GLOBAL PERSPECTIVES

Systems Approaches: A Global and Historical Perspective on Integrative Medicine

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Citation
Global Adv Health Med. 2012;1(1):10-11.

Key Words
Systems, medicine, integrative, Tibetan, traditional Chinese, TCM, Ayurveda, n-of-1, India, China

The globalization of healing systems is a dance of cultural awareness and cultural dominance that has arisen throughout history. With the development of greater communication and interest in whole-systems approaches to healing, the opportunity for the development of a global perspective on healing has emerged with new life force. The birth of integrative holistic healing systems in the West, such as naturopathic, homeopathic, anthroposophic, integral and functional medicine, and others, echoes the ocean of wisdom present in traditional healing systems, such as traditional Chinese medicine (TCM) and Ayurveda. In working to integrate the lessons from these systems, we see the inextricable link between man and the natural world, we work to understand the root cause of disease, we focus on the whole person to return balance, and we use empiric observation in large populations over time to grasp the interrelationships inherent in the whole-systems view of illness and wellness.

Western medicine has progressed during the past 100 years with an emphasis on scientific method, allowing for incredible advances in pharmacology and acute care. During the past 50 years, there has been an increasing emphasis on evidence, as delineated through the randomized controlled trial (RCT)—an idea promoted by the US Food and Drug Administration Section 335(D) in 1964 as a means of evaluating a single therapeutic intervention. However, by definition, this approach does not allow for personalization. Multiple variables are controlled, but there is no ability to assess the clinical utility of an RCT in the "real world" of clinical practice. Compare this with the billions of people who have received diagnoses and treatment over thousands of years within the whole-systems approaches of TCM and Ayurveda—clearly another form of evidence, with an emphasis on "what works" clinically. Now that the spectrum of evidence begins with anecdotes and intuitive hunches based upon clinical experience, moving toward case studies, cross-sectional reviews, prospective studies, and on to RCTs. All forms of evidence have value.

An interesting phenomenon occurs when the rigors of Western reductionistic scientific methodology move us toward increased specialization, ie, knowing more and more about smaller and smaller phenomena. As the lens of investigation narrows its scope, so does the clinical value of the lessons learned. We have seen multiple examples over the past few years of drugs that have been approved and widely used for the treatment of "disease A" and then been implicated in increasing the risk of "disease B." When there is a laser-like focus on a singular disease without evaluation of overall mortality and/or the effect of a therapeutic agent on the entire person, we lose the perspectives of a systems-based, holistic approach to healing.

TCM and Ayurveda intrinsically consider the entire person—indeed the entire community—when developing their approach to healing. Chinese medicine has long espoused the concept that macrocosm and microcosm recapitulate the same phenomenon—assimilation, transportation, energy production, detoxification/elimination, maintenance of structure, and other essential functions—whether at the level of the subcellular organelle, the organ, the person, the community, or the universe.[1] This awareness may seem abstract to the practicing clinician until there is an understanding that the functions of the whole system must be understood in dynamic relationship with each other in order to facilitate appropriate diagnosis of the root cause and proper treatment of the individual person.

This new order of thinking may constitute a barrier to entry for physicians who have developed their knowledge base through the linear, reductionist process of Western medicine. Very few doctors could discuss the difference between relative benefit, absolute benefit, and number needed to treat in a clinical trial. It is a clear understanding of these concepts that drives our clinical intuition that the current care paradigm does not effectively treat complex chronic disease with the standard pharmaceutical armamentarium. New systems-based approaches, including integrative medicine, metabolic medicine, and functional medicine, require us to change our mindset from one of disease as defined by an ICD-9 code toward a clinical passion to investigate the root cause of any given symptom complex, recognizing that the process becomes more difficult with increasing severity of illness, loss of reserve capacity, and a prolonged timeframe of disease. We assess imbalance and disease from the perspective of function and dysfunction.

In clinical practice, we begin to ask a new set of questions. How is this person assimilating with their environment? Is this person effectively breathing in oxygen and, possibly, organic pollutants? Is this person effectively digesting and absorbing the 30 to 40 tons of macronutrients and micronutrients they eat in a lifetime? TCM evaluates the interrelationship between the functioning of the large intestine and the lungs, the yin and yang organs of the "metal" element. Ayurveda considers the

pre-eminent role of the lungs and large intestine as absorbing *prana* (life energy). These whole-systems perspectives are integrated into the framework of functional medicine, in which we investigate an imbalance in the process of assimilation when someone is not receiving the nourishment that they need. In order to understand the root cause of illness and effectively treat the whole person, we must gather, synthesize, integrate, and apply this information in clinical practice.

Physicians, healers, sages, and politicians have sought to integrate the best forms of health and medicine for the past 2 millennia. Cultural information flow between India and China occurred nearly 2000 years ago, during the Buddhist era. The philosophical beliefs of each country contributed to its medical healing systems, Yoga in India and Taoism in China. Both healing systems include a theory of 5 elements, with Ayurveda applying them to physical structure and TCM seeing the 5 qualities of wood, fire, earth, metal, and water as representing the functional relationships between processes.[2] Many have tried to overlay similar concepts onto different culture perspectives, thought patterns, and spiritual belief systems. The most informative and possibly the first real effort to develop an integrative medicine occurred in Tibet during the 7th century, when King Songtsen Gampo organized the first medical conference. During this time, doctors from India, China, Nepal, Greece, Persia, and other countries were invited to Tibet and brought with them medical texts that were later translated into Tibetan. Tibetan medical researchers were encouraged to incorporate Ayurvedic, Chinese, and Shangshung Bonpo medical principles into their work. This international conference developed into a complex system of healing that interweaves spiritual, shamanic, and rational healing practices based on the view of health as a harmonious balance between the physical, mental, emotional, spiritual, and natural worlds.[3]

It is easy to glorify the series of events in Tibet, but it should be clear that the acceptance of diversity through multiple streams of (sometimes conflicting) information provides a foundational framework of tolerance over standardization. Early in my career of studying different forms of healing, it seemed to me that the use of pulse diagnosis within TCM and Ayurveda could be used as a tool to standardize the diagnosis across healing systems. However, even with the use of pressure sensory electrodes, it was found that the pulse waveform varied depending upon who was taking the pulse. This clinical confirmation of the Heisenberg uncertainty principle tells us that the observer changes the field. Our perspective on healing has an influence on each patient we touch.

We turn now to the emerging field of integrative medicine around the world. This globalization has varied implications for different cultures. Many physicians in China and India have eschewed their traditional healing systems because they are not perceived as having "status." There have been precious few research efforts that work to evaluate the efficacy of the whole-systems approach to healing within the peer reviewed medical literature. And Westerners have had little experience with integrating the philosophical framework of whole-systems healing approaches with the training they received in medical school and residency.

The importance of systems-based research in healthcare cannot be overstated. The n-of-1 case report has the potential to expand to a case series, using an empiric, qualitative approach to classify phenomena as they occur in clinical practice. This includes the operational gathering of data on patients' quality of life, diagnostic measures, treatment modalities, and follow-up data. The expansion of opportunities in this arena to monitor thousands, if not millions, of individuals will provide us with the statistical power we need to evaluate clinical utility. For example, one could assess the overall benefit to an individual who received standard medical care for irritable bowel syndrome (IBS) and compare that with an IBS patient who uses acupuncture and/or digestive enzymes in addition to standard medical care. The assessment of multiple different root causes for IBS as well as multiple treatment approaches can be evaluated over time with the participation of a sufficiently sized population.

This new journal, *Global Advances in Health and Medicine*, begins to focus on this globalization through educational materials, including this journal, as well as strategies to gather data and report on systems-based healing research. The tools offered here will help us to see the inextricable link between man and the natural world, to understand the root cause of disease, to focus on the whole person returning to balance, and to use clinical observations over time to see the interrelationships inherent in the whole-systems view of illness and wellness.

We cannot be content to simply deliver high-quality personalized integrative medicine to one individual at a time. We are at the frontline of integrative, systems-based clinical research. As sages over time have asked, "If not you, who? If not now, when?"

Join us.

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