increasing physical activity or decreasing disability related to low back pain; both of which are highly relevant to chiropractic practice. Rather than functioning as the Lone Ranger of health care, it is time for the chiropractic profession to join other providers and agencies to contribute to national

health objectives and demonstrate their commitment to health by integrating with the public health mainstream.¹¹

Chiropractic and Public Health Opportunities

Michael Haneline.

Public health has been defined as “The organized efforts on the part of society to reduce disease and premature death, and the disability and discomfort produced by disease and other factors, such as injury or environmental hazards.”¹² It emphasizes the health of a population as a whole, in contrast with typical patient care that focuses on the treatment of individuals. Nonetheless, it is very important to most practicing doctors of chiropractic to integrate public health principles as an essential part of patient care.

Public health interventions, such as advising patients about risk factor avoidance as well as how they can integrate protective factors into their lifestyles, can significantly enhance the healing process and prevent future illness. Examples include ergonomic advice about proper keyboard usage to patients with neck and upper extremity complaints¹³ and advising chiropractors about the proper workstation table height to reduce loads on the lower back.¹⁴ Efforts from the chiropractic profession to educate patients about how they can reduce risk and adopt healthy lifestyles have a collective effect of improving the health of the population that is being served.

The main influence chiropractors have on public health is undoubtedly through one-on-one encounters with their patients, but in recent years, quite a few members of the profession have become involved in public health at the community level. There are an increasing number of opportunities for chiropractors to participate in various health-related activities at the local, state, national, and even international levels through membership and/or employment in various health agencies and organizations. A direct connection with the public health profession is attractive to a growing number of chiropractors because the primary purpose of these groups is to help communities achieve their health goals. As a result, the potential to positively influence the health of large numbers of people is greater through these avenues. In fact, the enormous health gains that have occurred in modern society have mostly been attributed to public health measures, whereas patient care has had much less of an impact.¹⁵

Public health is an expansive field that encompasses subjects that range from infant health to healthy aging and infectious diseases to environmental health. Although not a complete list, examples of public health topics that should be of particular interest to chiropractors include injury prevention, occupational health, prevention of chronic diseases, and physical fitness. The chiropractic profession has made significant progress integrating public health matters into college curricula as well as mainstream chiropractic practice;

an amalgamation that has been of great benefit to the profession as well as the patients it serves.

Chiropractors and Public Health: It Is What We Do

Lisa Zaynab Killinger.

Although traditionally, chiropractic colleges have taught public health with a focus on microbes and infectious diseases, public health is so much more than these subjects. Public health is made up of the efforts of individuals and society to protect, promote, and restore health. This is what chiropractors do every day.

For example, when we perform a chiropractic adjustment, we are helping to relieve the public health burden of back pain on society. When we discuss the importance of physical activity with our patients, we are participating in meeting the nation’s public health goals.¹⁶ When we speak to patients or corporations about how to reduce back injuries at work, we are making a major public health contribution. When we encourage patients to eat a healthy diet or to stop smoking, this also contributes to public health. Chiropractors may do more public health education than almost any other type of health professional on a day-to-day basis. According to the 2005 Job Analysis of Chiropractic, 98% of chiropractors talk to patients about physical activity and nutrition, and 96% offer stress reduction recommendations.¹⁷ Multiply these efforts by the tens of millions of chiropractic patient encounters each year and it becomes clear that chiropractic and public health go hand in hand. It is important that chiropractors and other health professionals truly understand just how these 2 worlds are so intimately intertwined.

Chiropractic Alignment with Public Health Principles

Gary Globe.

“If a man will begin with certainties, he shall end in doubts; but if he will be content to begin with doubts he shall end in certainties.” -Sir Francis Bacon

DD Palmer’s pioneering work in conservative clinical methods focused on the spine as the gateway to helping patients with a wide variety of conditions. More than 100 years later, we find that evidence reviews, based on research produced over the past few decades, continue to support the use of manipulation but primarily in musculoskeletal conditions.^{18,19} In only a few areas is there nascent evidence supporting manipulation for nonmusculoskeletal conditions.^{20,21} It is hoped that future studies will illuminate additional nonmusculoskeletal benefits of adjustment, manipulation, and other manual methods in carefully selected patient populations.

However, if we look within the chiropractor’s scope of practice for those approaches most likely to yield the greatest good for the largest number of patients, it is clear that evidence-based preventive methods, available to doctors of all disciplines

but applied far too inconsistently, are by far the most critical element. One can reasonably speculate that the example of Palmer's continued search for improved understanding and effectiveness in the conservative care of patients might lead his successors to embrace such a change in direction.

Just as the theories of other great scientists of the 20th century were ultimately updated by an ever-increasing scientific knowledge base, our present understanding of health, as conceptualized by sources such as the WHO, should now inform, update, and guide a large aspect of our professional focus in this 21st century.² Such efforts as Healthy People 2000 and 2010 have inspired many and provided roadmaps as to how our profession can better contribute, in a myriad of ways, to improving the nation's health.¹⁶

Within our own profession, prescient leadership from both the academic and research community has enabled the profession to navigate through what were once hostile waters in achieving a mutually respectful association between the chiropractic profession and the APHA, ultimately leading to section status and the opportunity for increased respect and understanding of the chiropractic profession within the broader public health community.²²⁻²⁴ Furthermore, over the past 2 decades, many of these same leaders, and those they have mentored and inspired, have laid a solid foundation by updating and implementing the public health curriculum in chiropractic academic institutions. This, in turn, has led to an unmistakable increase in health promotion/disease prevention consciousness, which has formed the basis of new competency requirements and educational standards. These changes open the door to a world of opportunities for both the profession and its patients to benefit from the life-transforming impact that health-promoting/disease-preventing messages and advice can bring. However, as one may likely surmise in reading through the pages of this journal's special issue, much more work awaits us in both the academic and professional realms. This must include greater support for prevention in the form of active membership and participation in APHA throughout the profession.

Just as DD Palmer sought throughout his life to improve his theories and clinical methods, we too must focus on improving ours. This includes providing advice on health promotion and disease prevention in the form of orthodox preventive screenings and behavioral guidance, as now taught in our academic institutions.

In industrialized nations, the tremendous scourge of infectious disease has been largely contained through advancements in health sciences research and its application in public health policy. However, at the same time, chronic diseases have moved to the forefront in terms of human and financial costs. Over the past century, many within the chiropractic profession have operated under the banner of wellness, although in too many cases this was focused through the narrow lens of a static model of subluxation

dogma and consequently a limited conception of what the chiropractic profession could ultimately become.

The profession must stand firmly in opposition to unprincipled practice management models that use "wellness" as a guise and whose chief motivation is economic gain. Such unethical practices are often marketed hand in hand with recommendations for unlimited numbers of visits for the correction of chiropractic subluxations. This approach, particularly prevalent in some cash practices, can lead to grotesque levels of overuse far in excess of reasonable, evidence-informed levels of care.^{25,26} Practitioners who cite BJ Palmer as a respected source of inspiration would do well to remember that, in the tradition of "find it, fix it and leave it alone," BJ was known to admonish other chiropractors for treating patients longer than 2 weeks.²⁵

Continued breaches in the perception of our profession's ethics will further erode our public trust, which was hard earned through the honest and ethical practices of many chiropractors. What will public policy-makers think and do when they observe, once again, the soap opera-like pathos of our profession's unwillingness to stand up to the obvious abuses committed by our own in the name of chiropractic?

We must join the league of professions accessing and offering opportunities for true prevention and health promotion. To obtain any measure of broadly acknowledged cultural authority, the chiropractic profession's offer of wellness must, once and for all, move beyond the image and practice of technicians marketing an unendingly performed singular clinical procedure, to one whose practitioners are primarily engaged in holistic and evidence-based treatment of neuromusculoskeletal conditions, while integrating a focus on wellness care as exemplified and practiced by the public health community.

As consumers, health care professionals, and policy makers in the public and private sectors focus ever more intently on the costs, outcomes, and financial burdens of health care placed on individuals and society, there is increasing focus on achieving and maintaining wellness rather than solely treating disease. The goals of chiropractic, particularly DD Palmer's conservative approach to improving health and fundamental emphasis on the importance of the body's ability to heal itself, can now more than ever align with the goals of public health and other health care professionals. It is our responsibility to make it so.

Chiropractors in Military Treatment Facilities: Public Health Opportunities

Bart N. Green.

When one first thinks of the military environment, thoughts of tropical medicine, posttraumatic stress syndrome, and combat injuries often are the first to come to mind; and the relevance of chiropractic to public health in the military environment might be questioned. However, there are many opportunities for doctors of chiropractic in military

treatment facilities to make a difference in the health of the military population. Musculoskeletal disorders, particularly back and neck pain, are an enormous burden on the American health care system²⁷; and military members are no exception to this rule. More than 80% of Operation Enduring Freedom/Operation Iraqi Freedom veterans tracked in one study had diagnoses related to musculoskeletal and connective tissue problems.²⁸

The many long days lifting ordnance onto airplanes, bending over fixing troop transport vehicles, working at cramped computer spaces on ships, and other repetitive stressors take their toll on our troops. In a recent epidemiologic study of service members treated for musculoskeletal problems during Operation Iraqi Freedom, most members experienced spinal pain often associated with regular job duties and not combat operations.²⁹ By working with community resources, chiropractors can become involved in health promotion programs designed to decrease the morbidity associated with some of these problems in addition to providing secondary prevention during clinical care. For example, one could provide training in safe lifting techniques to a unit that has jobs requiring a great deal of lifting or education to a squadron of pilots about how to improve spinal flexibility and muscle endurance in an effort to reduce the prevalence of back or neck pain in the squadron. On-base health fairs that are designed to promote active healthy lifestyles are another opportunity for chiropractors to get out into the community and provide screening, education, and health promotion.

One growing subpopulation of our military is composed of those who have lost limbs, had other serious trauma, or polytrauma. Given that many of these members are young and expected to live for several more decades, experiencing chronic neuromusculoskeletal pain is a very real likelihood.³⁰ In addition to participating as health care providers in amputees' rehabilitation processes, chiropractors can collaborate with other departments of their military treatment facility, such as physical therapy, primary care, comprehensive care units, and orthopedics to develop creative primary prevention strategies to reduce the incidence of new neuromusculoskeletal problems, such as back pain, as these members become accustomed to prostheses, wheelchairs, and other lifestyle changes.

Perhaps the most important opportunity for doctors of chiropractic interested in public health in these integrated health care delivery systems is that of publishing epidemiologic studies that report whether or not chiropractic care is associated with improved troop readiness, decreased costs, reduced disability, or other meaningful outcomes. There is a great need for these types of studies because no such data have been published to date. Until we investigate these relationships, we will not be able to state with any degree of confidence what benefit the inclusion of chiropractic care in military treatment facilities has provided to active duty service members. Thus, there are many public health

research opportunities for chiropractic care in military treatment facilities.

Chiropractic Care in the Veterans Health Administration

Anthony J. Lisi.

Improving the health of a population is limited by one's reach. For various reasons, many individuals remain outside of a clinician's—or a profession's—sphere of influence. The reach of the chiropractic profession was extended somewhat in late 2004 when the first Veterans Health Administration (VHA) chiropractic clinics were established. Thus, our nation's veterans, a population long purported to be in need of access to chiropractic care within VHA, began to be served.

Chiropractors are now part of the largest integrated health care system in the United States. Operating some 150 medical centers, 850 outpatient clinics and hundreds of other facilities, VHA provides care to 5.2 million individual patients per year. In 2005, approximately 4000 veterans received 19 000 chiropractic visits in VHA facilities; projections for 2008 are more than 13 000 veterans and 70 000 visits. With clinics currently in 32 VA facilities, the contribution of the nascent VHA chiropractic service in providing high-quality, safe, cost-effective care for veterans will likely continue to grow.

Yet, this increased access is only one way that the profession's reach has been extended. The inclusion of chiropractors in the VHA means more than DCs simply being able to treat veterans. In addition to providing patient care, chiropractors are now filling administrative roles, building research capacity, educating clinical trainees, and contributing to public health initiatives.

The Office of Public Health and Environmental Hazards is the national leader for VHA public health initiatives.³¹ VHA's Public Health Strategic Healthcare Group coordinates patient care activities, clinician and patient education, prevention activities, and research directed at continuous improvement of medical and preventive services and delivery of care to veterans.³² The Center for Quality Management in Public Health fosters innovation and improvement in clinical care through quality management techniques and clinical information systems. The Office of Public Health Surveillance and Research oversees programs associated with influenza and hospital-associated infection, surveillance, and public health research. Conditions including influenza, hepatitis C, HIV/AIDS, norovirus, tuberculosis, smoking, and tobacco use are targeted through various programs.³¹ Computerized clinical reminders in the VHA's electronic medical record assist this process.³³

VHA chiropractic physicians are able to participate in systematic health promotion and preventive services efforts by appropriate recognition, triage, consultation, and intervention as indicated. A chiropractor may identify a patient who smokes, discuss strategies to quit, and consult a

cessation clinic as needed. Some chiropractors are collaborating with programs to encourage physical activity and manage obesity. Others may be part of a pain management approach that helps keep an AIDS patient compliant with antiretroviral therapy. These are not the first instances of chiropractors providing such services; however, being part of a major integrated health care system facilitates the contributions of doctors of chiropractic to public health efforts.

Through such efforts, as well as clinical care, education, and research, the VHA chiropractic service is part of the system meeting the health care needs of America's veterans. Important public health opportunities exist for understanding and maximizing our contribution to our patient population.

Chiropractic and Immunization

Stephen Injeyan.

Since the first discovery of vaccines at the turn of the 20th century, many have been developed. They have been the subject of clinical trials, mass immunization programs, and their effectiveness and safety have been checked repeatedly in the light of bioethical and financial considerations.³⁴⁻³⁶ Throughout these events, the immunologic and epidemiologic principles underpinning immunization programs have survived. Vaccination continues to be a key strategy in the control of communicable diseases for the individual, but more important, the community. Some chiropractors still hold views that are opposed to immunization.^{37,38} Rightly or wrongly, the chiropractic profession in general has gained a reputation of being antivaccinationist.³⁹ Reversal of this trend is needed to enhance the role that chiropractors may play in the public health arena.

In the United States, the chiropractic profession has gained a presence within the APHA. This group has demonstrated initiative by contributing in various ways, including development of a resource site that contains responsible and informed content about immunization.⁴⁰ Chiropractic organizations worldwide could emulate the example of their US counterparts and explore opportunities for public health involvement in this area. The mission of the Chiropractic Health Care section of the APHA is to "enhance public health through the application of chiropractic knowledge to the community by conservative care, disease prevention and health promotion." An integral component of disease prevention and health promotion is immunization. In light of this, the Chiropractic Health Care section of the APHA offers the profession an immunization information website with links to many high-quality information sources. This site compiles annotated bibliographies of citations from the scientific literature, as well as other authoritative sources on this topic (<http://www.apha-chc.org/vaccinfo/default.htm>). Interestingly, a 1993 survey of US chiropractors demonstrated that only 14% of

respondents supported APHA's immunization policy.³⁷ American Public Health Association's policy on immunization has remained essentially unaltered.⁴¹ However, it is not known if the level of chiropractic support for this policy has changed since that time.

Significant proportions of US chiropractors consider themselves primary care practitioners and perceive themselves relatively well trained in clinical prevention.⁴² However, perception of chiropractors with respect to preparedness to counsel on immunization is not so straightforward. Those who perceive themselves prepared to counsel feel that both the benefits and drawbacks of immunization should be presented. This implies preference for providing enough information to encourage the patients' freedom of choice. However, freedom of choice in immunization may be associated with antivaccination behaviors,³⁸ which may be counter to public health goals and practices.

It is paradoxical that the chiropractic profession has made inroads into organizations such as the APHA and the WHO,⁴³ and yet no official chiropractic organization has provided a strong, positive statement on immunization. The leading chiropractic organizations should make supportive statements regarding immunization programs and at the same time encouraging their members to be scientifically critical. It is hoped that such a stance will discourage irresponsible behaviors on the part of chiropractors espousing antivaccinationist views and will gradually foster a paradigm shift toward contributing to public health programs from an all-inclusive global perspective.

Chiropractic Serving in Inner City and Vulnerable Communities

Deborah Kopansky-Giles.

We know from the WHO that poverty increases the risk of ill health and vulnerability in the poor and that it impedes the effective delivery of health services. This leads to inequitable access and lack of use of health services.⁴⁴ These inequities greatly affect the world's poorest communities and most vulnerable people. According to the WHO, there is growing evidence that health-related risk events may be the first step toward permanent poverty. Social inequities result from inequalities in the conditions in which people around the world live and work. They become determinants of health, impacting health status and our general well-being. Poor health results in incapacity to work productively, care for family and one's self, in addition to numerous other trickle-down effects on the individual and their community.

The chiropractic profession is distributed globally and is in a position to impact the negative health effects of poverty and social vulnerability. We have the ability to develop creative and innovative health delivery opportunities, specifically aimed at poor and marginalized populations.⁴⁵ There are local attempts in different regions, where chiropractors have been providing services to impoverished communities. Unfortunately, up to this point in time, these

efforts have had little support from our profession, both economically and in terms of human resources.

There is a wealth of information describing the health profiles of inner city and poor populations. In 2001, Wasylenki described these complex populations and the association of poverty with poor health outcomes.⁴⁶ These subpopulations include homeless individuals; people with HIV infection; people with severe and persistent mental illnesses; women at risk due to social isolation, poverty, or the stresses of single parenthood; people with addictions; and inner-city aboriginal communities. In general, these populations have less access to health services, have more complex health problems, and, consequently, have higher admissions to hospitals, economically burdening health systems.

It is important to know that transference of inner-city health problems does occur to the broader community. For example, HIV, tuberculosis, and other communicable diseases transition outward over time thereby increasing the burden of disease. It is imperative, therefore, that a focus for health care reform, including chiropractic, needs to be the prioritization of access to health care by poor, diverse, and marginalized communities.

Chiropractors have the responsibility of assisting in minimizing the effects of poverty and marginalization on people's health, to become engaged with their local communities in ensuring equitable access to health services, and to help to reduce the effects of these negative social and societal determinants of health. At the practitioner level, providing chiropractic care in a nonjudgmental and safe environment with sensitivity and respect are extremely important to these populations that have specific and very complex health concerns.

At the profession level, engagement of chiropractic organizations in collaborating with others around equitable access to health care for marginalized communities is essential. In this way, our profession can greatly contribute to improving the health and well-being of our inner city and vulnerable communities worldwide.

Chiropractic, Geriatrics, and Public Health

Paul E. Dougherty.

It is projected that between 2010 and 2030, the over 65-year-old age group will increase over 70% representing approximately 20% of the United States population.⁴⁷ Chiropractors may play an important role in meeting the emerging public health needs for this population. Public health is the approach to health care that is concerned with the health of populations, including health promotion and disease prevention services. Chiropractic is the most commonly used non-allopathic health care service among older adults with reported use between 11% and 18%.^{48,49} This presents a significant opportunity for chiropractors to begin to address the public health needs of a very large group of individuals. Two specific areas that chiropractic may contribute to the public

health needs of older adults are the areas of fall prevention and back pain treatment.

Many factors lead to falls in older adults, including balance, gait, cognition, vision, and strength issues, use of 4 or more prescription medications, postural hypotension, depressive symptoms, and painful arthritis.⁵⁰ A recent study by Hawk et al⁵¹ has begun to investigate the role of chiropractors in addressing fall prevention. One practical method that could be used by chiropractors would be to recommend exercise programs that have shown some evidence to prevent falls in older adults, such as tai chi.⁵² Before initiating these preventative strategies, one should be familiar with the current evidence on these topics. The Canadian Chiropractic Association produces one of the best resources for information on fall prevention, this program is entitled "Best Foot Forward."⁵³

Back pain costs have increased 65% in the last 10 years, making it a significant public health issue.²⁷ Back pain is the third most common reason for older adults to visit their physician.⁵⁴ Unmanaged lower back pain may result in depression, functional disability, compromised quality of life, and increased analgesic medication usage.⁵⁴ In 1998, the American Geriatric Society listed chiropractic management among the nonpharmacologic strategies for treating chronic pain symptoms in older adults.⁵⁵ Recent published guidelines recommended spinal manipulation for chronic lower back and neck pain.^{56,57} A recent practice based study suggested some evidence for the efficacy of chiropractic management for older adults.⁵⁸ There is a need however for more research specifically targeted at older adults, not just for chiropractic but for all treatments of back pain. The chiropractic profession has a great opportunity to be the leader in research for this important public health problem.

As the chiropractic profession matures, it will become less concerned with protecting itself and more concerned with protecting the public. The response of the chiropractic profession to the aging society will help to define the future of chiropractic. We have an obligation to develop better prevention and treatment strategies for older adults. It is my hope that the chiropractic profession will rise to this opportunity and to a greater level of respect in the health care system.

Chiropractic and Interdisciplinary Relationships in Public Health

Monica Smith.

In the early part of the 20th century, the prevalence of infectious diseases was the most important health problem of the time. This early period was characterized by a closely connected and supportive relationship between the clinical practice of medicine and public health in implementing key public health strategies of the day such as quarantine, sanitary reform, safe water systems, pasteurization, and personal hygiene. Over time, the major causes of death and disability increasingly shifted from communicable diseases to chronic diseases. The changes in the social health burden and health

policy priorities, coupled with the technological evolution of biomedicine, increasingly separated the function and culture of clinical medicine from that of public health.

Today, we find ourselves in what has been termed a *collaborative imperative*⁵⁹ to reconcile the cultural and practical divide between clinical practice and public health, and to advance successful models for synergistic collaboration. These will accomplish, among other goals, improving health care by better coordinating services, improving the quality and cost-effectiveness of care, strengthening health promotion, and improving access to care by establishing frameworks to provide care for the un- and underinsured.⁵⁹

Current research and education continually seek to improve the care-coordination skill set of the typical practicing chiropractor,^{60,61} but much more exciting is the frontier-expanding work in integrative and collaborative care that emphasize nonpharmaceutical and nonsurgical approaches to primary care, through innovative models of care that contain costs and yield high quality and patient satisfaction.²⁶ The chiropractic profession advances important public health initiatives by contributing to improved care coordination, improving the quality and cost-effectiveness of chiropractic care and interdisciplinary care, and strengthening provision of health promotion and preventive care.

The contribution of chiropractic college outreach clinics in caring for underserved or impoverished populations is recognized, and relatively well documented, as an integral part of the institutional and professional missions of chiropractic educational institutions.⁶² In addition to the safety-net care of free clinics, voluntary referral networks among clinicians in private practice also build on a long-standing tradition of providing care to the un- and underinsured.⁵⁹ The charge remains, then, to better document and understand the “safety-net function” of DCs in private practice serving as a central source of accessible care for un- or underinsured populations,⁶³ an increasingly important priority in current health policy and health system reform.^{64,65}

Chiropractic's Role in Interprofessional Primary Care Reform

Silvano A. Mior.

Health care delivery at the turn of the last century focused on diagnosing a problem and providing the appropriate elixir, a rather reductionistic biological approach to the delivery of care. Today, as a consequence of our deeper understanding of human structure and function, the complex biopsychosocial model of health and disease requires the integration of knowledge from different disciplines and often the involvement of a multidisciplinary health care team.⁶⁶ Now add the growing resource constraints and financial pressures to maintain adequate funding,⁶⁷ and the importance of a health care system disposed to efficiently coordinate care delivery becomes fundamental.

Canadian commissioned government reports suggest that the health care system needs to be transformed into one in

which system participants involved in the spectrum of health services work collaboratively to deliver seamless comprehensive care.⁶⁸ A suggestion no doubt heard reverberating worldwide. The challenge however is that the current health care system is fragmented and composed of health care providers who in the main have not experienced collaborative or integrative care.⁶⁹

Reforming the delivery of primary care has many potential advantages including a focus on disease prevention and health promotion, improving access, and having health care providers working in multidisciplinary teams. The importance of health care professionals working collaboratively has been identified as a key strategy of primary care reform⁷⁰ and an answer to many complex and innovative health care solutions.⁷¹

Interprofessional collaboration has been defined as a “process by which individuals from different professions structure a collective action in order to coordinate the services they render to individual clients or groups.”⁷² There have been numerous reviews summarizing the key and essential concepts, barriers, and facilitators related to interprofessional collaboration, such as sharing of responsibilities and knowledge, communication strategies, nature of partnerships, the role of interdependency, trust and respect among professionals, the structure of practice, autonomy, and power. Interprofessional collaboration is seen as a process that is dynamic, interactive, and ever evolving.⁷⁰ And it could potentially optimize intellectual resources, maximize the coordination of care, and recognize contributions of various professions.⁶⁹

Chiropractors are one of the most frequently accessed, nonphysician provider groups for neuromusculoskeletal conditions. However, their inclusion into multidisciplinary settings has met with varied success both from the perspective of organizational structure and process of collaboration. The barriers to inclusion are not unlike those for other professions but enhanced because of philosophical differences, cultural prejudice, and the lack of knowledge, which exists among both chiropractors and other health care providers. As a consequence, care is fragmented, and interprofessional communication and understanding is limited.⁶⁰

Now, more than at any other time in its history, chiropractic is positioned to increase its role through its integration into the health care delivery system. Chiropractors are being provided with increasing opportunities to practice in multidisciplinary clinics and hospitals around the world.⁷³ Integrating into these environments provides opportunity to contribute to improving cost effectiveness and efficiencies in health services delivery by eliminating the “silo mentality,” reducing unnecessary duplication of services, creating strategies to increase accessibility, ensuring continuity of care, and sustaining the health of the population. Our experience suggests chiropractors are poised, and able, to make such a contribution in various

clinical settings. To do so, it is important to be a part of the health care delivery system.

Chiropractic Involvement on a Global Scale: the World Federation of Chiropractic Public Health Committee

Rand Baird and Deborah Kopansky-Giles.

Although we have many chiropractors involved in graduate studies and research in public health and epidemiology, our profession may appear to have minimally endorsed the concept of the strong role that we can play in the area of public health. We know very well that physical, social, and economical factors can have an impact on a person's health. We also know that chiropractic care can significantly improve a person's quality of life.

As a profession that promotes health, one of our strongest attributes is our commitment to patient education. We do this very well when explaining the etiology, diagnosis, and treatment recommendations. However, chiropractors have the opportunity to share information about public health and get involved actively in general public health initiatives.

One example of this is the efforts to reduce the use of tobacco by the WHO that has reaffirmed the Tobacco-Free Initiative as their top priority and tobacco use as the most important, preventable health and social issue, one with a considerable cost to society.⁷⁴ They have called for global action on tobacco use cessation, and the World Federation of Chiropractic (WFC) has been actively engaged for several years.

The WFC's Public Health Committee has been globally promoting tobacco use cessation. The campaign—Chiropractors Against Tobacco—has created posters and educational materials for use by chiropractors (available from the WFC website) as well as ads in chiropractic-related media.⁷⁵ The uptake on these materials has been minimal, yet we know that chiropractors in general promote smoking cessation. Our committee's next priority will be to support the WHO's efforts against obesity.

Chiropractors, by the very nature of their health promotional practices, are the ideal conduit to promote healthy lifestyles and support major public health initiatives. Our involvement in these areas will serve to improve the health of our patients, the community, and the world in which we live. We will also be seen on the global stage as noteworthy contributors to public health as we should rightly be seen.

We encourage all chiropractors, chiropractic associations, and academic institutions to incorporate public health education in their practices, curricula, and policies and to become involved in sharing this information with the communities in which they practice and live. In this way, the chiropractic profession can continue to improve the quality of life for people around the world.

DISCUSSION

Chiropractic began in the United States as a conservative method of health care in 1895.³ With chiropractic being a profession that is more than 110 years old, one may ask why it appears that there have not been more concentrated efforts to be more overtly involved in public health. There are several possible explanations including sociological and political barriers.

One barrier may have been an earlier APHA policy that explicitly excluded chiropractors from participating in public health programs. The 1969 APHA resolution stated:

"3. That state legislatures and health agencies not include chiropractors and naturopaths under state health programs. 4. That states reevaluate their existing licensure programs for chiropractors and naturopaths to determine whether such licenses should be further restricted or abolished, and that existing restrictions be more rigorously policed. 5. That professional and consumer groups undertake appropriate consumer education on the hazards of unscientific health care, including chiropractic and naturopathy."⁷⁶

This APHA policy encouraged legislation to prevent chiropractors from participating in health programs and promoted the concept that chiropractic was a health hazard.⁷⁶ These may have been some of the contributing factors that prevented chiropractors from participating in public health movements and organizations such as the APHA. Interestingly, the 1969 resolution directed against chiropractic was printed among other resolutions including biological warfare and lead poisoning of children.⁷⁶ Thus, it would seem that the authors of this resolution perceived that chiropractic was a serious threat to the health of the public. Whether this was due to lack of accurate information, political agendas, or other reasons is not certain. What we can say is that much has changed since the late 1960s about APHA's support of interdisciplinary participation and focus on collaboration for the common good of our patients and communities.

In 1983, the APHA changed its antichiropractic policy.^{77,78} This enabled chiropractors who had an interest in public health to pursue a stronger relationship with the APHA and eventually develop a section of the APHA known as the Chiropractic Health Care section.⁷⁷ Thus, it was only 25 years ago that chiropractic was first welcomed to participate in the APHA.⁷⁷

Another possible factor contributing to the lack of involvement with public health may have been the long-standing American Medical Association (AMA) policies against chiropractic.⁷⁹⁻⁸¹ These policies stated that it would be unethical for medical doctors to collaborate with chiropractors. What is known as the "consultation clause" prevented medical doctors from participating in certain activities such as accepting referrals from chiropractors, providing diagnostic or radiology services for chiropractors, or practicing with chiropractors.⁸⁰ It would be difficult, if not impossible, for collaboration to occur if one group of health care professionals is not allowed to interact with another.⁷⁹

For example, if a public health work group were to include a chiropractor, any medical doctor in the group would be obliged under the AMA policy of the time to withdraw from participation because of the presence of the chiropractor. Therefore, chiropractors were discouraged from participating in such activities.

In addition to the AMA policy, the AMA created the Committee on Quackery “to contain and eliminate chiropractic.”^{79,80} Through the Committee on Quackery, great efforts were made to prevent the acceptance and participation of chiropractic in mainstream health care. A policy passed by the AMA House of Delegates in 1966 stated:

“It is the position of the medical profession that chiropractic is an unscientific cult whose practitioners lack the necessary training and background to diagnose and treat human disease. Chiropractic constitutes a hazard to rational health care in the United States because of its substandard and unscientific education of its practitioners and their rigid adherence to an irrational, unscientific approach to disease causation.”⁸⁰

It has been theorized that these statements and activities were developed by the AMA to restrict economic competition from chiropractors, prevent chiropractors from obtaining hospital privileges, and prevent them from obtaining board of health and/or military positions in order to eventually eliminate the chiropractic profession.⁸⁰ These policies and activities created an unwelcome environment for chiropractors to participate in public health activities.

Eventually, in 1974, the Committee on Quackery was disbanded. In 1980, the AMA adopted a revision of their policies that enabled medical doctors to associate and consult with chiropractors.⁸⁰ A landmark suit brought against the AMA, finally concluding in 1987, resulted in a decision that the AMA cease and desist its violation of antitrust laws.⁷⁹ Now in a less restrictive environment, chiropractors would be able to participate in more of the mainstream health care activities such as those associated with public health. With the barriers to participation reduced, those who were dedicated to public health had a tremendous amount of work still ahead of them. So although the public health movement has been around for a long time, chiropractic has only been welcomed at the table for a short while.

Another factor contributing to a lack of early participation may have been issues involving the development of chiropractic education and scientific inquiry in the first half of the century. During the early growth phase of the profession, research and science were valued. However, the infrastructure to support these activities was not in place.⁸² Because public health is founded in science, it is expected that participants are able to communicate and behave in a scientifically grounded manner. Without an established research infrastructure and little or no training in scientific methods, chiropractors in the first decades of the profession’s existence would have been poorly prepared to participate. Although earlier attempts were made to conduct research and develop scientific journals,⁸² it was not until

1982 that the first journal with chiropractic content was accepted into MEDLINE and only relatively recently that a scientific research community has been established. Therefore, it has only been a few decades that chiropractic studies have been generally available to other scientists and that a focused scientific effort has evolved.⁴

Because public health requires outreach to all participants (eg, health care providers, policy makers, the public, etc) perception is essential. Unfortunately, the perception of chiropractic is often inaccurate, being based on antiquated or incorrect information. Some think that modern chiropractors only “crack” backs, have a minimal grounding in science, and purport that a “pinched” nerve causes all disease from hangnails to brain tumors. These concepts may have been historically present in the early phases of the development of the profession; however, times have changed. Using historical information to describe the chiropractic profession’s current practices would be similar to stating that medical doctors use bleeding and mercurial treatments to treat all disease, which were methods of choice for allopaths in the early development of the medical profession in the United States. Although there may be a few chiropractors who currently hold a narrow definition of what chiropractic is and what chiropractors are capable of doing, these are the minority.

Chiropractors are trained to do much more than manipulate or, in chiropractic vernacular, “adjust” the spine. Accredited programs in the United States that lead to a doctor of chiropractic degree must demonstrate compliance with the Council on Chiropractic Education accreditation standards (www.cce-usa.org); the Council on Chiropractic Education is recognized by the US Office of Education. Chiropractic programs require 4 or more years of course work and clinical training to complete. And, before a doctor may become licensed, he/she must pass a series of standardized competency examinations (National Board of Chiropractic Examiners, www.nbce.org). Chiropractic education includes basic sciences (eg, anatomy, biochemistry, physiology, microbiology, pathology, etc), clinical sciences (eg, physical examination, history taking, diagnosis, diagnostic imaging, nutrition, rehabilitation, managing extremity conditions, safety practices, public health, etc), and clinical training. Chiropractic programs typically focus on neuromusculoskeletal health; however, many other common health conditions, serious/acute conditions, wellness, and prevention are also included in training. As a conservative health care profession (as stated earlier, chiropractors do not perform surgery or dispense or prescribe pharmaceuticals), chiropractic’s holistic yet evidence-based approach to health care may offer additional options to patients and health programs seeking improved health. Chiropractic does not offer magic bullets; however, this profession may offer valuable contributions to the public health movement. The onus is on the profession to better communicate about practitioner training and what chiropractic has to offer the public.

Better communication includes the publication of scientific studies. Within the past 10 years, the chiropractic profession has contributed to public health efforts through introspection, identifying needs, and primary research. For example, there have been efforts to investigate the impact and contributions of chiropractic preventive services and providing care in needy communities.^{42,46,62,63,83,84} To improve practitioner knowledge and practice behaviors, more rigorous and focused public health curricula in chiropractic educational programs have been developed. To promote public health training in the chiropractic colleges, a model course was developed to provide a common public health curriculum in the chiropractic colleges.⁸⁵ Follow-up evaluations on public health educational programs were published for at least 5 different campuses.^{22,86-89} Topics related to special populations have also become more visible in the chiropractic literature. These include family violence, immunization, and smoking cessation efforts in education.⁹⁰⁻⁹² As with all health care professions, patient safety issues and adverse effects are of concern. Recent scholarly efforts look at these issues related to chiropractic care (eg, cervical artery dissections, radiological guidelines, identifying pathogens on treatment tables).⁹³⁻¹⁰⁰ And finally, there has been an effort to summarize and establish a research agenda so that resources may be better focused on what is needed most, including issues in public health.^{101,102}

CONCLUSION

Chiropractic has done much in a short amount of time. The chiropractic profession no longer has major external barriers that prevent participation in public health activities. Multiple opportunities are available for chiropractic colleges, chiropractic governing bodies, and practitioners to contribute. The question remains: will we enthusiastically embrace participation in public health practices and research or will we passively watch as this opportunity slips away into oblivion?

In its 2005 report, the Institute for Alternative Futures articulated projections for how chiropractic may exist in health care of the future.¹⁰³ This report recommended a greater involvement of chiropractors in public health related activities:

"Public and community health objectives are often not addressed by individual chiropractors (just as they are usually not addressed by MDs and other treatment focused health care providers). We recommend that each DC understand what contribution they can make to public/community health and do this. We recognize that many already are doing this, but most chiropractors are not."¹⁰³

The Institute for Alternative Futures report offers timely advice that all practitioners should consider. If chiropractic is going to make an impact on the health of the world, each one of us must become involved.

As chiropractic care becomes more accepted and integrated within health care delivery systems, the profession

becomes more responsible for public health care issues. The profession can no longer afford to think and act in a separatist fashion. Although the profession may need to maintain a separate and distinct identity, this does not preclude interdisciplinary collaboration to improve health care and to be more involved in the larger public health movement.

Traditionally, chiropractic care has focused on the individual patient or groups of patients; whereas public health challenges us to focus on the health of our local and global communities. As a profession that offers conservative care for neuromusculoskeletal and other health conditions, chiropractic is positioned to provide supportive contributions to wellness and health promotion. However, without a concerted effort in all areas of the profession, gains will not be made and opportunities may be lost. As this summary shows, chiropractic has done much to build its infrastructure in the past 3 decades. Should this trend continue, we will enjoy contributing to a productive and strong future in public health.

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