

## Health and Wellness: Holistic and Complementary Methods



Lynette Steele

Women's Health and Well-being, Private Medical Practice, Cape Town, South Africa

### Synonyms

Herbal medicine; Holistic; Integral; Integrative; Mind-body medicine; Preventative; Sustainable medicine; Traditional

### Definition

Complementary and alternative medicine (CAM) is a commonly used term for holistic and complementary therapies that have typically not been part of conventional Western medicine. Complementary means treatments that are used along with conventional medicine. Alternative means treatments used in place of conventional medicine (Mayo Clinic). Integrative medicine combines, or integrates, the best of conventional medical care with the best of evidence-based CAM. A whole-person approach is the focus of most CAM therapies to address the physical, emotional, mental, and spiritual aspects of health. This paper will address the main areas, for example, mind-body medicine (such as meditation, acupuncture, and yoga), manipulative and

body-based practices (such as massage therapy and spinal manipulation), and natural products (such as herbs and dietary supplements).

### Introduction

The healthcare practitioner of the future must ideally be able to bridge the divide between conventional and traditional medicine, using an integrative approach that provides high-quality healthcare in innovative, scientific, and sustainable ways. This should be done in such a way to reaffirm the importance of the relationship between practitioner and patient while focusing on the whole person (physical, mental, emotional, and spiritual aspects) and using appropriate therapeutic approaches informed by scientific evidence to achieve optimal health and well-being. An integrative approach will ensure more sustainable and innovative ways to deal with current and future health challenges. Holistic and complementary methods of healing have been part of ancient healing traditions over centuries. Currently, many of those methods form part of what is commonly described as complementary and alternative medicine (CAM). The demand for CAM therapies is high and increasing worldwide. The increased use of complementary and alternative medicine (CAM) therapies requires the design of integrative medical models and institutions that provide the best training and research possibilities for healthcare providers across a wide

range of disciplines. Open dialogue across sectors and among healthcare disciplines is crucial to creating a shared vision of sustainability in the field of health and well-being. This entry explores the challenge of developing an integrative model of health to prevent and treat chronic disease and promote wellness, both within and outside the hospital setting.

## A New Ecology of Health

Complementary and alternative medicine (CAM) therapies contribute to a vast field of various treatments, but they share a commonality in their views of health and healing. Micozzi (2011: 1) calls this “common philosophy ‘a new ecology of health’, sustainable medicine or ‘medicine for a small planet’”. The health care practitioner of the future must ideally be able to bridge the divide between conventional and traditional medicine, using an integrative approach that can be defined as “the practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing” ([Academic Consortium for Integrative Medicine & Health](#)).

Since the 1990s, there has been more recognition from the medical and scientific communities to incorporate what has been called “alternative,” “complementary,” or “integrative medicine.” The main reason for this shift is a significant amount of people that make use of alternative therapies. The National Health Interview Survey (NHIS) is an annual study in which tens of thousands of Americans answer questions about their health. Every 5 years, this survey includes a special section on complementary health approaches. The most recent data on complementary approaches from 2012 indicated that 33.2% of US adults used complementary health approaches. This is similar to the percentages in 2007 (35.5%) and 2002 (32.3%). In 2012, as in 2007 and 2002, the most commonly used complementary approach was natural products (dietary supplements other than

vitamins and minerals). 17.7% of adults and 4.9% of children between the ages of 4 and 17 used natural products. About 59 million Americans spend up to \$30.2 billion a year, primarily out of pocket on complementary health approaches.

The 2012 NHIS survey indicated that yoga, chiropractic or osteopathic manipulation, meditation, and massage therapy were the most common mind and body approaches used by adults ([The National Health Interview Survey](#)). According to the School of Public Health at Harvard University (Liebert 2014), some of the major reasons adults used CAM therapies included the following: the potential for supplementary benefits of CAM alongside conventional medicine, the potential to treat unique illnesses beyond the scope of conventional medicine, the avoidance of unwanted side effects, and the lower relative costs of CAM therapies. The rise of CAM can also be explained as a consequence of the aging population and the growing emphasis on chronic illness, such as chronic pain which is not sufficiently relieved by conventional medicine alone. Previous research consistently found that CAM users were more likely to be older (Van der Bulck and Custers 2010) and female, have poorer health status, and have experienced less satisfaction with conventional medicine.

In the postmodern era, therapists and practitioners of conventional medicine should be aware of the reasons why increasing numbers of people turn to CAM therapies, such as acupuncture (Clobert et al. 2015). There seems to be a sense of disillusionment and a loss of faith and trust in science due to a social change that has occurred. People in the postmodern era have seemingly fewer materialist concerns, have turned to green and new spiritual movements, and look for alternative medical systems in accordance with their new value system and worldviews. This can be predicted as a future trend that will increase the demand for alternative practitioners and therapies in healthcare. A better understanding of this phenomenon could indeed provide health practitioners with tools to better respond to this new demand and better meet the concerns of their patients, as well as addressing the staggering increase in chronic disease.

Chronic disease and conditions are currently the leading cause of death and disability worldwide. These most common chronic diseases include heart disease, stroke, cancer, type 2 diabetes, obesity, and arthritis. These diseases contribute to increased healthcare costs and more importantly, are preventable ([Centers for Disease Control and Prevention](#)):

- As of 2012, about half of all adults – 117 million people – had one or more chronic health conditions. One in four adults had two or more chronic health conditions.
- Seven of the top ten causes of death in 2014 were chronic diseases. Two of these chronic diseases – heart disease and cancer – together accounted for nearly 46% of all deaths.
- Obesity is a serious health concern. During 2011–2014, more than one-third of adults (36%), or about 84 million people, were obese (defined as body mass index [BMI]  $\geq 30$  kg/m<sup>2</sup>). About one in six youths (17%) aged 2–19 years was obese (BMI  $\geq 95$ th percentile).
- Arthritis is the most common cause of disability. Of the 54 million adults with doctor-diagnosed arthritis, more than 23 million say they have trouble with their usual activities because of arthritis.
- Diabetes is the leading cause of kidney failure, lower-limb amputations other than those caused by injury, and new cases of blindness among adults.

There are CAM therapies available for all the chronic diseases and illnesses. Koren et al. (2015) found that almost every fourth patient with type 2 diabetes mellitus (DM2) uses complementary and alternative medicine. The study looked at hospitalized patients and the possible interaction between CAM and prescription medication (PM). CAM consumers reported their diabetes to be well controlled more often than did non-consumers. Most patients did not inform their physician regarding the CAM consumption, as was found in previous studies. Given the potential adverse effects and interactions of dietary supplements

and herbal remedies, along with the possible beneficial effects, the use of CAM cannot be ignored (Moona et al. 2014; Koren et al. 2015).

However, the provision of CAM for hospitalized patients has been reported mostly in the context of clinical trials, whereas the integration of CAM as actual service for the care of hospitalized patients has seldom been reported in the medical literature. A large proportion of patients attending hospitals are familiar with the use of CAM, and some continue to use herbs and food supplements while hospitalized. It may be assumed that patient awareness of, and preference for, CAM does not change significantly during hospitalization. However, what most often happens is that patients would not disclose their use of CAM therapies within the hospital setting, due to fear that they might not be allowed to use it. On the other hand, they might encounter limitations of conventional care during hospitalization and be interested in adding CAM therapies. Thus, offering CAM to hospitalized patients might well be of benefit to enhance the outcome of care, while promoting ethical principles of patient autonomy (Schiff et al. 2012).

These observations motivated a group of clinicians and researchers to establish a CAM service within a general surgery department in a public academic hospital in Israel. The service was unique regarding the integration of CAM in a medical institution through close collaboration and cross-disciplinary communication with medical staff, as well as its research base. Five CAM practitioners worked side by side with the conventional caregivers to provide symptomatic relief for patients in the surgery department. CAM practitioners provided patients with CAM treatments in the outpatient clinic before surgery, and throughout their hospitalization in the surgery department, in induction room just before surgery where anxiety peaks, and in the postanesthesia care unit. The results of the intervention highlighted a few necessary steps. Firstly, the CAM integration should happen gradually, since it carries with it conceptual, personal, and organizational changes. Reflection accompanied by research on patient outcomes as well as on sociological and regulatory aspects is necessary to

facilitate the acceptance of integrative hospital care and its influence on wider circles. Such integration of conventional and CAM treatments within the hospital setting provides the first steps in what is described as “a revolution in medicine” (Schiff et al. 2012).

To match the future sustainable goals of healthcare, it can be helpful to establish CAM therapies on a broader scale, by developing more credible education and training institutions of complementary and alternative practitioners. Various academic institutions and consortiums using an integrative approach have been established over the past 20–30 years to promote the education and training of and standardize the various complementary therapies. Examples of such institutions include The University of Arizona Center for Integrative Medicine (AzCIM) and the Academic Consortium for Integrative Medicine & Health (The Consortium), who collaborates to create within the Health Resources and Services Administration (HRSA) the National Center for Integrative Primary Healthcare (NCIPH). “The purpose of the NCIPH is to advance the incorporation of competency- and evidence-based integrative health (IH) curricula and best practices into primary care education and practice. The most important gap filled by this 3-year project will be the development of a set of competencies and educational materials relevant to and appropriate for use across the entire inter-professional spectrum of primary care practitioners” (The National Center for Integrative Primary Healthcare).

Other examples include:

1. The Office of Cancer Complementary and Alternative Medicine (OCCAM) that coordinates and enhances the activities of the National Cancer Institute (NCI) in the arena of complementary and alternative medicine (The Office of Cancer Complementary and Alternative Medicine).
2. The National Center for Complementary and Integrative Health (NCCIH) is 1 of 27 institutes and centers that make up the National Institutes of Health. The NCCIH is the US Federal Government’s lead agency for scientific research on complementary and integrative health approaches (The National Center for Complementary and Integrative Health).
3. The Cochrane CAM Field is an international group of individuals dedicated to facilitating the production of systematic reviews of randomized clinical trials in areas such as acupuncture, massage, chiropractic, herbal medicine, homeopathy, and mind-body therapy (The Cochrane CAM Field).

These various institutions are examples of complementary medical systems defined by Micozzi (2011: 7–8) as “developing a body of intellectual work that (1) underlies the conceptualization of health and its precepts; (2) has been sustained over many generations by many practitioners in many communities; (3) represents an orderly, rational, conscious system of knowledge and thought about health and medicine; (4) relates more broadly to a way of life (or lifestyle); and (5) has been widely observed to have definable results as practiced.” A survey done among currently enrolled students in the United States’ first Bachelor of Science integrative healthcare program indicated that most had used complementary and alternative medicine modalities, such as massage, yoga, and meditation before. More than half of the survey participants were dissatisfied with conventional/Western medicine and its providers. Most respondents had a personal interest in complementary and alternative medicine and holistic health (Tollefson et al. 2016).

In 2013, 64.4% of Norwegian hospitals reported that they offer CAM to their patients. No significant differences were found between public and private hospitals and between somatic and psychiatric hospitals. Private psychiatric hospitals were most likely to offer CAM (80%). There were some regional differences, however not at a significant level. Acupuncture is the most frequent CAM method provided, followed by art and expression therapy and massage. Hospitals reporting to offer CAM have increased from 25% in 2001 to 64.4% in 2013, which is a significant increase in the total number of Norwegian hospitals providing CAM since 2001, both within

public and private and somatic and psychiatric hospitals (Jacobsen and Kristoffersen 2013).

## The Role of Scientific Research

The challenge for many complementary and alternative therapies is to provide scientific proof that would convince mainstream medicine that it has an important role to play in health and healing. Many of these therapies are deeply rooted in ancient knowledge that were practiced in many traditions and cultures over centuries. The value of these traditional therapies was never scrutinized through the scientific method but directly experienced by the recipients in need of healing. Because the focus in CAMS is so much more on the individual and his or her unique inner resources, the concepts of normalization, standardization, and generalization may be more difficult to apply to research and clinical practice in the various fields of CAMS compared with the allopathic method (Micozzi 2011: 6). However, in the modern age with the emphasis on knowledge and sharing that knowledge to educate and empower, it is essential that specific guidelines are incorporated in medical models as far as complementary and alternative therapies are concerned.

This is particularly true of natural products and supplementation, as the 2012 NHIS survey highlighted that since 2002 and 2007, the most commonly used complementary approach was natural products (dietary supplements other than vitamins and minerals). 17.7% of adults and 4.9% of children age 4–17 used natural products (National Health Interview Survey 2012). Because the use of natural products is so frequent and increasing, improved education is also necessary for medical schools, postgraduate medical training programs, and continuing medical education (CME). There seems to be an increased need among medical students to want more education in integrative medicine, according to surveys conducted by the Center for Research in Medical Education and Healthcare at Thomas Jefferson University (Thomas Jefferson University).

The National Center for Complementary and Integrative Health (NCCIH) is a lead agency for scientific research on complementary and integrative health approaches within the US Department of Health and Human Services. The aim of the NCCIH is “to define, through rigorous scientific investigation, the usefulness and safety of complementary and integrative health interventions and their roles in improving health and health care.” Their scientific objections are to support fundamental science and method development, improve care for hard-to-manage symptoms, and foster health promotion and disease prevention. This is a positive contribution to enhance sustainable integrative models of health for the future, making it relevant and effective in order to address the many health challenges that face the global population.

## The Basic Approach of CAM

According to Micozzi (2011: 9) there are five common characteristics of complementary and alternative medicine, namely, (1) a wellness orientation, (2) a reliance on self-healing, (3) an inference that bioenergetics mechanisms play a role, (4) the use of nutrition and natural products, and (5) an emphasis on individuality.

The basic philosophy of CAM includes:

- The body heals itself or has a “self-healing” ability. CAM uses therapies and modalities that support the body’s innate ability to heal itself.
- Identifying and treating the root cause of disease, rather than alleviating symptoms through surgery or drugs.
- Personalizing the treatment model: incorporating DNA and focusing on the whole person as a unique individual or the “individuality.”
- Educating the patient and empowering them with knowledge of their body’s functioning.
- Making use of a systems approach versus a Newtonian approach with the focus on living systems present within the body, as well as the ecosystem or outer environment of the body or patient.
- The patient or person is the center of focus and attention and not the medical system itself.

Two main approaches characterize CAM. The first approach is based on healing practices steeped in centuries of experience and rooted in particular belief systems of particular societies or traditions. The second type of practices includes therapies that are part of recent developments in the field of complementary medicine and run the risk of not having enough scientific research and studies to back it up. For example, the first category can include healing traditions of the east, including traditional Chinese medicine and acupuncture, manual therapies like osteopathy and chiropractic, massage, and homeopathy. These therapies very often include a focus on healthy lifestyle factors like exercise and nutrition, as well as the important role the mind-body connection plays in the healing process. The 2012 NIH survey indicated that yoga, chiropractic or osteopathic manipulation, meditation, and massage therapy were the most common mind and body approaches used by adults currently (National Health Interview Survey 2012).

## Mind-Body Practices

The National Center for Complementary and Alternative Medicine uses four main categories to define CAM, namely, (1) mind-body medicine, (2) biologically based practices, (3) manipulative and body-based practices, and (4) energy medicine (The National Center for Complementary and Alternative Medicine 2018). The definition of mind-body practices is a variety of techniques designed to enhance the mind's capacity to affect bodily function and symptoms (National Center for Complementary/Alternative Medicine 2008). Mind-body techniques include relaxation, hypnosis, visual imagery, meditation, biofeedback, cognitive behavioral therapies, group support, autogenic training, and expressive arts therapies such as art, music, or dance.

## Ayurveda and Yoga

For thousands of years, many cultures of the world have been practicing yoga, while examining the ways it could lead to a better understanding of human existence. "Yoga" can be said to be

an overarching category that includes all Asian mind-body practices, whether from India (Hatha yoga etc.), Tibet (Tsa lung Trul khor [rTsa lung 'Phrul 'khor]), China (T'ai chi, qigong), or other Asian origins. In the field of complementary and alternative medicine, yogic practices are categorized as both "energy medicine" and "mind-body medicine." Only within the past few decades has Western science begun to seriously explore these yogic practices to determine how they affect psychological, behavioral, physiological, and biological processes. Scientific research has shown that these practices modulate brain activity and diminish the psychological and biological effects of stress, and that at the minimum, these practices result in an acute relaxation response, lower blood pressure, heart rate, and subjective rating of stress. It is well established that yoga has a preventive and curative role on high blood pressure and heart diseases, but the mechanism of action is yet to be clearly determined (Sujatha and Judie 2014).

More recent research is showing that these different practices can also help people suffering from chronic illnesses (Chaoul and Cohen 2010). An example of this is type 2 diabetes, a chronic disease that has increased over recent decades from 108 million in 1980 to 422 million in 2014, according to the World Health Organization ([The World Health Organization](#)). Improving insulin sensitivity, glucose tolerance, and lipid profiles and preventing obesity and hypertension are the tangible benefits of yoga in patients with type 2 diabetes mellitus (DM). The scientists around the world accepted that it also leads to a reduction in oxidative damage (delays aging), improves pulmonary function and coagulation profiles, and decreases sympathetic activation in patients with type 2 DM-related chronic disorders. Yoga may also be useful in reducing medication requirements in patients with type 2 DM and could help to prevent cardiovascular complications (Bhattacharya and Singh 2016).

Among alternative medicine practices, yoga and Ayurveda are the most popular in India. Yoga and Ayurveda both are originated as part of a great system of Vedic knowledge and share virtually the same anatomy and physiology, which consists of 72,000 subtle channels (nadis),

7 energy centers (main chakras), 5 bodily seats (Pancha koshas), and the serpent power (the Kundalini Shakti). Ayurveda makes the best use of the metaphysics of yoga and yoga practices to treat the patient in totality. It also advocates the regular practice of asanas (yoga position), pranayama (conscious awareness of breath), and meditation as well as the use of body purification procedures, herbs, food, and chanting of mantras for physical and mental health. Ayurveda reveals the secret powers of the body, as well as the role of the senses, breath, mind, and spirit. More importantly, it includes transformational methods to improve most lifestyle factors through proper diet, herbs, panchakarma, and meditation. Herbal medicines also play an important role in Ayurveda (Bhattacharya and Singh 2016).

Ayurveda, an ancient Indian system of medicine documented and practiced since 1500 B.C., follows a systems approach that has interesting parallels with contemporary personalized genomic medicine approaches to the understanding and management of health and disease. However, there is a gap between research and clinical practice in Ayurveda. An over-reliance on reductionist methods of research leads to a piecemeal evaluation of Ayurveda ignoring its complex whole system approach in actual clinical practice. Variations in traditional diagnosis, the choice of treatments, and the methodology of research are responsible for the contradictions in the research findings. Ideally, best clinical practices at the point of actual care should be identified and studied using appropriate research methodologies (Prasher et al. 2016).

A study done in Hong Kong with elementary school teachers who experienced mild level of stress, anxiety, and depressive symptoms was the first of its kind to formulate a stress management program using an integration of cognitive behavioral therapy (CBT) and complementary and alternative medicine (CAM) approach. The 12-h program involved cognitive behavioral therapy, self-management, relaxation techniques (diaphragmatic breathing and progressive muscle relaxation), mindful exercises (qigong and yoga), aromatherapy, and acupressure. The study provided preliminary evidence for the clinical

efficacy of such multicomponent intervention program in relieving depression, anxiety, distress, and physiological responses among teaching professionals. As stress has been shown to affect individuals' psychological and physical health adversely, it is essential to explore ways to manage the associated symptoms (Tsang et al. 2015).

Many people are now turning to CAM practices as a way to reduce stress as there is substantial evidence showing the negative health consequences of sustained stress on health and well-being through profound psychological, behavioral, and physiological effects. These psychological and behavioral effects of stress may include increased adverse effects, post-traumatic stress disorder, increased health-impairing behaviors (e.g., poor diet, lack of exercise, or substance abuse), poor sleep, and decreased quality of life. A small study of 31 breast cancer survivors who suffered from persistent fatigue symptoms took part in a targeted yoga intervention that led to significant improvements in their fatigue and vigor, a common complaint of cancer survivors posttreatment (Bower et al. 2012). If yoga can prove valuable to support patients facing a serious life-threatening diagnosis like cancer, it should seriously be considered as part of optimal care of more cancer patients.

Each year the evidence mounts showing another medical population supported by the incorporation of mind-body practices alongside conventional Western medical care. The significant strides in our understanding of the role of these practices in health and well-being are supported by the findings of the studies examining the psychological, behavioral, and biological outcomes of these interventions. Demonstrating that yoga practices do not only make you feel better but also have an impact on brain activity, immune function, and endocrine function, as an example, provides a better indication for the profound implication these practices can have within a medical setting. There is a real opportunity for rigorous scientific research to begin to understand the role of these practices to improve the health and well-being of humankind on a broader scale.

However, a challenge to the field has always been the limited funding available to this kind of

research versus the conventional biomedical fields of study. Although the funding remains relatively quite limited, it has increased in the past 10 years, and interest continues to mount. The more evidence accumulates for the role of mind-body practices in medical care, the higher the allotment of funding this area will receive. Many medical centers already have incorporated mind-body practices as part of the standard of care. Although these practices are not necessarily prescribed and thought of in the same way as conventional medications, they are being delivered alongside medical treatments to help improve outcomes. As more evidence accumulates, the day will come when mind-body practices are a form of medical treatment provided and prescribed as part of standard medical treatment around the world (Chaoul and Cohen 2010).

### **Osteopathy, Chiropractic, and Massage Therapies**

A wide range of massage and manual therapies and techniques dates back for thousands of years. The commonality in these approaches is the focus on the normalizing of the connective tissue or fascia of the body, as well as the manipulation of the structural components of the body, like muscles, ligaments, bone, vertebrae, and tendons to improve overall structural integrity, as well as the general well-being of the individual. Various approaches and therapies are becoming part of mainstream medical settings as part of proactive general maintenance as well as for reactive treatment of dysfunction.

#### **Osteopathy**

Osteopathy was initially developed in the late 1800s by Andrew Taylor Still, an American physician. Osteopathic philosophy identifies the human being as a trinity, including body, mind, and spirit, and supports the notion that the body can heal if the structure is perfect (Micozzi 2011: 237).

The American Osteopathic Association emphasizes the following contemporary osteopathic philosophy in 1998 as follows:

1. The human being is a dynamic unit of function.

2. The body possesses self-regulatory mechanisms that are self-healing in nature.
3. Structure and function are interrelated at all levels.
4. Rational treatment is based on these principles.

A study done by Korotkov et al. (2012) demonstrates that osteopathic manipulation helps to relieve pain and muscle tension that also improves lasting relaxation (Liebert 2012). Further research in the field of osteopathy will support the value of it in the field of medicine.

#### **Chiropractic**

Daniel David Palmer was a self-educated healer who founded the chiropractic profession in 1895 in Iowa, USA. He based the treatment on two fundamental principles, namely, (1) that vertebral subluxation or spinal misalignment causes abnormal nerve transmission that is the primary cause of almost all disease and (2) that chiropractic adjustment (manual manipulation of the subluxated vertebrae) is the cure (Micozzi 2011: 257). Chiropractic practice is the third largest independent health profession in the Western world, following conventional (allopathic) medicine and dentistry (Micozzi 2011: 255). The treatment by spinal manipulation is for patients whose primary complaints are back pain, neck pain, and headaches. Lower back pain (LBP) is the most common occupational disorder in North America, a primary cause of work absenteeism and a leading cause of disability worldwide (The 2016 Global Burden of Disease Study).

According to the American Chiropractic Association:

- Lower back pain is the single leading cause of disability worldwide, according to the Global Burden of Disease 2010.
- Back pain is one of the most common reasons for missed work. In fact, back pain is the second most common reason for visits to the doctor's office, outnumbered only by upper respiratory infections.
- One-half of all working Americans admit to having back pain symptoms each year.

- Experts estimate that as much as 80% of the population will experience a back problem at some time in their lives.
- Most cases of back pain are mechanical or nonorganic – meaning they are not caused by severe conditions, such as inflammatory arthritis, infection, fracture, or cancer.
- Americans spend at least \$50 billion each year on back pain – and that’s just for the more easily identified costs ([The American Chiropractic Association](#)).

Another common musculoskeletal health condition is arthritis. The Centers for Disease Control and Prevention estimates 50 million Americans have arthritis, with cases increasing and projected to reach 25% of the adult population by 2030. Arthritis and chronic joint pain are the most common causes of disability in the United States, limiting activities of nearly 21 million adults. Globally, musculoskeletal conditions are the second leading cause of disability, behind only mental/behavioral disorders. Rheumatoid arthritis is explicitly characterized by increasing morbidity, excess mortality, rising healthcare costs, premature mortality, disability, and compromised quality of life. Musculoskeletal diseases and arthritis represent crucial public health problems with economic implications for the well-being of individuals and society. Identifying CAM use trends can be used to improve strategies to increase awareness and access to CAM as part of comprehensive and cost-effective approaches for the management and treatment of these conditions (Mbizo et al. 2016).

### Massage Therapy

Massage therapy, another ancient traditional healing art, has first been described in TCM dating back as far as 5000 years ago (Field 1998). Massage therapy is defined as the systematic manipulation of soft tissues of the whole body areas to bring about generalized improvements in health, such as relaxation or improved sleep, or specific physical benefits, such as relief of muscular aches and pains by trained therapists (Vickers and Zollman 1999). According to

Delany and Coughlin (Micozzi 2011: 212), massage therapy is based on the principle that the tissues of the body will function at optimal levels when arterial supply and venous and lymphatic drainage are unimpeded. The basic techniques of massage are directed at the skin, muscles, and fascia to improve basic fluid dynamics in the body.

There are various massage techniques, including lymph drainage, muscle energy technique (MET), myofascial release, neuromuscular therapy, reflexology, Rolfing, Shiatsu, and sports massage. Trager work, strain-counterstrain, tui na, and visceral manipulation (Delany and Coughlin 2011) are therapies that are offered in a variety of clinical settings and are in high demand from patients seeking complementary and alternative therapies. Various treatments are used to treat pediatric, adolescent, and geriatric patients in a multidisciplinary approach in hospitals, physical therapy clinics, rehabilitation centers, and professional sports arenas (Delany and Coughlin 2011). Massage therapy has been widely used to improve healthcare, prevent disease, and prolong life for a wide range of conditions, symptoms, and situations. These conditions include hypertension, rehabilitation after cardiac surgery, type 2 diabetes, headache, dementia, advanced cancer, preterm/low-birth-weight infants, stress, fibromyalgia, osteoarthritis, neck pain, lower back pain, fatigue, recovery from exercise, injury prevention, and for enhancing the quality of life of patients with other chronic diseases (Xiong et al. 2015).

Hypertension is an example of a chronic disease that affects more and more individuals worldwide both in developed and developing countries. Hypertension increases the risk of heart disease and death worldwide. The estimated number of adults with raised blood pressure increased from 594 million in 1975 to 1.13 billion in 2015, comprising 597 million men and 529 million women (The NCD Risk Factor Collaboration 2017). Massage therapy as a complementary therapy has increasingly been used for symptom relief in hypertensive patients with anxiety, depression, headache, vertigo, and chronic pain in the neck, shoulder, and back. As a result of the relaxation

response and through the increase in blood flow throughout the body, an overall decrease in BP for prehypertension and hypertension is thought to occur, which had been confirmed by several studies (Xiong et al. 2015).

## Conclusion

Combining the best of both worlds, namely, complementary medicine practices and conventional medicine in a coordinated way, can pave the way for sustainable healthcare models in the future. This form of integrative medicine (IM) is a relatively new approach driven by patient interest and desire to receive holistic care, rather than a focus on treating individual body systems. The integrative system, conceptualized as transformative integration patterns, is a dynamic and interactive relationship between the two medical paradigms with multidisciplinary arrangements. Articulating the systems that support the integration of the two medical paradigms will enable individual services, practitioners, and patients to consider the model most appropriate for their needs and setting. For the proposed field to progress, a deeper understanding of the concerns of the two systems and the implications for integration is required. Further efforts will also require greater openness and communication (Lim et al. 2017), as well as closer collaboration among the various disciplines and specialties within the medical field.

The principle of integration should ideally be implemented in most healthcare facilities to best serve the needs of the community. Firstly, the CAM integration should happen gradually, since it carries with it conceptual, personal, and organizational changes. Reflection accompanied by research on patient outcomes as well as on sociological and regulatory aspects is necessary to facilitate the acceptance of integrative hospital care and its influence on wider circles. Such integration of conventional and CAM treatments within the hospital setting provides the first steps in what is described as “a revolution in medicine” (Schiff et al. 2012). To match the future sustainable goals of healthcare, more credible education and training institutions need to be established,

similar to the ones mentioned in this entry. These facilities will also play a role to standardize the various complementary therapies.

Current estimates indicate that 38% of the general public in the United States uses CAM, and 69% in Australia have used at least one form of CAM in the past 12 months. The growing interest in IM is reflected by the increasing numbers of general practitioners (GPs)/primary care providers delivering CAM services: 16% in Canada and England, 30–40% in Australia, 47% in the Netherlands, and 85% in Germany ([The Academic Consortium for Integrative Medicine & Health](#)). Part of the challenge for general practitioners to promote the use of CAM therapies is lack of reliable information and concerns about the safety, regulation, and efficacy of natural products, although CAM is thought to be safer with less potential side effects (Von Conrady and Bonney 2017). Therefore the emphasis should be to promote health literacy both in patients and practitioners who are dedicated to improve health, wellness, and quality of life by advancing the understanding of complementary and alternative therapies.

The expected increased consumer demand for the integration of complementary and alternative medicine (CAM) with conventional medicine implies an acceptance and compatibility of the theories, practices, and research of these medicines. Ultimately, the integration of CAM into community health, medical practices, hospitals, and research institutes will provide greater choice and autonomy to the medical consumer (Possamai-Inesedy and Cochrane 2013). A challenge to the CAM field has always been the limited funding available to vigorous research versus the conventional biomedical fields of study. Although the funding remains relatively quite limited, it has increased in the past 10 years, and interest continues to mount. As more evidence accumulates, the future models of healthcare can be standardized to include complementary and alternative medicine as accepted forms of healthcare delivery.

## Cross-References

- **Holistic Well-being: Mental, Physical and Spiritual**

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