Integrating traditional practices into allopathic medicine

An evidence-based policy to improve quality of care in the United States

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Abstract

Although the popularity and demand for traditional medicine (TM) in Western countries has increased dramatically in the last several decades, allopathic healthcare practitioners in developed nations have largely avoided TM due to a lack of scientific evidence and controlled clinical trials supporting it. Unfortunately, the Western medical community's aversion to TM has resulted in a lack of appreciation for its many supposed benefits and is representative of a challenge towards maintaining a high quality of care. The failure to recognize and integrate TM into modern medical practices can lead to adverse effects, such as dangerous drug-herb interactions due to the mixing of incompatible herbs and pharmaceuticals, and a deterioration of the patient-centered model of care due to the lack of TM communication between patients and practitioners. This paper seeks to investigate the current state of traditional medicine in American health care and policy, examine the factors that drive miscommunication between patients and practitioners and introduce solutions that can be implemented to address existing challenges. In addition, this paper highlights successful examples of integration of traditional and modern medicine systems in developing countries, which can serve as a model for the United States.

Introduction

The World Health Organization (WHO) defines traditional medicine (TM) as the "sum total of knowledge, skills, and practices" of unique cultural origin that can be used to treat disease and illness and improve physical and mental wellness (WHO, 2005). This mode of classification is used interchangeably with complementary and alternative medicine (CAM), a term used to denote TM in countries that do not recognize or incorporate TM into their formal health care systems, and includes dietary supplements such as natural compound-based vitamins, herbal medicines such as gingko and ginseng and therapeutic practices such as yoga, acupuncture and tai chi (WHO, 2005). Even today, TM/CAM have remained popular alternatives to modern medicine due to their many benefits, including a relative lack of short-term side effects, low long-term toxicity, and a culturally accepted general effectiveness (Qian, 2007; WHO, 1986).

TM/CAM has traditionally played an important role in the health care systems of many African and Asiatic countries, where an estimated 80% of the population utilize some form of alternative therapy for primary care (WHO, 2008). In these regions, the importance of TM/CAM as an option for treating disease is widely recognized by citizens and medical practitioners alike (Zhang, 2000). However, in developed countries such as the United States, an alarming disconnect exists between TM/CAM use by the public and allopathic healthcare professionals. Despite estimates that one in three Americans consistently utilize TM/CAM in the United States either by seeking care from an alternative health care provider or by self-prescribing oral TM/CAM medications (Barnes, Powell-Griner, McFann & Nahin, 2004; van Tilburg et al., 2008), practitioners of modern allopathic medicine have remained wary of TM/CAM, citing concerns such as a lack of dialogue with TM/CAM practitioners and doubts about TM/CAM efficacy (White, Mitchell & Ernest, 1996). As a result, discussions of traditional remedies that the patient may be utilizing often do not surface in clinical encounters, which may lead to dangerous herb-drug interactions and adverse outcomes if an incompatible pharmaceutical drug is prescribed. Given these challenges to patient safety and quality of care, it is imperative that open communication between healthcare providers and patients be emphasized and promoted on a national level in the United States.

Prevalence of TM usage in Western countries

The popularity and demand for TM/CAM have skyrocketed in Western countries such as the United States, France, Germany and Australia over the past two decades, largely due to the perceived advantages of these types of therapies over modern pharmaceutical options for treating some types of health problems (Qian, 2007). In France, Germany and Australia, 46-69% of the population reported having used some form of TM/CAM, (Fisher & Ward, 1994; Xue, Zhang, Lin & Story, 2007), and the demand for herbal remedies has caused annual revenues to reach five billion USD in Western Europe alone (WHO, 2008). In the United States, public health records in combination with data from the Center for Disease Control's (CDC) 2002 National Health Survey revealed a similar trend, in which 65-70% of Americans reported having used at least one form of alternative therapy in their lifetime (Barnes, Powell-Griner, McFann & Nahin, 2004). In addition, the percentage of TM/CAM patients in the United States has been steadily rising over the past several decades, with the number of annual visits to alternative therapy providers exceeding the number of visits to all primary care physicians in 1990 (Eisenberg et al., 2003). Indeed, this trend of increasing TM/CAM use accelerated dramatically between 2002 and 2007. During this period, CAM use increased across all major racial and ethnic groups: 18.1% among whites, 17.2% among Asians, 6.6% among blacks and 1% among Hispanics (Su, 2011). This trend suggests that TM/CAM is likely to exert considerable influence on the current and future state of health care.

Lack of open TM/CAM dialogue between doctors and patients: an opportunity for intervention

Despite the surge in public interest in TM/CAM therapy, Western countries have largely failed to integrate TM/CAM into recognized health care programs (Chi, 1994). This failure stems in part from the lack of regulatory procedures and standardization measures for approving TM/CAM treatments, partially due to the lack of clinical trials. However, another important factor is the lack of open communication between allopathic physicians and their patients. Data from the United States in particular indicate that the lack of dialogue between health care providers and patients concerning TM/CAM usage has become an increasingly complex problem. The study, conducted by the American Association of Retired Persons (AARP) and the National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health (NIH), showed that over 40% of patients do not disclose personal TM/CAM usage to their health care providers. Even if alternative medicine is discussed at a medical appointment, it is twice as likely to be brought up by the patient as by their health care provider (NIH, 2011). Such findings suggest that the burden of determining the right treatment and exploring alternative medicine options rests with patients, who often lack the relevant medical knowledge and expertise to make safe, fully informed decisions.

The AARP and NCCAM put forth two reasons for the observed lack of communication between patients and physicians regarding TM/CAM. The first reason, which was observed in 42% of cases, attributes the lack of dialogue to the failure of health care providers to ask appropriate questions or facilitate comprehensive doctor-patient dialogue (NIH, 2011). Other studies have confirmed this finding, with evidence that practitioners asked one or more questions about alternative therapies in only 3.4% of patient encounters (Sleath, Rubin, Campbell, Gwyther & Clark, 2004). The second contributing factor to the lack of communication, which represents 30% of existing cases, suggests that patients may harbor feelings of hesitancy as to whether or not to bring up the topic of TM/CAM usage during a medical appointment (NIH, 2011). One study found that only 2% of patients asked their physicians one or more questions about alternative therapies, suggesting that patients expected the clinician to bring up the topic of alternative medicine usage, tended to anticipate negative responses from their physicians and/or detected an impression of disinterest (Adler & Fosket, 1999; Frenkel & Borkan, 2003). This assumption is troubling, as evidence points to the tendency of clinicians to interpret the low levels of communication about TM/CAM as a sign of low use among patients. This supposition, when combined with the low level of understanding of TM/CAM treatments among Western allopathic physicians, appears to limit the discussion of TM/CAM in the brief clinical encounter, a detriment to patient well-being (Shelley, Sussman, Williams, Segal, & Crabtree, 2009).

The failure to recognize Traditional Medicine practices alongside allopathic medicine in the doctor-patient relationship can harbor dangerous consequences.

The dangers of ignoring TM/CAM usage

The failure to recognize TM/CAM practices alongside allopathic medicine in the doctor-patient relationship can lead to dangerous consequences, including toxic drug-herb interactions and a failure to administer the most effective treatments. During an allopathic medical visit, doctors routinely ask patients to provide a list of drugs they are currently taking as a cautionary step to prevent harmful drug interactions in the case that additional medication is prescribed. While herbal medication is derived from natural sources, dangerous herb-drug interactions have been observed when TM/CAM remedies are taken concurrently with pharmaceutical prescriptions. As a result, TM/CAM usage may cause adverse outcomes for patients who do not disclose their TM/CAM-related medical history to their physician (Langmead & Rampton, 2001; Miller, 1998; D'Arcy, 1991). For example, herbal medicines such as psyllium and aloe sap, which increase gastrointestinal transit and absorption and are commonly taken as laxatives, are likely to exert downstream gastrointestinal side effects or alter the pharmacokinetics of oral prescriptions when administered together with certain pharmaceutical drugs (Langmead & Rampton, 2001; Ernst, 1999). St. John's Wort, a plant used to treat depression and anxiety, can limit the effectiveness of common prescription drugs such as synthetic anti-depressants and birth control pills when taken concurrently (NIH, 2007). Research has revealed numerous other adverse effects of various herb-drug interactions such as bleeding, induction of mania, increased risk of hypertension, mild serotonin syndrome and decreased drug absorption (reviewed in Fugh-Berman, 2000). Moreover, in cases of chronic degenerative diseases that require on-going treatment, such as cancer and diabetes, the potential for adverse outcomes from herb-drug interactions can be further magnified.

In addition to increasing the risk of adverse outcomes, failure to acquire information on patient use of TM/CAM can lead to oversight of the most effective course of treatment. In some cases, herb-drug interactions can induce chemical synergy, providing a greater benefit to the patient if both treatments are used together rather than individually. For example, Alzheimer's disease is characterized by reduced activity of choline acetyltransferase, an enzyme critical in the biosynthesis of the neurotransmitter acetylcholine. Acetylcholine plays an important role in learning, memory and synaptic plasticity in the central nervous system. Standard modern therapies typically employ cholinesterase inhibitors to decrease the rate at which acetylcholine is broken down. However, a recent study found that in patients with Alzheimer's disease, the cognitive benefits of the combination of donepezil, a standard therapeutic cholinesterase inhibitor, and Kami-Untan-To, a traditional Japanese herbal medicine that upregulates choline acetyltransferase at the mRNA level, were greater than when either treatment alone was used (Maruyama et al., 2006). Without the integration of TM/CAM discussions into routine medical visits, such a beneficial herb-drug synergy would not be utilized.

Encouraging collaboration and integration: a proposal to integrate TM/CAM into modern American health care practices

Given the dramatic increase in TM/CAM usage by the American public over the past several decades, it is imperative that these alternative therapies are accounted for and integrated into the standard clinical encounter. Unfortunately, major barriers to the integration of TM/CAM into American medicine include the lack of clinical trials for many TM/CAM therapies, the absence of information about the active ingredients and composition of an herbal treatment and the lack of strict regulation for many alternative medicine products. Here is proposed a three-step model that addresses these limitations in order to establish more open communication among physicians and to effectively integrate TM/CAM into modern medicine in the United States.

Initiating the TM/CAM discussion in the context of the medical visit

Traditionally, strategies designed to increase communication with patients about TM/CAM have recommended that clinicians acquire wider knowledge about specific TM/CAM therapies (Shelley, Sussman, Williams, Segal, & Crabtree, 2009). However, evidence suggests that the primary limitation to the discussion of TM in the clinical encounter actually resides in the initiation of the conversation. Physicians do not have to be experts in alternative treatments nor do they need to receive formal homeopathic training. They simply need to

show nonjudgmental interest, and candor regarding limited knowledge. Appropriate measures must be implemented to ensure that clinicians take the initiative to begin the discussion. A logical first step in this direction is implementation of a mandate by the American Medical Association (AMA) requiring certain questions about TM/CAM and other alternative therapies to be asked during the recommended annual physical examination.

Regulating the quality of patient experiences with TM/CAM products and practices

Once the physician has initiated the conversation and determined the patient's interest in engaging in TM/CAM practices, the physician must determine whether the patient prefers to, (a), engage solely in TM/CAM medications and practices or, (b), integrate both allopathic medicine and TM/CAM into his or her course of care. In the case of the former, it is imperative that the physician provides the patient with safe, trusted and reliable access to TM/CAM therapies. Currently, two major threats to patient safety are the lack of proven evidence of some alternative therapies, and the large quantity of counterfeit or adulterated TM/CAM products in the international drug market (WHO, 2008). Indeed, scientific evidence demonstrates that there is only a 50% probability of selecting an authentic TM/CAM product containing both the correct species and correct plant component at the indicated dosage (Betz, Fisher, Saldanha & Coates, 2007). Since there currently exist no regulatory bodies in the United States that ensure the efficacy and safety of TM/CAM products, patients often rely on false and inconsistent claims to make their decisions. We propose three key recommendations to address this issue. First, measures should be taken to establish a regulatory body that oversees the quality assurance of TM/CAM products on the market and the training and licensing of TM/CAM practitioners. Second, rigorous clinical trials should be undertaken to ensure that only effective TM/CAM therapies that adhere to strict standards of patient safety are available. Finally, physicians should develop their own list of trusted TM/CAM providers in their community and inform patients interested in procuring TM/CAM treatment of these providers. Generating provider lists would not only benefit patient safety but also encourage physicians to communicate and collaborate with TM/CAM practitioners.

In the case in which patients prefer to integrate both modern and traditional medicine into their treatment plans, allopathic physicians should take the initiative to gain some knowledge of TM/CAM treatments so that herb-drug combinations can be prescribed without the risk of dangerous side-effects. Increased government funding for research in these areas and a requirement by the AMA to include TM/CAM as part of the required medical school curriculum will help ensure that this knowledge is more readily available. In the long-term, truly effective patient-centered care requires the formal integration of TM/CAM and alternative medicine practitioners into primary care, with the support of requisite scientific evidence and clinical experience (Frenkel & Borkan, 2003).

Formally integrating TM practitioners into primary care

To date, while some studies explore the role of TM practitioners in the primary health care team, the question of how to systematically integrate alternative therapies into formal health care systems has yet to be addressed (Ben-Arye, Scharf & Frenkel 2007). Currently, there exist documented frameworks that can provide the basis for regulatory guidelines in the establishment of this model. In the United States, the Federation of State Medical Boards developed an outline for integrating TM/CAM into conventional health care systems, including guidelines for educating and regulating alternative therapy practitioners, initiating certifications and licensures for state-regulated alternative therapy health care practitioners, using approved TM/CAM products in medical practice and organizing the integration of accepted standards of care with legitimate medical uses of alternative medicine (New Model Guidelines, 2002). Similar frameworks have been proposed in Great Britain, although they are narrower in scope and do not provide guidelines for ensuring TM/CAM efficacy and safety, selecting and educating TM/CAM practitioners or facilitating dialogue between patients and providers (Frenkel & Borkan, 2003; British Medical Association, 2009). Unfortunately, there exist several barriers to the implementation of these guidelines, including organization, cost and the exclusion of TM/CAM from insurance coverage, which forces patients to bear the brunt of the financial burden. The removal of these barriers requires a coordinated national effort among government, physicians and insurance companies. For example, the establishment of a national task force dedicated to overseeing the integration of TM/CAM into primary care, and the requirement for insurers to include licensed TM/CAM healthcare providers in their reimbursement policies, would go a long way towards the creation of a unified, and more effective, healthcare system.

The above proposals align directly with the long-term vision of the WHO on the future of TM/CAM. Overall, the WHO encourages countries to establish national regulations to control the quality of herbal products and to license TM/CAM practices to ensure patient safety (United Nations, 2009). To this end, the WHO has completed the first steps in identifying the challenges of incorporating TM/CAM into formal healthcare systems, such as, (1), maintaining international diversity of treatment options; (2), crafting national policy and recognition to support and integrate traditional medicine into national health care systems; (3), promoting patient safety by upgrading the skills and knowledge of traditional medicine providers; (4), acknowledging TM/CAM as part of primary health care to increase access to care and preserve knowledge and resources; and (5), ensuring the safety, effectiveness, and quality of TM/CAM products (WHO, 2008). The establishment of doctor-patient communication regarding TM/CAM treatment is an interdisciplinary, collaborative effort that would address steps 1-4, four of the five pressing challenges regarding TM/CAM as recognized by the WHO.

Valuable lessons on integrating TM with allopathic medicine from developing countries

According to data collected on the global relationships between TM/CAM and allopathic medicine, many developing countries have taken steps towards meeting the WHO goals of integrating the two practices. For instance, the Chinese government, which instituted an integrated allopathic-homeopathic health system in the 1950s, has mandated a national policy stipulating regulatory measures for TM practice, products and research, in addition to an insurance policy that covers both traditional and modern medicine (WHO, 2005; UN, 2009). Governments of African countries including Tanzania, Indonesia and Ghana have also enacted national laws to recognize traditional practitioners, including the establishment of a set of minimum criteria to approve physicians who wish to practice TM/CAM (WHO, 2008).

Recognized integration of TM/CAM treatment into formal health care systems has brought forth many unanticipated benefits in patient safety and quality of care, most of which arise from the improved standardization, cataloging and control that regulatory bodies are able to exert over drug manufacturing and regulation. For example, many Chinese laboratories that manufacture TM/CAM products are equipped with state of the art ultra-performance liquid chromatography systems that are able to precisely examine individual batches of product pre-distribution in a high-throughput manner, ensuring tight quality control on TM/CAM products available in the market (Cordell, 2011). In addition, government recognition of TM/CAM has led to significant advances in drug discovery, particularly through collaborations that apply local resources and indigenous knowledge to the design of new drugs

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for global diseases (Cordell, 2011). A number of conventional pharmaceutical drugs have been derived from plants used in TM/CAM, such as digoxin from foxgloves, aspirin from willow-bark, quinine from cinchona-bark and morphine from the opium poppy. More recently, the potent anti-malarial drug artemisinin was developed from the isolation of an extract from the Artemisia annua plant, a product that has been used in traditional Chinese medicine for thousands of years (Klayman, 1985).

Despite the many benefits of integrating TM/CAM with modern medical practices, concerns still exist regarding the transferability of TM/CAM practices due to the wide range of social, economic and cultural differences between developed and developing nations. In particular, the United States and many other Western countries may lack the cultural support for TM/CAM typically rooted in hundreds of years of history, as observed in places such as China. In addition, the governments of democratic nations lack the Chinese government's ability to enact sweeping mandates that ensure rapid TM/CAM integration with allopathic medicine. However, with the implementation of rigorous clinical trials, regulatory bodies and government oversight, the United States can enact measures to ensure that TM/CAM is effectively and safely utilized even without a firmly established cultural base.

Conclusion

While modernization often rests on the paradigm that developed countries provide aid to the rest of the world, Western nations such as the United States can learn from the practices of developing countries to address the challenges that arise from the intersection of TM/CAM and modern medicine. Given the widespread popularity of TM/CAM among Americans, reviewing the successful integration efforts of healthcare systems such as those of China and African nations is essential. By following the lead of developing nations, the United States can take steps towards improving the quality of American primary care through the integration of homeopathic and allopathic treatment.

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