

# Integrative approach to health: Challenges and opportunities

## INTRODUCTION

Health care workers worldwide have recognized the inadequacy of western medicine in combatting chronic diseases. They also are aware of the merits of the integrated approach to health. In recognition of this, National Institute of Health (NIH) USA dedicated a separate institute, to address the issues related to complementary and alternative medicine (CAM). However, the regulatory agencies in the USA, UK, and EU countries have banned the sales of herbal medicine in their respective countries citing, safety issues and lack of clinical evidence about efficacy. In these countries, those who have not received relief from the western medicine are seeking CAM therapies. Since the majority of countries are trying to develop an affordable universal health care, there is great global interest in an integrated approach to health. Prof. Patwardhan *et al.* recently have put together an excellent book on this subject, which thoroughly discusses, documents the advances made in biomedical sciences, debate opportunities, and challenges in developing an integrated approach to health. In this overview, I have reviewed part of their work and shared some of my views on the topic and offered some suggestion. India is beneficiary to an ancient art and science of healing. It also has vast herbal resources. Furthermore, the Indian government has recognized and licensed both traditional medicine practitioners as well as modern medicine practitioners. We have a wonderful opportunity to develop a robust integrated approach to health as a model for global affordable healthcare.

## BOOK REVIEW

“Integrative Approach for Health: Biomedical Research, Ayurveda and Yoga,” published by Academic Press, an imprint of Elsevier Publications, The Netherlands, is a unique book, authored by Dr. Bhushan Patwardhan, Dr. Gururaj Mutalik, and Dr. Girish Tillu. It is unique because, it brings the collective experience of three

generations of scientific progress. Dr. Gururaj Mutalik, of the first generation, has superb academic and public health experience. The second generation represented by Dr. Bhushan Patwardhan has seen the rapid progress of biomedical sciences, and the emergence of translational science. Dr. Girish Tillu has grown up with information technology and represents the new generation. These authors bring a unique blend of domain expertise to each of this book’s three components: Biomedical Research, Ayurveda, and Yoga. Authors of this monograph have discussed all aspects of integrative approach to health in the 12 chapters: Advocacy for Integration, Evolution of Medicine, Concepts of Health and Disease, Evidence-Based Medicine and Ayurveda, Systems Biology and Holistic Concepts, Lifestyle Behavior, Food and Diet, Health Supplements, Drug Discovery and Ayurveda, Longevity, Rejuvenation and Rasayana, Personalized Approaches to Health, Integrative Approaches for Future. The subject is well researched, meticulously documented, discusses thoroughly from a historic perspective, current opportunities and challenges, as well as futuristic possibilities. The book should become an integral part of medical education in countries like India, for students of both allopathic as well AYUSH systems. Authors pose number of questions related to the current practice of health care, discuss pertinent information, and conclude, “That some of the answers to these questions may be found in collaboration with the experimental wisdom available in traditional systems.” After reading this authoritative book, the major questions that arise in the mind are; why are we waiting? What is preventing us from adapting such an integrative approach to health care? Can it be adapted globally? Can it be adapted in developing and resource poor countries?

## INTEGRATED APPROACH TO HEALTHCARE

To keep the discussion focused, I will limit my views to the development of an integrative approach to health care as it relates to the prevention of cardiometabolic diseases. Indians have a very high incidence of coronary artery disease compared to any other ethnic group in the world.<sup>[1-3]</sup> According International Diabetes Federation, India has the largest number of diabetics. Currently, we have 65 million diabetics in India and an equal number of prediabetics.<sup>[4]</sup> To create awareness, develop educational and preventive programs, I started a professional society (South Asian Society on Atherosclerosis and Thrombosis [SASAT];

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www.sasat.org) in 1993. Since then we have organized over 15 international conferences in India and published several books on the subject.<sup>[1-6]</sup> At the SASAT-2006 conference in Bengaluru, we had organized a round table conference to discuss this very topic, as to how to develop an integrative approach to health. The experts who participated in these discussions felt the need to develop a common platform to bring the various disciplines of traditional medicine together. In view of this need, we launched a platform called, Global Alliance of Traditional Health Systems. At that time, we discussed the challenges and opportunities for integrative health care in India and abroad. Since the book of Patwardhan *et al.* also discusses in depth these issues, it becomes a common theme for those interested in developing a new affordable approach to health care. All those working in this area recognize that modern medicine has failed to address the issues related to the prevention of chronic disease. At the same time, they firmly believe that the Indian traditional medicine with its holistic ways can better serve this underserved area of health care.<sup>[7-11]</sup> Any discussion on the development of integrative approach to health will have to address what is applicable or feasible in Western countries and at the same time consider what will be relevant, achievable in developing and resource poor countries.

If we are thinking of integrative approach for global health, then we have to consider the concerns that the major Western countries have in adapting this approach and the efforts that they are making to include the integrative approach in their health care systems. An integrative approach is a way of life; just like the holistic medicine is a way of life, compared to modern medicine, which is disease, focused. In recognition of the growing body of evidence about the importance of integrative approach to health, in 2009 Institute of Medicine (IOM), NIH, USA, organized a summit on Integrative Medicine and Health of the Public. More than 600 health care providers participated in this summit. The IOM summit summary states, “The disease-driven approach to care has resulted in spiraling costs as well as a fragmented health system that is reactive and episodic as well as inefficient and impersonal.” In spite of such strongly worded statement, therapeutic aspects of traditional medicine in which herbal products or herbal preparations are used, have no place in the modern medicine, as US-Food and Drug Association (FDA) and regulatory agencies in Europe have banned sales of such products as therapeutic drugs. In the USA, Public Health Services established National Center for Complementary and Alternate Medicine (NCCAM) in 1991. Over 50 US academic institutions have complementary medicine programs funded by NCCAM. Dr. Josephine P. Briggs has been the director of this institute for over a decade. According to

her, the use of herbal medicine is not acceptable, as they do not meet the safety and efficacy criteria established by the US regulatory agencies (FDA). Since we are making a case for Ayurveda, we should also note that no states in the USA license Ayurvedic practitioners, although a few States have approved Ayurvedic schools.<sup>[12]</sup>

## CONCERNS ABOUT SAFETY AND EFFICACY OF TRADITIONAL MEDICINE

In view of the concerns expressed in the previous paragraph, it would be difficult for us, to promote an integrative approach to health, in the US, UK, and EU. In order to get approval by regulatory agencies in these countries, we will have to do robust clinical studies, provide data on the safety and efficacy of AYUSH products. As authors have suggested in their book, Ayurvedic medicine can take lessons from its Yoga component in evolving a road map, to move toward integrative evidence base. According to them, such evidence-based investigations are important to properly position Ayurvedic herbal medicine in the competitive international market. Authors know very well the studies that have been done in the past in India, to develop protocols, clinical testing, and validation. In fact they summarize their finding on this subject in the following way; “Admittedly many of these efforts have not produced any remarkable products, processes or protocols and desired impact on the scientific community is yet to be seen. Saper *et al.* did a unique study in which they did an internet search for herbal products available in US and of the 673 identified products they selected 230 Ayurvedic medicines and analyzed for the presence of toxic components.<sup>[13]</sup> Twenty percent of these products contained metal components such as lead, mercury, or arsenic. What this study also demonstrates is that 80% of the randomly selected Ayurvedic drugs were relatively free of toxic components. We should take advantage of such studies and develop complementary data on the efficacy of these products.<sup>[14]</sup>

Although regulatory bodies have banned the use of herbal products in UK, USA, and EU countries, let us briefly discuss the level of enthusiasm for an integrative approach to health in these countries. According to an article by Joos *et al.*, more than two-thirds of the patients in Germany use CAM. Based on their survey they concluded that CAM is highly valued by many family practitioners and is already making a substantial contribution to first contact primary care in Germany.<sup>[15]</sup> One in ten of the UK population use the complementary medicine, and 50% are lifetime, users. A recent House of Lords’ report has expressed great interest in the need for further research into, both safety and efficacy of these therapeutic modalities. According to George Lewith, Professor of Health, Department of

Medicine, Southampton General Hospital, UK, over the last 8 years a unique multidisciplinary team (nonclinical postdocs, doctors, nurses, physiotherapists, pharmacist, and health psychologists) has been put together to address CAM related therapies. These studies have been directed at asking not only where complementary therapies may be most applicable but also whether and how they work. In March of 2009, The First International Congress of Ayurveda was held in Milan, Italy.<sup>[10]</sup> The importance of this event was evident by the number of national and international participants (400) attended. It also brought much-needed endorsements that added a significant political dimension of high social impact, due to the topical period of CAM acceptance and integration in health care in Europe. Khorsan *et al.* did a systematic review of integrative health care research: Randomized control trials, clinical controlled trials, and meta-analysis.<sup>[16,17]</sup> In their search that yielded 11,891 citations, they found only 6 clinical studies in which four were randomized. In spite of the fact that they did not find too many randomized clinical studies, they concluded that integrative care regimen appears to be generally safe. According to the World Health Organization, more than one billion people are using herbal medicines, and in India more than 65% of people in rural areas use such medicinal plants and Ayurveda as part of their primary health care needs (Times of India August 2, 2012). According to a publication (2002) of the Central Council for Research in Ayurvedic Sciences (CCRAS-AYUSH) government of India, one of the key challenges facing AYUSH is generating data on scientific validation on the safety and efficacy of classical formulations. In spite of this revelation in as early as decade ago, we have achieved very little progress in addressing this issue.

This book by Prof. Patwardhan *et al.* looks at two promising areas of traditional medicine, Ayurveda and Yoga. However, after review of literature on these two topics, one feels the real need to standardize the practice of both of these therapeutic modalities, develop methodologies, protocols, clinical tests and validation tools for various therapeutic practices, digitize, collate data, and publish the results of clinical studies in high impact journals. Just like the studies by Khorsan *et al.* at the military medical research and integrative medicine at Samuel Institute, California showed very little published information on randomized clinical studies, even in the much widely accepted field of Yoga, very little data are available. According to the authors of this monograph, “Research institutions in the USA, Europe, Canada, Australia and China are involved in researching and teaching the practice of Yoga. The Cochrane Library cites 21 systematic reviews and PubMed cites 172 reviews on Yoga. While several institutes, which teach Yoga have thrived, the contribution to biomedical research in Yoga from India is marginal. For instance,

out of 21 Cochrane reviews, only one has come from India (from Apollo Hospitals), and four each from the UK, USA, and Canada.” In spite of this observation they conclude that “Ayurvedic medicine can take lessons from its Yoga component in evolving strategies and creating a road map to move it toward an integrative evidence base.” Whereas, both these disciplines need to develop evidence/observance based knowledge and not rely on the fact that these therapeutic modalities have prevailed in India for centuries. It is high time that we develop the needed trained human resources, infrastructure and expertise to undertake clinical studies on our traditional therapeutic modalities.

When we are trying to find ways and means to develop an integrative approach, we should think without bias as to how we improve these two well-recognized disciplines of the Indian traditional medicine to global standards and how we can integrate them for use in India. It is not an easy task. Just consider a simple fact that both Ayurvedic Vaidyas and Allopathic doctors graduate from 4 years colleges in India, licensed to practice their respective fields, yet there is clear cut boundary between them. There are over 700,000 Vaidyas in India and an equal number of allopathic doctors. How do we integrate their practice? How do we harmonize the two different approaches to healthcare? It may or may not be possible to bring them on a common platform. We can certainly try and develop a modern integrative health care facility where licensed medical doctors of modern medicine and practitioners of other “AYUSH” disciplines practice side by side. One can develop a unique model of health care, which would combine the best of Eastern and Western medical practices on one platform. We can introduce integrate approach for future generation by introducing these subjects in Medical Colleges, Ayurvedic Colleges, and Yoga Universities. The book by Patwardhan *et al.* should serve as the beginning of such an effort and should be made a part of the health care education in India, so that students of AYUSH, as well as modern medicine, become familiar and debate these issues with unbiased views. Deemed universities with multidisciplinary departments should initiate the concept of integrative health approach and facilitate the development of translational science and research. One such example of well thought out integrative medicine facility is North Hawaii Community Hospital in the USA. When Earl Bakken the founder of Medtronic Inc., Minnesota, retired and moved to the big Island of Hawaii, the local Hawaiians asked him to build a Holistic Hospital. He did build a patient-centric modern holistic hospital ([www.nhch.com](http://www.nhch.com)). According to him, it is “Not Just Another Hospital” but, one that was conceived, designed constructed and operated according to what he termed “Blended Medicine.” That is, the practice of integrative medicine (the best of high-tech, combined with the best of

high-touch or healing touch or the human, caring approach including complementary modalities) provided, within a healing environment ([www.earlbakken.com](http://www.earlbakken.com)).

### NEED FOR POSTGRADUATE TRAINING PLATFORMS FOR GRADUATES IN TRADITIONAL MEDICINE

In order to provide advanced training in research and clinical disciplines, we should develop postgraduate institutions on integrative health medicine, similar to the All India Institute of Medical Sciences to train AYUSH graduates in the science and arts of clinical validation of AYUSH products. An initiate postgraduate training program with NCCAM and its affiliated academic institutions. Establish teaching and research “Chairs” in Ayurveda and Yoga in reputed US and European Universities. Develop working relationship with the Academic Consortium for Integrative Medicine and Health ([www.imconsortium.org](http://www.imconsortium.org)) of the USA, which includes 57 highly esteemed academic medical centers, working on integrative medicine and health. Encourage the development of a certification board for integrative health similar to the board of integrative medicine in the USA ([www.boim.org/certification.html](http://www.boim.org/certification.html)). Authors are very well aware of the causes of this health care crisis, lack of accessibility, availability and affordability, market forces driven health care, unresolved challenges despite biomedical advances and the unavailability of knowledge-based decision support systems. These causes remain same, whether we consider the traditional medicine or modern medicine; although authors suggest that some of the answers to these questions may be found in the wisdom and experience of traditional methods. We should address these issues with the idea of implementing integrative health care in India and develop appropriate solutions.

### CONCLUSIONS

Scholars interested in developing integrated health care, should develop a “Consortium of experts” of like-minded individuals and work with AYUSH, Indian Medical Council, as well as Ministry of Health and Family Welfare, to find out ways and means to integrate traditional medicine in India, where we have over 700,000 Vaidyas and an equal number of Allopath’s practicing medicine. Of course, it is easier said than done, when it comes to integrate these two disciplines. However, it is possible to introduce this culture at the level of medical education. As is done in China, we could introduce an integrative approach to health in the medical colleges as well as in Ayurvedic colleges. Authors have achieved great credibility, visibility and some degree of success by debating all aspects of the integrative approach to health and providing their collective wisdom on this

subject in this comprehensive book. Those who do not have access to this book should refer to some of the relevant articles published in this journal.<sup>[18-35]</sup> With the publication of this authoritative book, they have created a window of opportunity, to promote this concept in India and bridge the health care gap. With honorable Narendra Modi leading the country, the time is ripe, to develop an unbiased workable platform for integrative approach to health, which could in the near future, become an affordable global health care model for the rest of the world.

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