

Integrating Qigong into Healthcare

Adding Qigong Health Care to the Healthcare System

By Tom Rogers and Josie Weaver

Today's medicine is in the midst of an undeniable crisis. Calls to reform healthcare are in the forefront of economic and political discussions worldwide. Economic pressures reduce the amount of time physicians can spend with patients contributing to burnout among medical staff and endangering the patient... Politicians are getting involved as the public is calling for more affordable healthcare. (Ross 2009)

The American healthcare industry is in a challenged state because it is an expensive system focused on financing medical intervention for treating disease after people are sick and not on safety, cost effectiveness, prevention, and actual health care *before* people get sick. The pandemic crisis with COVID-19 has exposed the need for personal and public health-care practices to enhance immunity and resilience. The nation has an opportunity to reimagine health care. Scientific research proves that Qigong is a non-invasive self-care practice that provides physical and emotional well-being and resilience that can be clinically measured. Qigong exercise results in the active creation of health and is a useful health intervention that could be more fully integrated into American healthcare.

Creating Health with Qigong

Among the behaviors that create health, “exercise as medicine” is a global health initiative put forth by the American College of Sports Medicine with the aim of getting primary care physicians and other health-care providers to include exercise in treatment plans for patients. Patient action is an essential means to and component of this patient-centered health. Patients are not merely consumers of health care dispensed by physicians or professionals but are producers and creators of health. Removing barriers to the self-care practice of Qigong is a way to remove barriers to patient action. One of the great misconceptions in our society is that medicine only comes from outside of ourselves. The Chinese healthcare model says that the free inner medicine comes from within us and is available to anyone. Qigong practice includes biomedical, social, and psychological aspects of health that are described by institutions such as the U.S. Veteran’s Administration as “whole person health,” and are delivered by a biopsychosocial model of medicine. Biopsychosocial medical practices and therapies integrate physiological, cognitive, emotional, and social input with neurophysiological mechanisms (Wade 2017). The scientific evidence for Qigong as a biopsychosocial “whole person” health modality is not well known or understood which creates a situation where efforts at certification and legislation are not being informed by science. Understanding scientific research on Qigong is required to keep these efforts from creating unnecessary barriers to its dissemination.

Qigong and Tai Chi as Meditative Movement Exercise

Jahnke described the fundamental practices of Qigong using Western medical terms in *The Healer Within* (Jahnke, 1997), but the first effort to define or standardize the fundamentals of Qigong and Tai Chi occurred at the National Expert Meeting on Qi Gong and Tai Chi. Two very important outcomes of the meeting were identifying a set of fundamental practices common to both Qigong and Tai Chi and declaring that Tai Chi practiced for health and Qigong are equivalent (Chodzko-Zajko and Jahnke 2005).

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This equivalence was introduced to clinical research with the definition of a new category of exercise called Meditative Movement (MM), separate from traditional forms of exercise because it includes Qigong and Tai Chi, which has the following characteristics: “(a) some form of movement or body positioning, (b) a focus on breathing, and (c) a cleared or calm state of mind with a goal of (d) deep states of relaxation” (Larkey 2009). Researchers have used the term MM, or equivalent terms, including “movement with attentional focus” (Payne 2013), “movement-based embodied contemplative practices” (Schmalzl 2014), and “mindfulness-based movement” (Lucas 2018), each with discussion about the roles of movement, posture, breathing, interoception, kinesthesia, and emotional and social regulation. The equivalency of many different forms of MM exercise can be established not only on the level of energy output generated in the activity, but also on the underlying similarity in observable mechanisms of action and related outcomes and health benefits (Jahnke 2010). As MM, Qigong and Tai Chi can thus be considered functionally equivalent. The importance of the equivalence of Tai Chi practiced for health and Qigong cannot be overstated because it is the intersection of the exercises that are the easiest to practice and teach, and they provide the most benefit. The National Expert Meeting concluded that “there is growing evidence that Qigong and Tai Chi practices may be among the best forms of physical activity for diverse populations because they are low impact, low cost and easy to learn” (Chodzko-Zajko and Jahnke 2005). Given the above equivalence, we refer to Qigong as including Tai Chi unless otherwise noted.

Scientific Research on Qigong

Western medical awareness of the benefits of Qigong began with the introduction of Traditional Chinese Medicine (TCM) practices to the West in the 1970’s, but it was Deng Xiaoping’s modernization reforms in the 1980’s that led to the first large-scale Western-style medical research on Qigong in China. The first Western medical systematic review of the benefits of Qigong and Tai Chi found improved bone density, cardiopulmonary effects, physical function, quality of life, self-efficacy, patient reported outcomes, psychological symptoms, and immune function; and reduced psychological symptoms, falls, and related risk factors (Jahnke 2010). Harvard Medical School and the Veterans Administration have strongly endorsed Qigong and Tai Chi for a very broad range of health conditions (Wayne 2013, Hempel 2014, Harvard 2019). Clinical research trials have shown Qigong and/or Tai Chi to be effective interventions for hypertension, diabetes, osteoarthritis, osteoporosis, breast cancer, heart failure, COPD, coronary heart disease, schizophrenia, depression, quality of life, strength, flexibility, cardiovascular function, balance, pulmonary function, stress, mood, physical function, mental health and cognitive function, risk of falls, self-efficacy, anxiety, self-esteem, quality of sleep, and safety, cancer care, immune function, inflammation, pain, arthritic and musculoskeletal conditions, depression, fibromyalgia, Parkinson’s Disease, multiple sclerosis, and stroke (Yang 2015, Klein 2017, van Dam 2020, Zhang 2020). The World Tai Chi and Qigong Day website lists one hundred common health issues addressed by Tai Chi or Qigong (Douglas 2021), and the Qigong Institute’s Qigong and Energy Medicine Database™ contains over 16000 abstracts, including 2200 abstracts on Qigong research and 1500 abstracts on Tai Chi research (Qigong 2021).

Clinical Research Protocols Using Qigong

Qigong and Tai Chi are complex, multimodal interventions and practices that integrate many physical, emotional, cognitive, social, and behavioral components. Thus, researchers have employed various methods to take the complexity of the Qigong and Tai Chi interventions into account. Research methods

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of randomized clinical trials have included specific traditional and recognized Tai Chi and Qigong forms, simplified forms, and criteria (e.g., years of experience) for the Qigong and Tai Chi teachers participating in clinical research as practice leaders. This has amounted to using a wide variety of protocols across studies and in many cases for research on identical medical conditions. A sampling of Qigong exercises used in clinical trials include Tai Chi Easy™ (Larkey 2015), Tai Ji Quan: Moving for Better Balance (Li 2019), Tai Chi for Arthritis (Song 2010), Tai Chi Chih (Irwin 2017), Baduanjin (Zou 2018, Osypiuk 2020) and Health Qigong (Baduanjin, Wuqinxi, Yijinjing, Liuzijue) (Yu 2020).

In addition to different protocols being used in different randomized controlled trials (RCTs) for the same clinical conditions, different teachers have used their own protocols in the same RCT (Yeh 2011). The wide success of different Qigong and Tai Chi protocols for the same condition, or the same protocol for different conditions, reveals a pattern across studies: the teaching and practice of the fundamental components of Qigong, as taught by many schools and philosophies of the practice, have consistently yielded positive health outcomes and are repeatable.

Fundamental Components of Qigong for Health

SIDEBAR: Neuromotor Benefits of Qigong for Health. Qigong is a form of exercise that improves cardiovascular, musculoskeletal, and neuromotor function, decreases stress, and builds immunity and resilience. One of the primary mechanisms is maintaining neuromotor fitness. The American College of Sports Medicine (ACSM) recommends Qigong in their Position Stand for neuromotor fitness and as prescribed exercise (Huang 2021). Neuromotor exercise training for functional fitness incorporates somatic motor skills such as balance, coordination, gait, and agility, and proprioceptive training.

“Multifaceted physical activities such as tai ji (tai chi), qigong, ... involve varying combinations of neuromotor exercise, resistance exercise, and flexibility exercise. Neuromotor exercise training is beneficial as part of a comprehensive exercise program for older persons, especially to improve balance, agility, muscle strength, and reduce the risk of falls” (Garber et al., 2011) (Hu 2020).

Although it can be practiced sitting or lying down, Qigong is predominately a movement-based exercise whose fundamentals include meditative focus on breath, mind, and body. In addition to the neuromotor benefits of Qigong as a movement-based exercise, research also indicates a bi-directional relationship of body posture and exercise with mental states. The physical body plays a strong causal role in supporting cognitive processes (Osypiuk, 2018). This relationship becomes more apparent when breath and mind focus are added to the body focus. Advances in psychophysiology and neuroscience have revealed that slow diaphragmatic breathing, interoception, and meditative focus affect the human system and correspond to fundamental components of Qigong.

Slow Diaphragmatic Breathing

Physiological function, immune function, lung capacity, behavioral relaxation, emotional regulation, suppression of chronic inflammation, regulation of the stress response, and maximization of heart rate variability are enhanced through slow, deep diaphragmatic breathing. Diaphragmatic breathing is a particularly effective way to stimulate the vagus nerve which is essential in the regulation of metabolic homeostasis and controlling immune function and pro-inflammatory responses (Pavlov 2012).

Psychophysiological research reveals that slow diaphragmatic breathing is related to vagus nerve

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stimulation and improved executive and cognitive performance, social function, and overall health (Laborde 2017).

Diaphragmatic breathing modulates cardiovascular, respiratory, and gastrointestinal systems through the Autonomic Nervous System (ANS). In addition to real-time input, the current state of the ANS is based on one's life experience through engagement behavior with and feedback from the environment. The ANS is a sub-cortical and sub-conscious detection system without directed awareness. The "fight-or-flight" (sympathetic) and the "rest and digest" (parasympathetic) branches (i.e., states) of the ANS have traditionally been presented as operating in inverse relation to one another analogous to a teeter-totter: An increase in one causes a corresponding decrease in the other, and vice-versa.

However, Polyvagal Theory defines a multi-state ANS hierarchy of ventral vagal (parasympathetic: health, growth, restoration), sympathetic (fight or flight mobilization), and dorsal vagal (parasympathetic: rest and digest, but also life-threatening, dissociation, immobilization, and shutdown) (Porges 2009). This hierarchical model explains how people who are in a dorsal-vagal state can be unavailable for social interaction (withdrawn and dissociated) and are consequently not able to obtain benefit from meditation-based clinical practices and therapy (Watford 2019). Polyvagal Theory indicates that appropriate clinical interventions for conditions such as trauma and chronic pain feature slow diaphragmatic breathing (a key component of Qigong) to stimulate the vagus nerve, which moves the nervous system towards the parasympathetic ventral vagal state. Such an intervention safely and effectively engages a patient's ANS dynamics to allow them to take advantage of meditative practices as part of their therapy and healing.

In addition to moving discretely between states, the ANS can be in combined states as well (Quintana 2019). Qigong practice stimulates the vagus nerve (Dedoncker 2021) and can lead to a "Qigong state" of being simultaneously "relaxed and alert." This combined parasympathetic and sympathetic ANS state enhances action and flow, leading to healing, resilience, creativity, innovation, co-regulation, and adaptability. Researchers have also uncovered the connection between vagus nerve stimulation and cognitive processing (Frangos 2017) and have identified vagus nerve stimulation as the prime candidate in explaining the effects of contemplative practices on health, mental health, and cognition (Gerritsen 2018). The mental processes of contemplative practices depend on simultaneous cognitive and physiological processing. This psychophysiological (mental processes and physical stimuli) combination is a key component of the "mind-body" science of Qigong.

Meditative Awareness and Interoception

Learning to have present moment awareness of and attention to the body without distractions such as thoughts is a mindfulness skill. Interoception is the underlying neurological mechanism of mindfulness-based approaches. Clinical research describes mindfulness as the attentional focus necessary and fundamental for gaining interoceptive skills (Gibson 2019). The refined ability to sustain awareness characterizes what in Qigong is called cultivating the skill of self-observation and regulating emotional responses to bodily sensation. Interoception refers collectively to the processing of internal bodily stimuli by the nervous system and includes physical responses in body and brain representation such that the sensing of stimuli is available for reflection, insight, conscious awareness, and action. This

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characteristic training of awareness makes Qigong an “interoceptive awareness practice.” Interoception is such a new field of psychophysiological study that its first international conference was held in 2016. The National Center for Complementary and Integrative Health (NCCIH) is focusing on the multidisciplinary study of interoception science as a way to research mind-body practice, including Qigong (Chen 2020).

Recent research findings highlight interoception’s role in emotional experience, self-regulation, physiological health, cognition, behavior, decision-making, and consciousness (Khalsa 2018, Quadt 2018). As a strong supporter of interoceptive research, NCCIH sponsored the development of a subjective measure of interoception called the Multidimensional Assessment of Interoceptive Awareness (MAIA), which is a 32-item state-trait questionnaire to measure multiple dimensions of interoception by self-report (Mehling, 2018). A key element of interoception is the concept of interoceptive accuracy with greater health being associated with higher interoceptive accuracy. Lower interoceptive accuracy has been associated with increased stress and inflammation, and interoceptive dysfunction is emerging as an important biomarker for mental illness and psychological distress. Research featuring Qigong Mind-Body Exercise as the intervention showed improvement in MAIA scores and better management of post-surgical pain (Osypiuk 2020). Interoceptive awareness of one’s own physiological and mental processes improves stress coping; promotes adaptive perspectives and behavioral responses; increases tolerance of distress; improves self-compassion and positive expectancies; and most importantly, incorporates acceptance of uncertainty into one’s life view.

Qigong for Personal and Public Health in America

In spite of overwhelming scientific evidence, the wide-spread adoption of Qigong and its integration into the existing Western medical model of healthcare face challenges. These include the current healthcare delivery system, patient education versus patient treatment, insufficient numbers of teachers and instructors to teach the basics and lead practices, and attempts at regulation and legislation that have not been based on science, common sense, or consensus of subject matter experts and stakeholders.

Given that 70 to 90 percent of diseases are preventable (Fries 1993, DHHS 2000, DHHS 2010) and 75 to 90 percent of all visits to primary care physicians are for stress related problems (AIS 2020), the benefits of adopting a stress reducing intervention such as Qigong more widely through personal, group-based, organizational, and clinical practice cannot be overstated. Although stress appears to be the basis of many diseases, stressful events or stressful somatic sensory input are not objectively "stressful." Central to stress management is how an individual structures, perceives, and evaluates their experience: Thoughts produced about an event can put someone under stress rather than the sensory input evoked by injury, inflammation, or other pathology (Melzack 2001). Changing people’s lifestyles and philosophies of health and healing through self-care and mind-body integration through practicing Qigong would have a major impact on lowering societal healthcare costs and improving the healthcare system.

Embracing a New Definition of Healthcare

For the current American healthcare system to incorporate Qigong, the adoption of an enhanced and complementary model of healthcare must take effect. In general, Western medical practice treats healthcare and clinical therapy as a metaphorical “fire extinguisher” intended to be used only for

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emergencies versus disease prevention, exercise, and wellbeing. In the Western model of healthcare, healing itself is a medical procedure that requires the supervision of a medical team or physician. The medicalization of health and health care interventions such as Qigong presupposes a malady or condition that must be addressed. The original definition of medicine is that it is an inner power that can be cultivated. For this reason, the National Qigong Association (NQA) did not explicitly define “Medical Qigong” in hard terms so that practitioners would not use the term “Medical Qigong” to describe a practice that, like a fire extinguisher, is meant to be used only in emergencies. In China, Qigong therapy is a category of medical practice where medical records are identical to those in western medicine, but the diagnosis of a condition involves both Chinese and Western categories of disease, and Qigong exercises may be given as prescriptions. In contrast, Western medicine defines the terms “medical” and “medicine” as constituting a practice that includes making a diagnosis and prescribing particular interventions and potentially pharmacological prescriptions for particular health conditions. Since Qigong practice leaders and teachers are not diagnosing and prescribing like doctors, Qigong instructors are not practicing medicine and therefore do not need a license to teach and share Qigong practice (Rogers 2019) (Weaver 2019). With chronic diseases now accounting for most morbidity in Western countries, healthcare systems designed around acute biomedical care models are struggling to improve patient-reported outcomes and reduce health-care costs. Consequently, a biopsychosocial medical model needs to be consistently applied to healthcare management.

Patient Education versus Patient Treatment

With Qigong the goal is to widen the definition of the terms “medical” and “medicine” in order to emphasize and include health, wellness and prevention as well as intervention. One health care practitioner does not take care of all needs; multiple providers are common and even necessary. Self-care fits in prevention and overall health management, and it is a life-long skill that must be practiced over time in order to maintain the benefit. This is an important idea for the individual user and the teacher of Qigong practice: Understanding that there is more to learn and that there are deeper and deeper levels of practice to investigate. The important line between education and treatment provides a guide for how hospitals and clinics can offer Qigong as a way of teaching health cultivation skills. When patients take classes, they learn how to positively affect their own body and behavior to become active participants in creating their own health and healing. Qigong does not compete with the allopathic approach and will not replace it, but is an effective complement to it, especially where Western medicine is perceived as lacking, as in the case of chronic conditions and comorbidities for which there are no cure. As a biopsychosocial practice, Qigong provides a way to give patients an empowering and tangible exercise to bring a positive perspective and personal participation to their healing and creation of health. This type of “take-home” exercise is what physicians and health care providers appreciate instead of or in addition to prescribing medication. Patients must first get into a state where they can heal and be receptive before a therapy can become effective. And who is qualified to help them in this task?

Increasing the Number of Qigong Teachers

Increasing access to Qigong necessitates the demystification of Qigong, such that anyone can do the fundamental practices and benefit and also teach others. Given the direct simplicity of the essentials of Qigong, the National Expert Meeting concluded that a practitioner with 14-16 hours of formal training and time (six months) to integrate what they learned can deliver effective Qigong practice sessions

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(Chodzko-Zajko and Jahnke, 2005). Although the Experts acknowledged the National Qigong Association's (NQA) professional level of certification of 200 hours training, they also defined the shorter effective training levels of 20 to 50 hours. Teachers with these shorter levels of training have delivered Qigong effectively in clinical research and therapy. The non-profit NQA has been certifying teachers of Qigong for over fifteen years, having done extensive groundwork and market research. The NQA levels of certification, with the 200-hour certification in particular, does not specify the particular populations or audiences that a certified teacher can teach. A teacher with a 200-hour certification is qualified to teach varied populations. The NQA provides peer-reviewed certification verification that validates training as sound, meaning that the institution where such a teacher trains has a solid curriculum. There are also many private schools and organizations that are currently training teachers using curricula shorter than 200 hours and successfully certifying Qigong teachers who are effective teachers for a range of populations.

However, the Experts also emphasized that continuing education is important for lay leaders to improve their skills and knowledge in areas such as movement, safety, principles of practice, and capacity to tailor the presentation for specific populations whose limitations and experience can be observed and understood over time. The Experts also encouraged all practice leaders to keep up-to-date with science and research. The experience and knowledge of teachers with more extensive training (e.g. 200 hours and above) and numerous years of teaching experience are valuable in terms of both refining teaching skills and from working extensively with a particular population (e.g., children, elders, those with chronic conditions). In addition to accumulating knowledge of a particular population's health challenges and experience, such knowledge can lead to a teacher being able to serve that particular population well. Teachers with multiple years of teaching experience are also likely to encounter wider or diverse audiences with different levels of health and ability, and this experience can help refine a teacher's presentation skills. Most important, longevity as a teacher demonstrates a commitment to the cultivation of wellbeing, and serves to model this behavior for students and increase an understanding of creating health.

Qigong Legislation: Stories of Trial and Error

Efforts at legislation threaten the dissemination and practice of Qigong by mandating burdensome licensing laws that limit the public's ability to access teachers and therapies of their choice. Occupational licensing may restrict the supply of providers leading to increased consumer prices and decreased access to Qigong. Legislation often does not make the distinction between teaching and therapy, thus further restricting the supply of providers by subjecting teachers to therapeutic standards, which often require more training and licensing fees and could delay when a teacher can teach. Some bills require holistic health care professionals to be trained at state licensed schools in order to obtain a license while others arbitrarily lump Qigong together with unrelated health practices such as bodywork and massage therapy. Worse still, proposed legislation specifies detailed requirements that do not take into account existing evidence-based science on how Qigong is taught, practiced, and incorporated into clinical therapy (Rogers 2019, Weaver 2019).

There are many recent and ongoing attempts at legislating the practice of Qigong (NQA 2021). Massachusetts sought to define Qigong as "bodywork" therapy that would license the practice of using touch, words, or directed movement to deepen awareness of patterns of movement in the body or the

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human energy system, acupoints, or Qi meridians of the human body. Under such a law, anyone not licensed as a massage therapist would not be allowed to teach or practice *any* form of Qigong. Due to strong public response, the bill was referred back to committee for further study. Revised versions of this legislation define Qigong as an “Asian bodywork therapy” which is based upon the body’s system of energy (Qi) (SD1068 2021, HD1708 2021). Describing Qigong in terms of Qi, meridians, and “energy” begs the question of how to define Qigong in terms Western medical professionals, policy makers, and the public can actually understand and relate to.

Chinese Medical Qigong, the official textbook used in colleges and universities of traditional Chinese medicine in China, clearly indicates the term “medical Qigong” is not the same thing as medical treatment in the sense of Western medicine. By the TCM definition, a medical or “Clinical Qigong Therapist” practice could include External Qi treatment, Sound Resonance Therapy, Invisible Needle Therapy, Tui Na, and Purge, Tonify, and Regulate practices in combination with herbal treatments, etc. (Liu 2010).

In addition to practicing Qigong according to the TCM definition, it can also be practiced as “energy medicine” (EM). Both Chinese and Western research have reported on human bioenergy and resonance. For example, each cell in the body can generate and receive different forms of energy, including heat, light, sound, vibration, magnetism, and electricity. Allopathic medicine uses a variety of devices to measure, and in some cases apply, forms of bioenergy such as transcutaneous electrical stimulation, magnetic stimulation, or pulsed electromagnetic fields during therapy. EM can be human touch or device-based and depends upon the invisible and “subtle” energies that form the basis of “biofield therapies” and the field of EM. EM researchers have reported raw physiological data from a range of bioenergy reading devices and suggest that these results are indicative of practitioner competence and effectiveness (Connor 2021). Scientific research has yet to relate practitioner bioenergy measurements to clinical therapy outcomes or patient physiology and pathology. In spite of the limited acceptance and application of EM through device-based and non-device treatments such as “qi transmission,” e.g. Reiki, therapeutic touch, and “external Qigong”, EM is perhaps the most controversial branch of integrative medicine because its mechanisms of action have not been explained; and, most important, the existence of invisible healing energy has not been validated (Leskowitz 2020).

A further complication with treating Qigong as TCM or EM is that there is no theory or framework of correspondence between bioenergy and physiology. Although the World Health Organization has decided to include TCM diagnostic patterns into the new revision of the International Classification of Diseases code (the global standard for diagnostic health information), there is no justified basis for the existence of the philosophical concepts of Qi, meridians, “subtle energy”, or treatments based on them from a Western medical scientific research standpoint (Eigenschink 2020). This illustrates the need for any certification of Qigong teachers and practitioners, and for any legislation that concerns Qigong teachers and practitioners, to have very clear and distinct definitions of Qigong that is practiced as MM versus Qigong practiced as TCM (“clinical Qigong”) or EM. To ignore this important distinction amounts to an incomplete definition of Qigong and does not accurately reflect how Qigong is taught and practiced.

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Oklahoma Bill SB190, which was defeated, defined Qigong over-broadly as a practice including a long list of TCM treatment exercises and strictly prohibited anyone from practicing any form of Qigong exercise in a clinical situation unless properly licensed as a Clinical Qigong Therapist. A further issue brought up in this bill posed an important question: Who is qualified to administer the implementation of the law? This bill specified the creation of the Oklahoma Board of Qigong which among a long list of administrative duties would enforce the legislation and determine tiered licensing and certification standards for Qigong teachers, schools and clinical practitioners which would include continuing education requirements as well as professional conduct and ethical standards. It also included a very restrictive requirement that no person could represent themselves as a “Qigong Teacher” unless licensed in accordance with this act which also required a minimum of 200 hours of training (Oklahoma 2020).

Illinois Senate Bill SB1930 provides for the licensure of Traditional Asian Healing Therapists, which specifically includes the practice of Asian bodywork therapy, clinical Qigong therapy, and Thai bodywork therapy, by the Department of Financial and Professional Regulation (Illinois 2021). The bill defines the minimal qualifications for “clinical Qigong therapy” or “clinical Qigong” to be 500 hours of training which is the basic level of Clinical Qigong Practitioner certification from the National Qigong Association. Clinical Qigong Therapy involves diagnosis, treatment, and possibly prescriptions according to Chinese medical principles and skills including a wide-range of TCM therapies. The scope of the Illinois bill includes Qi transmission, which as noted earlier, is problematic from a clinical research and treatment standpoint. Fortunately, the proposed Illinois legislation does not include physical therapy or therapeutic or corrective measures that are outside of the scope of Clinical Qigong Therapy as defined in the act. The proposed legislation also does not prohibit personal practice or instruction of Qigong outside of the clinic, nor does it prohibit teaching Qigong as MM in clinical or hospital settings.

The state of Rhode Island has a bill with similar requirements as the Illinois bill for regulating the practice of acupuncture and Oriental Medicine. The Rhode Island bill includes Qigong as one of the possible therapies that can be used by those who are licensed under the proposed law and practice Chinese medicine using Chinese medical diagnostic methods, but it does not attempt to otherwise regulate or restrict the teaching and practice of Qigong per se (Rhode 2021).

Protecting Public Access to Health Care Freedom – Enacting Safe Harbor Legislation

Iowa Senate Bill SF261 mandates that providers of Alternative and Complementary Medicine inform patients of non-state licensure, the nature of the care they will provide, their training and credentials, and obtain a written acknowledgement from the client to be kept on file for two years. Penalties are associated with non-compliance (Iowa 2019). But there are no other requirements, so Qigong may be taught anywhere.

Several states that previously tried to legislate very problematic Qigong regulations which were defeated have switched to a much more enlightened approach of passing Safe Harbor Exemption bills. Consumer access to Qigong and the right to practice complementary and alternative health care are protected by Safe Harbor practitioner exemption laws. These laws allow Qigong to be freely available without regulation in clinical, hospital, or any other settings (Miller 2019). Safe harbor laws are making clear that access to Qigong is not limited as long as the practitioner is not directly assessing a person’s health, applying specific treatments or diagnostic tests, or prescribing or administering specific

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remedies. **SIDEBAR: Safe Harbor Acts.** Safe Harbor acts require a signed acknowledgement from the client before the practitioner provides care or treatment for the first time. This disclosure includes practitioner education and training, contact and business information, and state licensing status. The safety factor is key and the disclosures of experience and education/training requirements create the necessary transparency. Given the evidence base for the safety of Qigong practices, the Safe Harbor exemption is appropriate and also useful in making the argument to include the practices in medical settings. This speaks to the complementary nature of Qigong practice and how it works side-by-side with Western medicine and does not replace it. Transparency required by law is owed to the end user in return for exemption. But it is the end-user's choice to go ahead with it.

Qigong in Healthcare, Qigong as Therapy

Qigong and Tai Chi practiced for health have a common foundation that provides basic health exercises for illness prevention, health restoration, enhanced immune function, resilience, self-healing, clinical treatment, regulating mental and physical health, and healthy active aging. The scientific research on the fundamental practices reveals how Qigong and Tai Chi are effective for both public health and therapeutic intervention. The scientific research on Tai Chi and Qigong also points to the necessary qualifications of those who teach in hospital settings or apply the practices in clinical therapy.

The first step in integrating Qigong into healthcare involves personal practice. One of the main barriers to developing a personal practice is lack of public education about Qigong. Recognizing the cost-effectiveness and health benefits of delivering Qigong to a huge population of almost 1.4 billion people, the Chinese government is actively researching, promoting, and standardizing the “traditional Chinese exercises” of Qigong and Tai Chi as public health practices. The Chinese Health Qigong Association is actively promoting Qigong by establishing affiliated organizations in countries around the world, including the United States. The United States National Prevention Strategy (NPS) encourages partnerships among Federal, state, tribal, local, and territorial governments; business, industry, and other private sector partners; philanthropic organizations; community and faith-based organizations; and everyday Americans to improve health through prevention (NPC 2016). The main component of prevention is regular exercise maintained throughout an individual's lifespan. Qigong combines exercise with the proven benefits of meditation and should be promoted to the public as an essential life skill.

Another barrier to personal practice is lack of available teachers and classes. The National Expert Meeting on Qi Gong and Tai Chi defined program content and structure for the standard Qigong practices that are being delivered as MM to students, teachers, and professionals who teach in community centers, academia, health clubs, YMCA's, retreat centers, hospitals, retirement centers, libraries, the military, medical schools, schools, the justice system, and clinical settings as diverse as cancer care, physical therapy, and chronic pain. Qigong practice for this wide range of populations is being provided by people with as few as 14 - 16 hours of training. Safety knowledge and teaching skills combined with basic Qigong form the foundation of this training competency and the ability to tailor programs for specific populations and conditions. This same level of training can be made available to physical therapists, doctors, nurses, and other Western medical professionals to help bring Qigong into their professional practices. Thus, the medical care of the patient is the doctor's responsibility, and the doctor can recommend or declare Qigong to be a safe practice given their patient's condition provided they, as doctors, know enough about Qigong to be able to endorse it as a safe and “permissible”

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practice in the first place. The value of educating the medical community in this regard is necessary and truly far reaching (Weaver 2019).

Scientific research confirms that the combination of Qigong's movement, postural alignment, diaphragmatic breathing, relaxation exercises, and mindfulness meditation and interoceptive practices promote health and healing as well as provide adaptive coping and individual and community resiliency that meet prevention, treatment, and rehabilitation requirements for the current COVID-19 crisis (Feng 2020). Qigong also broadens the concept of health in order to provide ways to clinically measure physical and emotional well-being and resilience and provide active treatment for chronic diseases and comorbidities. Proposed legislation, certification, and training of Qigong teachers and practitioners need to be informed by science so as not to present barriers to dissemination of the practices to those individuals and populations who need them the most. Qigong is a potentially powerful component of Western models of healthcare systems where the "whole person" is considered and prevention and wellness are primary aspects of care.

References

AIS. American Institute of Stress. America's #1 Health Problem. <https://www.stress.org/americas-1-health-problem>

Chen, W. Probing Interoceptive Processes. NCCIH. July 2020. <https://www.nccih.nih.gov/research/blog/probing-interoceptive-processes-join-nccih-hot-topic-webinar-on-july-15>

Chodzko-Zajko, Jahnke. National Expert Meeting on Qi Gong and Tai Chi Consensus Report. 2005. <http://www.agingblueprint.org/PDFs/ConsensusDoc.pdf>

Connor MH, Connor CA, Eickhoff J, Schwartz GE. Prospective empirical test suite for energy practitioners. *Explore (NY)*. 2021 Jan-Feb;17(1):60-69. doi: 10.1016/j.explore.2020.07.010. Epub 2020 Aug 1. PMID: 32798173.

Dedoncker J, Vanderhasselt MA, Ottaviani C, Slavich GM. MENTAL HEALTH DURING THE COVID-19 PANDEMIC AND BEYOND: THE IMPORTANCE OF THE VAGUS NERVE FOR BIOPSYCHOSOCIAL RESILIENCE. *Neurosci Biobehav Rev*. 2021 Feb 11:S0149-7634(21)00064-6. doi: 10.1016/j.neubiorev.2021.02.010. Epub ahead of print. PMID: 33582230.

DHHS 2000, Department of Health and Human Services. Healthy People 2000: National Health Promotion and Disease Prevention Objectives. Washington, DC, Pub.# 91-50213, 1991.

DHHS 2010, Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. Washington, DC, Pub.# No. 017-001-00550-9, 1/2000.

Douglas, W. World Tai Chi and Qigong Day Medical Research. 2021. <https://www.worldtaichiday.org/WTCQDHlthBenft.html>.

Integrating Qigong into Healthcare

Eigenschink M, Dearing L, Dablander TE, Maier J, Sitte HH. A critical examination of the main premises of Traditional Chinese Medicine. *Wien Klin Wochenschr.* 2020 May;132(9-10):260-273. doi: 10.1007/s00508-020-01625-w. Epub 2020 Mar 20. PMID: 32198544; PMCID: PMC7253514.

Feng F, Tuchman S, Denninger JW, Fricchione GL, Yeung A. Qigong for the Prevention, Treatment, and Rehabilitation of COVID-19 Infection in Older Adults [published online ahead of print, 2020 May 15]. *Am J Geriatr Psychiatry.* 2020;10.1016/j.jagp.2020.05.012. doi:10.1016/j.jagp.2020.05.012.

Frangos E, Richards EA, Bushnell MC. Do the psychological effects of vagus nerve stimulation partially mediate vagal pain modulation? *Neurobiol Pain.* 2017;1:37-45. doi:10.1016/j.ynpai.2017.03.002

Fries JF, Koop CE, Beadle CE, et al. Reducing health costs by reducing the need and demand for medical services. *N Engl J Med* 1993;329:321–325.

Garber CE, Blissmer B, Deschenes MR, et al. American College of Sports Medicine position stand. Quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness in apparently healthy adults: guidance for prescribing exercise. *Med Sci Sports Exerc.* 2011;43(7):1334-1359. doi:10.1249/MSS.0b013e318213febf

Gerritsen RJS, Band GPH. Breath of Life: The Respiratory Vagal Stimulation Model of Contemplative Activity. *Front Hum Neurosci.* 2018;12:397. Published 2018 Oct 9. doi:10.3389/fnhum.2018.00397

Gibson J. Mindfulness, Interoception, and the Body: A Contemporary Perspective. *Front Psychol.* 2019 Sep 13;10:2012. doi: 10.3389/fpsyg.2019.02012. PMID: 31572256; PMCID: PMC6753170.

Harvard Medical School. *An Introduction to Tai Chi.* 2019. Harvard Health Publishing.

Healer Within Foundation. <https://www.healerwithinfoundation.org/>

HD1708. Massachusetts Bill HD.1708. An Act Regulating Alternative Healing Therapies. <https://malegislature.gov/Bills/192/HD1708>

Hempel S, Taylor SL, Solloway MR, et al. Evidence Map of Tai Chi. Washington (DC): Department of Veterans Affairs (US); 2014.

Hu Y, Kattan C, Kontos D, Zhu W, Hernandez ME. Benefits of tai ji quan practice on neuromuscular functions in older adults: A Systematic Review and meta-analysis. *Complement Ther Clin Pract.* 2020 Dec 16;42:101295. doi: 10.1016/j.ctcp.2020.101295. Epub ahead of print. PMID: 33341582.

Huang J, Wang D, Wang J. Clinical Evidence of Tai Chi Exercise Prescriptions: A Systematic Review. *Evid Based Complement Alternat Med.* 2021 Mar 10;2021:5558805. doi: 10.1155/2021/5558805. PMID: 33777155; PMCID: PMC7972853.

Integrating Qigong into Healthcare

Illinois. Illinois Senate Bill SB1930. <https://legiscan.com/IL/bill/SB1930/2021>

Iowa. Iowa Senate Bill S261. 2019. <https://legiscan.com/IA/bill/SF261/2019>

Irwin MR, Olmstead R, Carrillo C, et al. Tai Chi Chih Compared With Cognitive Behavioral Therapy for the Treatment of Insomnia in Survivors of Breast Cancer: A Randomized, Partially Blinded, Noninferiority Trial [published correction appears in J Clin Oncol. 2017 Dec 20;35(36):4096]. J Clin Oncol. 2017;35(23):2656-2665. doi:10.1200/JCO.2016.71.0285.

Jahnke, R. The Healer Within. HarperCollins Publishers. 1997.

Jahnke R, Larkey L, et.al. A Comprehensive Review of Health Benefits of Qigong and Tai Chi. Am J Health Promot. 2010 JUL-AUG; 24(6): e1–e25. doi: 10.4278/ajhp.081013-LIT-248.

Khalsa SS, Adolphs R, Cameron OG, et al. Interoception and Mental Health: A Roadmap. Biol Psychiatry Cogn Neurosci Neuroimaging. 2018;3(6):501-513. doi:10.1016/j.bpsc.2017.12.004

Klein. Know the Evidence. A report of the NQA Research and Education Committee. June 30, 2017. https://www.nqa.org/index.php?option=com_dailyplanetblog&view=entry&year=2017&month=10&day=04&id=15:know-the-evidence-may-2017-updated-review

Laborde S, Mosley E, Thayer JF. Heart Rate Variability and Cardiac Vagal Tone in Psychophysiological Research - Recommendations for Experiment Planning, Data Analysis, and Data Reporting. Front Psychol. 2017 Feb 20;8:213. doi: 10.3389/fpsyg.2017.00213. PMID: 28265249; PMCID: PMC5316555

Larkey L, Jahnke R, et. al. Meditative Movement as a Category of Exercise: Implications for Research. Journal of Physical Activity and Health 2009. 6. 230-238.

Larkey LK, Roe DJ, Weihs KL, et al. Randomized controlled trial of Qigong/Tai Chi Easy on cancer-related fatigue in breast cancer survivors. Ann Behav Med. 2015; 49(2):165- 176. doi:10.1007/s12160-014-9645-4.

Leskowitz, E. A cartography of energy medicine: From subtle anatomy to energy physiology. Explore. 2020, Nov. DOI: 10.1016/j.explore.2020.09.008

Li F, Harmer P, Chou LS. Dual-Task Walking Capacity Mediates Tai Ji Quan Impact on Physical and Cognitive Function. Med Sci Sports Exerc. 2019;51(11):2318-2324. doi:10.1249/MSS.0000000000002051.

Liu, T. Chinese Medical Qigong. Singing Dragon. 2010.

Lucas AR, Klepin HD, Porges SW, Rejeski WJ. Mindfulness-Based Movement: A Polyvagal Perspective. Integr Cancer Ther. 2018;17(1):5-15. doi:10.1177/1534735416682087.

Integrating Qigong into Healthcare

Mass. Massachusetts Bill S.168. An Act Regulating Bodyworks.

<https://legiscan.com/MA/bill/S2634/2019>.

Mehling WE, Acree M, Stewart A, Silas J, Jones A. The Multidimensional Assessment of Interoceptive Awareness, Version 2 (MAIA-2). PLoS One. 2018;13(12):e0208034. Published 2018 Dec 4.

doi:10.1371/journal.pone.0208034

Melzack R. Pain and the neuromatrix in the brain. J Dent Educ. 2001 Dec;65(12):1378-82. PMID: 11780656.

Miller C. An interview with Diane Miller, JD. Spirit of Change.

<https://www.spiritofchange.org/protecting-your-access-to-health-care-freedom-in-massachusetts/>

NPC. National Prevention Council. Healthy Aging in Action. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2016.

<https://www.cdc.gov/aging/pdf/healthy-aging-in-action508.pdf>

NQA. National Qigong Association. Legislation Committee. Qigong Legislation. 2021.

<https://www.nqa.org/legislation-updates>

Oklahoma. Senate Bill 190. 2020. <https://legiscan.com/OK/text/SB190/2020>

Osypiuk K, Thompson E, Wayne PM. Can Tai Chi and Qigong Postures Shape Our Mood? Toward an Embodied Cognition Framework for Mind-Body Research. Front Hum Neurosci. 2018 May 1;12:174. doi: 10.3389/fnhum.2018.00174. PMID: 29765313; PMCID: PMC5938610.

Osypiuk K, ...Wayne P. Qigong Mind-Body Exercise as a Biopsychosocial Therapy for Persistent Post-Surgical Pain in Breast Cancer: A Pilot Study. *Integr Cancer Ther*. 2020; 19:1534735419893766.

doi:10.1177/1534735419893766.

Pavlov VA, Tracey KJ. The vagus nerve and the inflammatory reflex--linking immunity and metabolism.

Nat Rev Endocrinol. 2012 Dec;8(12):743-54. doi: 10.1038/nrendo.2012.189. PMID: 23169440; PMCID: PMC4082307.

Payne P, Crane-Godreau MA. Meditative movement for depression and anxiety. Front Psychiatry.

2013;4:71. Published 2013 Jul 24. doi:10.3389/fpsy.2013.00071.

Porges SW. The polyvagal theory: new insights into adaptive reactions of the autonomic nervous system.

Cleve Clin J Med. 2009 Apr;76 Suppl 2(Suppl 2):S86-90. doi: 10.3949/ccjm.76.s2.17. PMID: 19376991; PMCID: PMC3108032.

Qigong. Qigong Institute. Qigong and Energy Medicine Database™. 2021.

<https://qigonginstitute.org/abstracts>

Integrating Qigong into Healthcare

Quadt L, Critchley HD, Garfinkel SN. The neurobiology of interoception in health and disease. *Ann N Y Acad Sci.* 2018;1428(1):112-128. doi:10.1111/nyas.13915.

Quintana. Heart rate variability: physiology, methodology and experimental possibilities. 2019. <https://osf.io/y6zmt/>

Rhode. Rhode Island House Bill H5154 (also S2232 2020). 2021. <http://webserver.rilin.state.ri.us/BillText21/HouseText21/H5154.pdf>

Rogers T, Weaver J. Regulating the Teaching and Practice of Qigong and T'ai Chi. *Qi Journal.* Vol 29. No. 2. Summer 2019.

Ross CL. Integral healthcare: the benefits and challenges of integrating complementary and alternative medicine with a conventional healthcare practice. *Integr Med Insights.* 2009;4:13-20. doi: 10.4137/imi.s2239. Epub 2009 Oct 19. PMID: 21614160; PMCID: PMC3093682.

SD1068. Massachusetts Bill SD.1068. An Act Regulating Alternative Healing Therapies. <https://malegislature.gov/Bills/192/SD1068>

Schmalzl L, Crane-Godreau MA, Payne P. Movement-based embodied contemplative practices: definitions and paradigms. *Front Hum Neurosci.* 2014;8:205. Published 2014 Apr 14. doi:10.3389/fnhum.2014.00205.

Song R, Roberts BL, Lee EO, Lam P, Bae SC. A randomized study of the effects of t'ai chi on muscle strength, bone mineral density, and fear of falling in women with osteoarthritis. *J Altern Complement Med.* 2010;16(3):227-233. doi:10.1089/acm.2009.0165.

van Dam K. Individual Stress Prevention through Qigong. *Int J Environ Res Public Health.* 2020 Oct 8;17(19):7342. doi: 10.3390/ijerph17197342. PMID: 33050017; PMCID: PMC7579037.

Wade DT, Halligan PW. The biopsychosocial model of illness: a model whose time has come. *Clin Rehabil.* 2017 Aug;31(8):995-1004. doi: 10.1177/0269215517709890. PMID: 28730890.

Watford TS, O'Brien WH, Koerten HR, Bogusch LM, Moeller MT, Sonia Singh R, Sims TE. The mindful attention and awareness scale is associated with lower levels of high-frequency heart rate variability in a laboratory context. *Psychophysiology.* 2020 Mar;57(3):e13506. doi: 10.1111/psyp.13506. Epub 2019 Nov 17. PMID: 31737916.

Wayne, P. *The Harvard Medical School Guide to Tai Chi.* Shambhala. 2013.

Weaver J, Rogers T. COMMENT ON Accreditation Standard Guideline Initiative for Qigong Instructors and Training Institutions. ResearchGate. 2019. <https://qigonginstitute.org/upload/tinymce-editor/docs/CommentMTCQ.pdf>

Integrating Qigong into Healthcare

Yang G-Y, Wang L-Q, Ren J, et al. (2015) Evidence Base of Clinical Studies on Tai Chi: A Bibliometric Analysis. Scherer RW, ed. *PLoS ONE*. 2015;10(3):e0120655. doi:10.1371/journal.pone.0120655.

Yeh GY, McCarthy EP, Wayne PM, Stevenson LW, Wood MJ, Forman D, Davis RB, Phillips RS. Tai chi exercise in patients with chronic heart failure: a randomized clinical trial. *Arch Intern Med*. 2011 Apr 25;171(8):750-7. doi: 10.1001/archinternmed.2011.150. PMID: 21518942; PMCID: PMC3277798.

Yu P, Li W, Li H, Ouyang S, Cai H, Wu J, Tang C, Huang Q. The efficacy and safety of health qigong for anti-aging: Protocol for a systematic review and meta-analysis. *Medicine (Baltimore)*. 2020 Dec 4;99(49):e22877. doi: 10.1097/MD.00000000000022877. PMID: 33285677; PMCID: PMC7717840.

Zhang Y, Yao F, Kuang X, Li L, Huang L, Zhou Q, Peng J, Chang Q. How Can Alternative Exercise Traditions Help Against the Background of the COVID-19 in Cancer Care? An Overview of Systematic Reviews. *Cancer Manag Res*. 2020 Dec 17;12:12927-12944. doi: 10.2147/CMAR.S282491. PMID: 33363409; PMCID: PMC7753005.

Zou L, Yeung A, Quan X, et al. Mindfulness-Based Baduanjin Exercise for Depression and Anxiety in People with Physical or Mental Illnesses: A Systematic Review and Meta-Analysis. *Int J Environ Res Public Health*. 2018;15(2):321. Published 2018 Feb 12. doi:10.3390/ijerph15020321.