An Essential Guide to Chiropractic in the United States Military Health System and Veterans Health Administration

Bart N. Green, DC, MSEd, PhD, [a] and Andrew S. Dunn, DC, MS, MEd [b, c]

Abstract

Objective: The purpose of this article is to provide an essential overview of chiropractic services in United States military and veterans' health care systems.

Methods: We reviewed literature, legislation, and policies from 1936 through September 2021 pertaining to chiropractic services in the United States military and veterans' health systems. Using these sources and our combined experience in these systems, we identified fundamental themes in the delivery of chiropractic care in the health care systems of the Department of Defense (providing health care for active duty service members) and the Department of Veterans Affairs (providing health care for veterans) in main topic areas.

Results: We identified 7 main topic areas relevant to the 2 systems: populations served by chiropractors; health care systems; integration; utilization and supply of chiropractic care; vetting of chiropractors; roles and evaluation of chiropractors; and oversight and leadership. Key information about chiropractic care in these systems was synthesized into the main topic areas. Benefits of high-quality within-system chiropractic care to active-duty service members and veterans are presented. The assets that within-system chiropractors bring to the Department of Defense and Department of Veterans Affairs health care systems are discussed for each main topic area.

Conclusion: This article contains an essential overview of chiropractic services in the Department of Defense and the Department of Veterans Affairs. It offers clarity regarding the integration of chiropractic services into these health care systems and includes a 1-page brief of talking points that may help better inform ongoing discussions of chiropractic services in these 2 different but intertwined environments. (J Chiropr Humanit 2021;28;35-48)

Key Indexing Terms: *Chiropractic; Veterans Health Services; Military Health Services; Health Policy*

Introduction

Active-duty service members (ADSMs) and veterans of the United States (US) military are treasured members of the U.S. population. The United States has an obligation to provide high-quality, high-value health care for its current and former troops, because they defend, or have defended, the freedoms valued by U.S. Americans. Thus, the US provides the Military Health System (MHS) and the Veterans Health Administration (VHA) to care for ADSMs and veterans, respectively.[1] With this focus on quality and value, the United States provides a range of health care professionals in MHS and VHA hospitals and clinics.

Doctors of chiropractic (DCs) are 1 of the groups of licensed independent providers within MHS and VHA facilities. To enter chiropractic training, students must complete the equivalent of a minimum of 3 academic years (90 semester hours) of undergraduate study. Some chiropractic training programs require a bachelor's degree and most chiropractors possess a bachelor's degree or higher.[2] Chiropractic-school applicants must have a cumulative grade point average of at least 3.0.[3] Chiropractic students must complete a 4200-hour curriculum (4 or 5 years) to graduate. This requirement is similar to that in other health professions.[4] Four National Board examinations are required as qualifying tests for most states.[5]

The focus of chiropractic care is on the diagnosis and nonpharmacologic, nonsurgical treatment of neuromusculoskeletal (NMSK) disorders.[6,7] Positive treatment outcomes are published for a variety of NMSK problems.[8] Chiropractors provide care using a holistic biopsychosocial model that considers various aspects of the health-disease continuum, such as biomechanics, environmental factors, and psychosocial influences on NMSK problems.[9] DCs are among the most commonly sought-out health care providers for back pain in the United States.[10] Chiropractors

[a] National University of Health Sciences, Lombard, Illinois.
[b] Chiropractic Department, VA Western New York Healthcare System, Buffalo, New York.
[c] Department of Chiropractic Clinical Sciences, New York Chiropractic College, Seneca Falls, New York.
Corresponding author: Bart N. Green, National University of Health Sciences, 1507 E. Valley Parkway 3-486, Escondido, CA 92027.
(e-mail: *bgreen@nuhs.edu*).

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often provide spinal manipulation for patients with neck or back problems. It has been estimated they provide more than 90% of the spinal manipulation performed for the general population in the United States,[11] and they have been identified as providing the most manipulation of all providers in at least 1 study recently conducted in the MHS.[12] DCs are highly proficient in these procedures.

High-quality and high-value care is badly needed for NMSK problems, particularly in the MHS and VHA. Neuromusculoskeletal disorders are the most common problems of ADSMs and veterans, and they contribute substantial morbidity and burden to these members of society.[13] Spine pain, which is an area of concentration for chiropractors, is one of the most common of these NMSK problems among ADSMs and veterans, and often leads to chronic pain.

It has been reported that annually, non−combat-related NMSK injuries render 68 000 ADSMs unfit for deployment, causing 25 million days of limited duty and greater than 2 million health care visits. This comes to an annual cost of $3.7 billion.[14] After transitioning out of the military, veterans continue to have these problems, which are often compounded by significant and severe comorbidities, such as depression; veterans are also more likely to have a drug dependence than nonveterans.[15] As with ADSMs, spine problems are a significant source of morbidity for veterans, with 32.8% of veterans having back pain and 15.9% having neck pain.[16] Comorbidities complicate the management of these NMSK problems.

Neuromusculoskeletal conditions are a substantial burden on the MHS and VHA. They are costly and often require many resources and health care providers for best management. There is no known best treatment for most NMSK disorders. Chiropractors, as licensed independent practitioners within MHS and VHA facilities, provide a drugless, nonsurgical option for care. This conservative, primary-level care can decrease the likelihood of patients requiring secondary- and tertiary-level care, such as spinal injections and surgery.[7] DCs within these systems may help alleviate the burden of NMSK management in primary care and can relieve bottlenecks in NMSK patient-care pathways.

Chiropractors are ideally suited with the knowledge and skills needed to treat NMSK conditions. As stated by Cherkin, "in contrast to most clinicians, chiropractors are specialists in back problems and enjoy seeing patients with [low back pain]." Chiropractors are a ready and able workforce with expertise in spine care, and patients consistently provide high satisfaction ratings with chiropractic care.[17-20]

In summary, chiropractic management of NMSK disorders appears to be a good fit and a valuable service for ADSMs and veterans. Despite this, the extent to which chiropractic has been implemented and integrated within these health care systems, and the current and potential roles of chiropractors, are not well understood by many stakeholders. Part of this may be due to the relatively recent inclusion of chiropractic into the MHS and VHA. Such misunderstandings can lead to miscommunication about the relative need and use of chiropractic services for ADSMs and veterans alike.

A guide to some of the essential information about how chiropractors fit and function in the MHS and VHA may help better inform ongoing discussions of chiropractic services in the Department of Defense and the Department of Veterans Affairs. However, we are unaware of any such publication, and did not find any during our searches. Therefore, the purpose of this article is to provide an essential overview of chiropractic services in US military and veteran health.

Methods

We performed a narrative overview that synthesized the findings from several document types into 1 source. The methods were intended to provide a broad perspective on the topic of chiropractic care in US military and veteran health.

Documents were included if they were about the delivery of chiropractic care in the Department of Defense (DOD) or the Department of Veterans Affairs (VA). We did not include sources about chiropractic care for dependents of ADSMs or veterans.

We performed searches of PubMed from inception through September 2021, using combinations of the terms "chiropractic," "military," "veteran," "Department of Defense," and "Veterans Affairs." Our searches were conducted between March 1, 2021, and October 1, 2021. Thanks to our involvement in military and veterans' health care, we are aware of literature published, and so we sourced papers from our personal libraries and from colleagues who published those papers. For government documents, we searched Google Books and Google for proceedings of Congressional hearings, legislation, and policy, and supplemented this with materials from our own collections.

This review was shaped in part by our combined 30 years of experience with chiropractic care in military and veterans' health. One of us (B.N.G.) practiced for 13 years in the MHS and continues to research this topic. The other (A.S.D.) has practiced in the VHA for 17 years and is also a veteran. We have practiced chiropractic in interprofessional teams in primary care, sports medicine, combat casualty care, aviation medicine, and recruit health. Our work in military and veterans' health has included several research projects and publications, the opening of several chiropractic clinics in these environments, the development of clerkships and a residency program, and the mentoring of other chiropractors, students, residents, and other health care providers in these systems. Therefore, we are familiar with these systems and how chiropractic care is delivered in these environments.

To create this overview, we identified categories and organized them into themes. We focused this review on the

topics that people tend to confuse the most and that would benefit from clarity.

Results

Materials supporting this article were published from 1936 through September 2021. The 7 main topic areas we identified are populations served by chiropractors; health care systems; integration; utilization and supply of chiropractic care; vetting of chiropractors; roles and evaluation of chiropractors; and oversight and leadership. Figure 1 provides an overview of these topics.

Populations Served by Chiropractors

People actively serving in the US military and uniformed services are ADSMs, and their health care is

Fig. 1. *An overview of chiropractic services in the Military Health System and Veterans Health Administration. For a full page image of this figure, please see the Supplemental File.*

provided by the MHS. Currently, there are about 1.4 million members of the Armed Services.[21] ADSMs tend to be young, with 61% of them in the age range of 17 to 29 years.[22] Women represent about 16% of the total force.[23] Racial representation of the force is 53% white non-Hispanic, 18% Black, 19% Hispanic, and 4% Asian, with the remainder identifying as multiracial, Native Hawaiian/Pacific Islander, or American Indian/Alaska Native.[23]

The ADSM population and their families tend to be healthier than the civilian population.[22] Regardless of the force-wide relatively good health, patients in the MHS have some comorbidities that are more prevalent than in the civilian population, such as mental health disorders, traumatic brain injury, posttraumatic stress disorder, amputation, substance abuse disorders, and others.[24-26]

In the MHS, chiropractic care is allowed only for active-duty members.[28,28] Those who use MHS chiropractic services tend to be older (35 years of age) than their counterparts.[27] In 2009, it was estimated that approximately 27% of MHS chiropractic users were women.[27] At that time, women comprised 16% of the total force.[29]

The VA defines a veteran as any person eligible for various VA benefits, such as home loans, burial services, health care, and other services.[30] Veterans may receive care through the VHA. Veterans who satisfy the basic eligibility criteria for receiving health care through the VHA are enrolled and then assigned to priority groups based upon military service history, disability rating, income level, Medicaid qualification, and other VA pension benefits. In this way, veterans with the greatest need are able to most easily gain access to health care services.

The veteran patient population seeking care through the VHA is complex.[31] The majority of veterans are men (91%), with a median age of 65 years. The population is more than 70% white non-Hispanic.[32] Veteran ambulatory patients have been shown to have more than twice the illness burden of non-VA ambulatory patients.[33] It has been reported that veterans with service-connected conditions, especially those with mental illness, depend heavily on the VHA for health care.[34] Veterans also have a high prevalence of posttraumatic stress disorder and chronic pain.[25,35] While the demographic of VHA patients is skewed toward older veterans with many health concerns, it should not be forgotten that many veterans are younger and have served in any number of conflicts over the past 30 years.

Chiropractors in the VHA currently provide care only to veterans.[1] It has been reported that 54% of VHA chiropractic patients have both posttraumatic stress disorder and chronic pain.[25,35] These comorbidities are recognized as factors that may complicate patient management,[34] as has been shown in chiropractic studies on neck and back pain in veterans.[36-41]

Health Care Systems

The United States has an obligation to provide for the health of its ADSMs and veterans. This commitment is reflected in the government's provision of health care through 2 of the world's largest health care systems. The MHS, under the DOD, provides health care to military members; the VHA, within the VA, is the health care system for veterans.[1]

The MHS provides health care in combat theaters (ie, where active combat operations are conducted), in the United States and its territories, at foreign locations, and to foreign and domestic citizens in need of assistance during humanitarian missions.[42] It provides care for approximately 9.6 million military members and families and some veterans at its own military treatment facilities (MTFs) and through nonmilitary facilities in local communities.[42] Of eligible beneficiaries, there are 1.4 million active-duty members and 331 000 reserve military service members.[42] The MHS includes 49 hospitals and more than 465 other clinics.[43] It has a workforce of 134 000 people with an annual operating budget of $50 billion,[44] and operates many medical and other health-professions training programs in its Uniformed Services University of the Health Sciences programs and in training programs within numerous MTFs. The MHS is second only to the VHA in terms of size.

Chiropractors have been part of the MHS for 26 years.[45] There are approximately 64 MTFs out of 400 that offer on-base chiropractic care,[46] and approximately 100 DCs providing care in the MHS. If an ADSM wants to receive chiropractic care at a community chiropractic clinic outside of an MTF, she or he must pay out of pocket.[28]

The VA is the government agency responsible for caring for those who have previously served in the military and their families.[47] The VHA is the largest health care system in the United States, and provides health care in the United States, in its territories, and at foreign locations. Thus, it is 1 health care option for ADSMs after they transition from the DOD to the VA. The VHA has 4 statutory missions: health care delivery for veterans, education and training for health care personnel, health care research, and contingency support during times of national emergency. At the end of 2018, the estimated veteran population was 19.6 million people.[48] Out of these, there are approximately 9 million veterans enrolled in the VHA health care system.[49] The VHA comprises 171 medical centers and 1112 outpatient clinics[49]; it has a workforce of more than 367 200 people[7] and an annual operating budget of more than $72 billion.[50,51] Health-professions education has been a central part of the VHA since its earliest years, and the VHA is the largest health-professions training program in the United States.[52] The Office of Academic Affiliations provides oversight for trainees. During 2019-2020, nearly 118 000 trainees participated in over 7000 training programs offered through partnerships between the VHA and over 1800 academic insitutions.[52]

Chiropractors have been part of the VHA for 17 years.[53] Chiropractic care is provided only to veterans, and it is estimated to be offered at between 128 and 190 VHA facilities.[54,55] The number varies based upon report date, because there has been a relatively rapid expansion of chiropractic care in the VHA. There are estimated to be approximately 300 DCs working within the VHA.[55] When chiropractic care is not offered on-site at a veteran's local facility, the VHA offers chiropractic care at community clinics outside of VHA facilities using an outpatient referral-based Community Care Program. The same process can be used for veterans who live more than a 60-minute drive from a VHA chiropractic facility. Presently, several major VHA medical centers in areas with high populations of veterans do not have a chiropractor on staff.

Integration

The unit of importance in interprofessional care is the community of patients, and the model is focused on improving health outcomes. Chiropractors within the interprofessional care teams of the MHS and VHA can focus on the bigger picture of the health of the population. With complex and chronic diseases requiring multiple specialty providers, there is a great need for team-based community care.

In both MHS and VHA facilities, DCs work as an integral part of the health care team.[56] Because the MHS and VHA are integrated health systems, chiropractors are incorporated into various departments and care programs with other health professionals.[57] Thus, chiropractors in the MHS and VHA participate in interprofessional health care teams focused on achieving coordinated, effective, and value-driven team care.[1,45]

In the MHS and VHA, chiropractors are versatile and work in various departments, depending on the structure required within the facility to provide optimal care to beneficiaries. Chiropractors may be administratively aligned in departments of primary care, pain management, orthopedics, sports medicine, physical medicine and rehabilitation, and others.[56,58] Unique to the MHS, chiropractors may be located in clinics that serve distinct military populations, such as special-forces commands, air stations, submarine stations, infantry training schools, and combat casualty care centers.[1,45]

Unique to the VA is a team-based model called Patient-Aligned Care Teams (PACTs). PACTs seek to address disease management, prevention, wellness, and health promotion.[59] They are led by a health care provider, and the team includes health professionals, veterans, and their caretakers. Chiropractors are included in some PACTs. The goal of PACTs is to work collaboratively to meet the health care needs of patients.[59,60]

Utilization and Supply of Chiropractic Care

The exact numbers for chiropractic utilization in the MHS are uncertain for 2021. Jaditz et al reported 214 917 chiropractic patient encounters from 49 MTFs with a total of fewer than 75 DCs. The median number of visits annually per chiropractor was about 3500.[27] Using the count of 61 MTFs from the Tricare website and our personal knowledge of there being about 100 DCs providing care in the MHS, that equates to a median of approximately 350 000 chiropractic encounters annually at present. The DOD reported a 10% growth in chiropractic services between fiscal years 2007 and 2008.[61]

The use of chiropractic services within VHA facilities is growing at a rate of 17% per year.[55] Nearly 2.5 million chiropractic visits have been provided to approximately 325 000 veterans by chiropractors in VHA facilities since the program opened in 2004.[55] In fiscal year 2015, 86 chiropractors (full- and part-time combined) provided 159 366 visits, about 1800 each.[53] In fiscal year 2021, more than 70 000 patients received chiropractic care from VHA DCs and more than 300 000 visits (in-clinic, telephone, video) were delivered.[55] This level of service occurred despite the ongoing COVID-19 pandemic significantly affecting chiropractic health care delivery on a global level.[62]

Vetting of Chiropractors

On-site chiropractors are vetted (ie, thoroughly assessed) through an extensive process before they become members of a facility's staff. Vetting is a critical part of verifying that a DC meets the basic requirements for employment and has appropriate qualifications before they may provide patient care. Vetting also increases the likelihood of the chiropractor being a good fit for the MTF or VHA facility.

The hiring process involves screening candidates to be sure they meet several requirements. After screening, and before hiring, each chiropractor undergoes a preemployment assessment to ensure that they meet additional requirements in hospital and hospital-associated clinics. This process includes a rigorous national-security investigation, drug tests, and often a physical.

After passing the preemployment process, on-site chiropractors must be credentialed by the MTF or VHA facility where they will work. Credentialing is the process of establishing the chiropractor's qualifications. The credentialing process involves a verification of the chiropractor's education and specialty certificates. Licensing boards are contacted to verify that the chiropractor's license to practice is in good standing. The credentialing department also verifies that there are no past reported issues suggesting that the chiropractor may not maintain competence to treat patients.

Once chiropractors are credentialed, they are granted hospital privileges. Privileges are a list of procedures that a staff member may perform at the facility. This allows chiropractors to perform their essential functions in MHS or VHA facilities. In general, chiropractors are granted

privileges to use the procedures and methods that they learned in their professional and postgraduate training. Chiropractors use standard health-evaluation procedures, biomechanical analysis, diagnostic imaging, and laboratory analysis to establish a diagnosis and formulate a management plan.[6,7,63] In these integrated facilities they use patient education, lifestyle recommendations, joint manipulation and other chiropractic techniques, soft tissue techniques, therapeutic exercise, and physiotherapeutic modalities.[6,7,63] Some chiropractors may also be trained, licensed, and awarded privileges to provide other modalities or therapies, such as acupuncture, biologically based preparations, and mind-body therapies.[7]

Once chiropractors have been credentialed and received their privileges, they are awarded a provisional position with the facility, typically 1 to 2 years. During this time, they are generally assisted by peers to help ensure that they receive adequate integration and inclusion into the interprofessional environment. Peers also assess new chiropractors for quality of documentation. Finally, after passing the provisional period, MHS and VHA chiropractors are awarded privileges for a 2- to 3-year period, depending on the system and facility. At the end of each period, they must reapply for credentials and privileges, which helps to ensure the highest possible quality of chiropractic care.

Roles and Evaluation of Chiropractors

The majority of the focus of MHS chiropractors is on clinical care and related clinical duties.[1] There are few occasions when they are appointed to duties or committees that would take them away from direct patient care and immediately related supportive tasks, such as documenting patient encounters.

From an employment perspective, most MHS chiropractors are employees of external contracting companies that manage the provision of health care services to the military. For most of these chiropractors, the salary that they agree to upon employment remains the same for years, as there is no uniformly defined method for advancement. Thus, few chiropractors in the MHS are hired and promoted using a defined and standardized process of evaluation, primarily because few of them are hired as employees of the MHS.

Doctors of chiropractic in the VHA also have a primary role as clinicians. However, they often serve on committees, ethics review boards, and other service-oriented bodies as part of their duties. Many VHA chiropractors maintain academic affiliations and supervise chiropractic clerkships as part of their regular duties. Some VHA chiropractors engage in research and may have protected time to participate in scholarly activity. Chiropractic residents comprise a growing number of VHA chiropractors. At present, there are 10 locations offering residency programs.

Doctors of chiropractic in VHA are initially appointed to a grade and step within the General Schedule that determines their salary.[64] This determination is made by the National Chiropractic Professional Standards Board based on the criteria established within a Qualification Standard.[65] Doctors of chiropractic in VHA are appointed between the grades of 11 (associate) and 15 (chief). Advancement in grade or step is also determined by the Professional Standards Board, based upon a defined set of criteria.

Both systems use peer review (referred to as "chart review" within the VHA), which is an important quality-assurance function that takes place either formally or informally. Formally, each chiropractor's peers review her or his electronic medical record and provide feedback on the quality of documentation and whether it meets the standards expected by the hospital and outside accrediting agencies, such as the Joint Commission.[1] As well, DCs in both systems are annually reviewed for various aspects of productivity and safety. Chiropractors in both systems must uphold guidelines, such as utilization reviews and risk-management instructions, and may be required to perform administrative tasks. Chiropractors in both systems are expected to attend regular staff meetings, maintain a host of yearly live and online training competencies, and provide in-service training as needed.[1]

Oversight and Leadership

Within the MHS, chiropractors are positioned within various departments, such as physical therapy or sports medicine. These departments are led by a department head who is usually a military officer. The department head usually reports to a leader 1 level higher in the chain of command, such as a director of a service. That director reports to the hospital commander, who reports to the next individual higher up in the chain of command. Each MTF is then overseen by another level of administration, which then reports to the Assistant Secretary of Defense for Health Affairs.[1]

VHA chiropractic services are a national program with an appointed field-based chiropractic-program director. The national chiropractic-program director works to coordinate and direct the chiropractic program through the Office of Rehabilitation Services. There is also a Field Advisory Committee which in some ways serves as a conduit between the national chiropractic-program director and the VHA chiropractic field. This structure provides for national coordination of communication between VHA chiropractors through national and regional conference calls or presentations and generally an annual face-to-face meeting in concert with a larger VA or chiropractic-organization conference.[1]

Discussion

The goal of this article was to provide an essential overview of chiropractic services in US military and veterans'

health care systems. In synthesizing the available information, we identified what we consider to be the main topic areas that people need to discuss the health care of ADSMs or veterans. To help organize and discuss the similarities and differences in chiropractic inclusion in both types of health care, we devised the 7 topic areas of populations served by chiropractors; health care systems; integration; vetting of chiropractors; roles and evaluation of chiropractors; utilization and supply of chiropractic care; and oversight and leadership. Within these main topic areas there are many benefits to ADSMs and veterans that are linked to high-quality, high-value care.

Populations Served by Chiropractors

ADSMs and veterans are using chiropractic. Chiropractic procedures often provide an immediate improvement in symptoms, proprioception, and movement.[66-69] These effects can make exercises more comfortable to perform and more beneficial, and reinforce compliance for self-care. Activities of daily living may be easier to perform after chiropractic care. Whether they receive it on-site or off, ADSMs and veterans are using chiropractic and other nonpharmacologic forms of treatment. Having chiropractic care provided on-site, where health care systems can best manage it and provide quality assurance, seems to be a sensible choice.

ADSMs commonly use chiropractic care at MTFs for pain and stress management.[70] Chiropractic care is sought out at MTFs frequently by ADSMs, as reported by Madsen et al in a summary of 3 different studies.[71] In the MHS, chiropractic care shows evidence of effectiveness for pain management and improved fitness. It has demonstrated higher levels of effectiveness for low back pain compared to traditional medical care. One report states, "The health status analysis shows that patients seen by doctors of chiropractic showed greater improvements in 5 health status scales."[72 (pp. IV-48)] This report also shows higher levels of military readiness for duty compared to traditional medical treatment.

Further studies have reported favorable results for ADSMs. Patients receiving chiropractic care and usual medical care (vs usual medical care alone) have demonstrated an increase in isometric strength, balance, and endurance. Compared to a wait-list group, members in a chiropractic-care group performed better on all 3 physical outcome measures.[73-75] These results would be expected to improve military readiness. As reported by the assistant secretary of defense, "chiropractic care in Active Duty populations can improve fitness measures and short-term motor responses, and improves outcomes when combined with usual medical care in the treatment of [low back pain]."[76 (p. 3)]

Use of various conservative therapies, including chiropractic, is higher among veterans than it is in the general population. It is believed that the use of chiropractic and other conservative approaches among veterans will increase with time, particularly because they are recognized as nonpharmacologic treatments for pain in veterans, as mandated in the Comprehensive Addiction and Recovery Act.[77] In a large survey of veterans who regularly use the VHA for care, 37% reported using chiropractic services, most received outside of the VHA.[78] Of those that did not use chiropractic care, more than half indicated that they were interested in learning about or trying it in the VA.

Use of conservative treatments for chronic pain in ADSMs may aid in decreasing considerable health problems when ADSMs transition to being veterans. An analysis of MHS and VHA data has shown that previously deployed soldiers with chronic pain who received exercise therapy, chiropractic care, acupuncture, and other nonpharmacologic therapies had fewer problems after their military careers than soldiers who did not receive such therapies. Veterans who had received nonpharmacologic therapies while on active duty were less likely, as veterans, to have alcohol or drug use disorders; accidental poisoning with opioids, narcotics, barbiturates, or sedatives; suicidal ideation; and self-inflicted injuries, including suicide attempts.[79]

Health Care Systems

With chiropractors on-site within an MTF or VHA facility, leaders seem to value chiropractic care, patients are generally satisfied, and the systems can save money. The chiropractors in these systems have a responsibility to provide the best possible care for ADSMs and veterans. These chiropractors are paid a salary or contract per year; they are not paid per patient, nor by billable procedure. Therefore, they are paid to get patients better as effectively and efficiently as possible and keep the focus of care on what is best for the patient.

MHS data have shown that military commanders value MTF chiropractic services. A 2009 study of DOD commanders and staff revealed that 100% of those surveyed rated chiropractic care as highly beneficial, acknowledged that it returned ADSMs to duty faster, and agreed that it was an important part of the services at the MTF.[61] In 2013, the DOD acknowledged that chiropractic care was authorized for any MTF that desired to have it, as long as it could be funded with money from the MTF budget and not additional funds from the DOD. This change in policy was a result of several MTF leaders asking to add chiropractic services and to include them in pain-management programs for ADSMs.[80]

Consistently since the beginning of chiropractic services in the MHS in 1995, chiropractors have provided high levels of patient satisfaction. This shines positively on each MTF where chiropractic care is offered. The first report on MHS chiropractic noted that DCs received higher levels of patient satisfaction than other providers, and that there was a strong demand for chiropractic care.[72] Follow-up data have shown an overall satisfaction rating with chiropractic service across all MTFs of more than 90%.[61] Separate surveys of MTFs by MHS health benefits administrators have demonstrated similar data.[61]

The VHA has performed some cost comparisons to the civilian sector. As an example, in fiscal year 2015 the VHA purchased 159 533 private chiropractic visits for 19 435 veterans at a cost of $11 155 654.[53] Comparatively, in the same year the VHA had 86 chiropractors within the system with an average salary of $97 860, for a cost of $8 415 960. In fiscal year 2015 those chiropractors provided 159 366 visits, essentially the same number as community care, despite having collateral duties. The delivery of on-station chiropractic services as reported seems to represent a more cost-effective means of providing chiropractic services to veterans with the additional level of quality assurance that comes from keeping care within VHA.

Integration

At the patient level of care, services are usually provided by interprofessional teams working as part of integrated systems. The patients in these systems can have complex health needs, and the expertise that various health professionals can bring to the patient experience is an integral and important part of providing the best care possible. Including chiropractors as members of the interprofessional team makes sense. Collaborative efforts yield better health services for populations.[81] Better outcomes have been seen from interprofessional collaboration in managing complex problems and noncommunicable diseases.[82] As well, studies have shown improvements in access to care and coordination of services, appropriate use of specialty care, and safety in interprofessional environments.[82,83]

Neuromusculoskeletal conditions can be complex and involve biopsychosocial factors, and thus there is no single best treatment for all NMSK disorders. Nor is it known what procedures are most effectively delivered by which providers, since many health care professionals have overlapping scopes of practice and may use similar procedures. This is particularly true with spine conditions; there are nearly 200 different treatments just for low back pain.[10] For some patients, any particular procedure may not be an effective aspect of care. Some patients may have a better response to 1 provider type than others, or a better response to combined or serial care from more than 1 provider. Thus, some integrated care systems, such as the MHS and VHA, have begun to include services like chiropractic in the care of patients.[15,57] The important outcome is not who or what type of provider treats the patient but instead that that the patient's health improves. When that occurs, it is a win for the patient, the team, and the system.

Keeping an actively utilized chiropractic component to overall care provides needed continuity. A close working relationship between providers is in patients' best interest, supporting improved outcomes. Having chiropractors on staff benefits providers, patients, and administrators. By being integrated in the system and using a common set of records, all providers can see the chiropractic assessment and plan for each visit. Chiropractors have quick access to other providers' assessments, plans, test results, prescribed medications, and other treatments. With all providers working within the same system, the advantage of close communication is leveraged, yielding more efficient and effective results in addition to the cost savings from reducing the potential redundancy of efforts.

There is a mission-driven focus on providing evidence-based and patient-centered health care. When the care is provided within the system by providers focused on this mission, it lessens the tendency for providers to protect their professional turf and instead trains their focus on patients. As well, there is no competing interest for health care dollars within the MHS and VHA. It is entirely possible that these aspects of integration have played a role within individual MHS and VHA facilities and within each system in terms of the growth and integration of chiropractic services.

Vetting of Chiropractors

Another benefit to the MHS and VHA from including chiropractors on staff is meaningful quality control. Vetting requirements are generally not expected in the US civilian chiropractic marketplace, where the majority of chiropractors (estimated 84%) operate solo practices independent of hospitals.[2] On-staff chiropractors in the MHS and VHA are incentivized to maintain excellent credentials and earn outstanding reviews to increase the likelihood of renewed credentials and privileges every 2 to 3 years. Chiropractors on grade and step with defined criteria for advancement are incentivized to maintain a sterling record. On-site chiropractic providers offer the ability for the MHS or VHA to maintain ultimate control of patient care. Thus, vetting can enhance the experience for both patients and the health care systems.

Roles and Evaluation of Chiropractors

Chiropractors' training, perspectives, and approaches offer the benefit of diversity to the traditionally more conventional MHS and VHA environments, which have recently recognized the benefit of expanding the repertoire of services provided in patient care. The increased attention to the biopsychosocial approach to care for pain and NMSK conditions is a good fit for chiropractic in military and veteran health care. As well, chiropractors in these systems can assist patients in navigating the choices available in the medical system, which frequently may be unclear to them.

Most ADSMs and veterans who use chiropractic care do so for NMSK pain.[71,78] With an increased concern over the use of medications for pain management, there is a growing literature base for the use of chiropractic care as a desirable form of nonpharmacologic treatment for musculoskeletal concerns. Spinal manipulation, patient education, and other procedures provided by chiropractors have recently been included in the Joint Commission's pain-management

guidance.[84] Thus, chiropractors can serve on interprofessional teams that help to manage pain.

Many military occupations prohibit individuals from taking certain medications. Special-warfare commands, air stations, submarine stations, explosive-ordnance units, and other duty stations require ADSMs to be very focused and perceptive. The nonpharmacologic and conservative approach for NMSK conditions used by chiropractors often makes them a good fit for these special populations. This is a common sentiment in the aviation community, where back and neck pain are endemic and chiropractic care may help keep the aircrew on flight status, since chiropractors do not prescribe medications.[85-87] Recently, a study has shown benefits of chiropractic care to military service members and an association with less medication use.[88]

Use of chiropractic services has been related to lower opioid use. In a systematic review of several publications, chiropractic users were 64% less likely to be provided with an opioid prescription.[89] In a large study of over 100 000 people, those who were provided chiropractic care had half the likelihood of filling an opioid prescription.[90] Several more recent studies support the use of chiropractic care for its nonpharmacologic benefits in pain management.[88,91-93] Thus, chiropractic care is a recommended treatment in various guidelines.[94-96]

One of the major roles of chiropractors within the VHA is to absorb some of the burden of pain management from primary care, which dually serves veterans and assists primary care providers in providing comprehensive care for this complex patient base. While the addition of chiropractic services within the VHA initially served as another pain-management option, the significance of having chiropractic care as a drug-free option became more pronounced as issues with opioid use and abuse became more prominent and understood. It has been noted that the frequency of opioid prescriptions became lower after some veterans began receiving chiropractic care.[97] However, additional pain-management options are not just about opioid medications. Veterans with uncontrolled diabetes, chronic kidney disease, digestive-tract disease, and heart and lung conditions frequently cannot pursue medical approaches to NMSK pain, because of contraindications associated with some medications. Chiropractors fill a role in aiding these veterans with an option for improving function and managing their pain.

Utilization and Supply of Chiropractic Care

An adequate supply of chiropractors to meet the demand for chiropractic care within the MHS and VHA is a point of concern and an opportunity for growth. Both systems often compare their metrics to the civilian marketplace. We applied that approach here to look at the supply of chiropractic care. In the civilian marketplace, there are approximately 331 500 000 people in the United States.[98] There are approximately 77 000 civilian chiropractors.[2] This equates to an estimated 4305 people per chiropractor in the civilian sector.

In the MHS, there are 1 400 000 active-duty service members and 331 000 reservists. Some of those reservists are on temporary active-duty status and therefore eligible for care within the MHS. There are about 100 MHS chiropractors. Thus, there are more than 14 000 ADSMs per chiropractor, more than 3 times the number per chiropractor in the civilian marketplace. Comparatively, it is reported that the average number of patients ranges between 1100 and 1300 per primary care provider, which may be a physician, nurse practitioner, or physician assistant. Unique to the MHS, active-duty medical technicians (corpsmen and medics) are also used in filling some primary care roles. These primary care data represent a lower number of patients per provider than is seen in the civilian sector.[22]

In the VA, there are 9 million veterans enrolled in VHA health care.[49] There are approximately 300 VHA chiropractors. Thus, there are approximately 30 000 veterans per VHA chiropractor, 7 times the ratio of the civilian sector. The VHA reported that there were 25 000 physicians working for VHA in fiscal year 2017, or approximately 360 veterans per physician.[51]

To accommodate the burgeoning use of chiropractic services in the MHS, it seems that more chiropractors could be added to the system. The last time that expansion happened in a programmatic fashion was directed by legislation drafted in the year 2000.[99,100] Thus, it has been 20 years since MHS policy directed expansion for increased access to care. For the DOD, "the chiropractic health care benefits program is fully implemented."[100] Presently, chiropractic care is available at 60 of approximately 400 (15%) existing MTFs, showing that full implementation has not yet been achieved. The addition of chiropractic services at MTFs is allowed, should MTF commanders decide to do so.[80]

The provision of chiropractic care in the VHA has continuously expanded since its inception. In fiscal years 2005 through 2015, the total number of VHA chiropractic clinics grew on average by 9.4% per year and the number of chiropractor clinician employees grew on average by 21.3% each year.[53] An increase in the number of chiropractic providers and facilities continues to occur,[55] demonstrating the growth within the system.

Although chiropractors do not see as much of the eligible population as primary care providers do, chiropractors in the MHS and VHA are valued as providers with expertise and a desire to see patients with NMSK problems, particularly spine problems. With NMSK problems being the most common health care problems of ADSM and veteran concern, it would seem odd to expect that the number of patients per MHS or VHA chiropractor would be 3 to 7 times higher than in the civilian sector and 10 to 100 times higher than for other provider types. Summarily,

chiropractic care is highly desired, but neither system appears to have an adequate supply of chiropractors to staff clinics. Thus, demand clearly exceeds supply.[102] Regardless of how the data are analyzed, it seems that chiropractic services may be underprovided by both systems.

Oversight and Leadership

There may be benefits for ADSMs and the MHS of having no national and central chiropractic-program director or similar position. Perhaps it allows for nimble placement of chiropractors where they are most needed by MTF leaders. It seems that if such a specialty advisor could be established, this would serve to coordinate communication between MHS chiropractors, advocate for quality care, and provide feedback up the chain of command. Coordinated, quality care and feedback would seem to be benefits to the MTFs and ADSMs. Congressional members have questioned the absence of such a position[103] and been told that it was "not justifiable at that time."[104] Thus, this is an area for growth in the MHS.

The structure and function of VHA chiropractic services as a national program with an appointed field-based chiropractic-program director seems to work well. VHA chiropractors are generally well briefed on current events pertinent to their roles in the VHA, and the chiropractic program has seen tremendous programmatic growth in academic affiliations, research, and expansion of chiropractic services as a result of a centralized and coordinated program.

Limitations

There are some limitations to this article. First, finding military documents pertaining to chiropractic is challenging. Unless a researcher works within the system, she or he will not know about these documents—and even those who do work within the system may be unaware of them. We found no documents after 2014 in our search, and none of our contacts within the MHS were aware of any such documents when we asked them. Thus, we believe that we retrieved the majority of documents, but it is possible that some may have been missed.

Another limitation is that there have been only 2 research publications since 2015 about MHS chiropractic by current or former MHS chiropractors to provide more current information.[45,105] There have been reports of clinical-trial data on the use of chiropractic care for certain populations of ADSMs by researchers outside of MHS.[73-75,106] However, these do not address systematic or environment issues within MHS chiropractic. Chiropractors within the VHA have been much more active in research and publication and were more accessible for this report. Thus, there are some areas that have not yet been fully explored; if they were available, it would have helped to contribute to this essential guide.

Although we tried to maintain an objective perspective when synthesizing the results, we recognize that this article is subject to author biases, as it is written by chiropractors. We did not invite those from other professions to provide counterpoints. Because 1 author formerly worked in the MHS and the other currently works in the VHA, these roles could have biased our views of chiropractic services in these environments, either more favorably or more critically. A final limitation is that this article is not applicable outside of the United States, and thus is limited to a discussion of inclusion of chiropractic services in US military and veterans' health care systems.

Conclusion

Chiropractic care has been provided for 26 and 17 years in the MHS and VHA, respectively. The integration and supply of chiropractic in these systems is an evolving process. This review found that ADSMs and veterans are using chiropractic care, and there is an increasing demand for this service. ADSMs and veteran satisfaction with chiropractic care appears to be high, and this reflects well on the interprofessional teams that chiropractors are part of and the systems that contain these teams. Chiropractors are vetted through an extensive credentialing process to ensure that they are qualified, licensed, and in good standing within the jurisdiction of their license, serving as an excellent form of quality control. Doctors of chiropractic practice within a clear range of procedures, as granted by each system's privileges. Chiropractic care is demonstrating evidence of effectiveness for common needs of ADSMs and veterans. The conservative, biopsychosocial, and nonpharmacologic approach of chiropractors is a benefit to ADSMs and veterans and may help reduce the burden of mental health and substance abuse disorders. There appears to be an undersupply of in-house DCs in both systems, and thus there is plenty of room to grow.

Chiropractic management of NMSK disorders is a good fit and a valuable service to ADSMs and veterans, but it is underprovided by both systems. This article provides an essential overview of each system and a 1-page brief that provides further clarity on chiropractic services in these 2 different but intertwined environments. We hope that this "field guide" will assist readers in attaining a better understanding of the basics of chiropractic care within the MHS and VHA.

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Concept development (provided idea for the research): B.N.G.
Design (planned the methods to generate the results): B.N.G.
Supervision (provided oversight, responsible for organization and implementation, writing of the manuscript): B.N.G.
Analysis/interpretation (responsible for statistical analysis, evaluation, and presentation of the results): B.N.G., A.S.D.
Literature search (performed the literature search): B.N.G., A.S.D.
Writing (responsible for writing a substantive part of the manuscript): B.N.G., A.S.D.
Critical review (revised manuscript for intellectual content, this does not relate to spelling and grammar checking): B.N.G., A.S.D.

Practical Applications

- Active-duty service members and veterans use chiropractic care, and there is a demand for this service.
- Chiropractic care has demonstrated evidence of effectiveness for common needs of active-duty service members and veterans.
- There appears to be an undersupply of in-house chiropractors in both systems.

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.echu.2021.10.002.

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