Editorial

Directions for revitalization of Ayurveda in the 21st century

Ayurveda, as a knowledge system has existed for a long time; however, it is still not being explored and developed in the country where it originated. Ayurveda today, has still yet to make a national and global impact and has to be contemporized for the 21st century. Although at its frontiers it has already created the emerging transdisciplinary field called ‘Ayurveda – Biology’, the process has just begun. Indian Industry is not being adequately aided despite the brilliant short bursts of energy exhibited during the ‘Golden Triangle’, an initiative of CSIR for developing star pharmaceutical, nutraceutical and cosmeceutical products of global acceptance, the Indian industry is still inadequately aided. Given the sophistication of Ayurveda, creating world class education institutions which may attract global students still remains a distant dream. Although patients all around the world have started seeking services for non-surgical conditions from Ayurveda, the scale and proportion is hardly significant.

1. Present scenario

Many factors contribute to this present scenario and one of the main reasons appears to be that the State and Central Governments have starved Ayurveda research for more than 70 years since independence; it received similar financial treatment for 100 years during pre-independence era at the hands of colonial rulers. During this period, Ayurveda survived largely on community support with subcritical public investment in research, education, clinical services, public health and in industry as well. Presently, at the national level, Ayurveda receives a small outlay of around 2.5% of the Central health Budget and at the State level, it receives a minuscule part of the state health budgets. Evidently, the expectation is that the governmental efforts will spark innovation and growth. This expectation is unrealistic not just in the Indian governmental context but holds good throughout the world. Western biomedicine has hundreds of big and small, domestic and global players in health services, manufacturing, research and medical education with huge investment running into trillions. In contrast, Ayurveda is largely India centric with negligible global presence and a total estimated annual turnover of around 10 billion in private industry and health services and a negligible investment in research.

Ayurveda’s strength and potential is derived from its deep connect with nature and its highly evolved epistemology. The core strength of Ayurveda stems from its incredibly holistic world view rooted in the observer-observed framework of sankhya; its profound five valued logic derived from nyaya; and vaishika, its understanding of systemic change in life processes that use algorithms (sutra) based on refined qualitative parameters and pattern recognition. Ayurveda has a remarkably insightful theory of disease progression (shad kriya kala) and chronobiology; possesses an ecologically sensitive scheme of diagnostics (das-vid-pariksha); and has demonstrated clinical acumen to observe, classify and establish causality (karya karan vivechana). Prevention, wellness and treatment of NCDs is also one of the core strengths of Ayurveda. The Ayurvedic strategies for immunity (vyadishamta) and tissue regeneration (rasayana tantra) can lead to new research at the 21st century frontiers of healthcare. Its systemic pharmacology (dravya guna shastra), its thousands of brilliantly designed food and drug formulations (bhaishaj kalpana) with undiscovered pharmacokinetics and dynamics can feed a new paradigm of drug discovery for syndromes and personalized nutrition science (nutrigenomics) for decades to come. Ayurveda understanding of the influence of food, metabolism and lifestyle on physiological processes in particular phenotypes which correspond to genotypes, can guide epigenetics and predict health trajectory of individuals. Ayurveda also has an inspiring symbiotic relationship with village based health traditions, wherein millions of homes and community based healers; use ecosystem specific plant resources for health security of humans, livestock and for agriculture.

Despite its strengths, Ayurveda definitely has some limitations in current scenario. Its present frame cannot generate solutions for management of emergency and acute conditions and understanding of molecular level change is minimal. This traditional system of medicine still has to learn a great deal from modern surgical technologies even if in yesteryears it pioneered and gifted surgery to the world. Today, Ayurveda needs to interface in an epistemologically informed manner, with molecular biology in order to discover its own mode of actions at the structural level and embrace tools of information technology to organize its enormous multifaceted data, in searchable formats. Rigorously documented clinical experiences interpreted through Ayurveda-biology will deepen modernization of healthcare in India.

2. The way forward

The decadal vision for research on Ayurveda biology should focus on themes of global interest that can impact the world of medicine [1]. Research priorities will need to be carefully set and selected themes pursued for 10 years at a stretch. Examples of potentially high impact research themes include chronobiology; new holistic theories in nutrition science; immunity; regenerative biology; microbiome; biology of taste; biophysics of endothermic and exothermic metabolism; pharmacodynamics and kinetics of herbo-mineral formulations; metabolic effects of detoxification...
The challenge before policy makers and investors in innovation is to strengthen and create competent not-for-profit institutions in the private sector which have the capacity to design and execute bold, path breaking strategies in education, health services and research, with trans-disciplinary foundations in Ayurveda and biology. Despite its poor institutional performance, today, astute observers can detect that the time for the quantum growth of Ayurveda has come. This is not due to the sudden upsurge of creative energy within the Ayurvedic community or change in working of government policies but essentially due to the limitations of western biomedicine and the inevitable and serious global search for alternatives. India can leap from its current obscurity and occupy center stage in the coming decade due its powerful knowledge legacy.

Globally, there is a growing demand for the introduction of healthcare based upon the best knowledge and practices drawn from different healthcare systems. The inadequacy of any single system of healthcare to solve all contemporary health needs has been assessed by ‘laypersons’ and has hence, contributed to the rising global demand for pluralism in healthcare. It is probably this assessment and the consequent public demand for wider options that are responsible for the dramatic global growth of the Traditional Complementary and Alternative Medicine (T-CAM) movement during the last 3 decades and the nascent evolution of different models of Integrative Medicine (IM) in both the public and private sector. Foreign governments and regulatory bodies also appear to have accepted the imperative for pluralistic approaches in healthcare and we possess an incredibly rich medical heritage of our own. The limitations of singular health knowledge systems at the frontiers of medical and life sciences are being recognized globally. These limitations arise due to the reductionist theoretical framework and its methodological limitations that permit only partial understanding of the complex biological phenomena. Thus, despite the remarkable insights into cellular biology, the understanding of life processes at the systemic level remains incomplete. Even today, underlying pathways for biological changes are hardly understood and drug actions established after expensive clinical trials, have unpredictable side effects. This suggests that our understanding of life is still in its infancy. It is tempting to suggest here that the approach of modern medicine which starts at the molecular level and progresses towards building systems, now referred to as ‘Systems Biology’, will intersect with the holistic approaches of traditional medicine’s if expertise and research are managed carefully leading to sustainable solutions to managing health.

While medical pluralism may be visualized as the future direction and indeed the new form of healthcare, the shift from singular knowledge systems to new plural systems cannot happen without very significant and long term investments in integrative research, education and health services. Medical pluralism is bound to express itself in a new knowledge field which, for the sake of a convenient but distinct term, we may refer to in the Indian context as ‘Integrative Trans-Disciplinary Health Sciences and Technology’. India can be a world leader in this new field of ‘Integrative Trans-Disciplinary Health Sciences and Technology’ because over the last century or so, we have assimilated and achieved a reasonable degree of competence in the areas of biomedicine and life sciences and we possess an incredibly rich medical heritage of our own.

At this juncture, it is very important for policy makers to understand that India’s medical heritage flows into two streams and therefore any revitalization agenda has to address both the streams. The first stream is a community based system of local health practices and is ecosystem and ethnic community specific. The second stream comprises of the codified systems like Ayurveda, Siddha, Sowa Rigpa, Unani and Yoga. Fortunately, in the last decade AYUSH and National Health Policy (AYUSH Policy 2002, NRHM Policy Framework 2005), have also recognized the community based stream even if this recognition has not yet translated into substantial support for its revival. The携带 of this stream are millions of households and around one million folk healers. The number of village based healers is larger than all the paramedics on the payroll of the government. These healers continue to enjoy a definite social legitimacy in their own localities. They have knowledge of a wide range of healing practices ranging from birth delivery, bone-setting, herbal cures, treatment of poisonous snake and scorpion bites, rabies to infertility and veterinary-care. These healers are seen across the length and breadth of the country. The folk knowledge systems have an amazing system of oral transmission of knowledge that has sustained and evolved over centuries. Even today, this stream contributes substantially to the health security of rural communities, particularly the poor. However, their contribution has neither been properly evaluated nor acknowledged.

In 2018, in order to strengthen the capacity of folk healers, the Quality Council of India, Foundation for Revitalization of Local Health Traditions, and the Trans-Disciplinary University have collaborated to pilot a scheme for Accreditation and Certification of Prior Learning (ACPL) of folk healers. 520 folk healers in small pockets of six states of India viz. Chhattisgarh, Gujrat, Karmataka, Orissa, Rajasthan and Tamil Nadu were certified through an internationally acceptable ISO process in selected streams of practice namely management of common ailments, midwifery, jaundice and dislocations and fractures, against a set of minimum standards.
Given the current global and domestic trends, it seems that the ‘time’ for executing a well-conceived revitalization strategy for the Indian medical heritage has come. Revitalization of India's indigenous health sciences will contribute to original contributions in biomedical research and will give the country a competitive edge for global leadership in ‘integrative healthcare’ [2]. There are several paths that can be taken, but not all of them will result in the revitalization of India’s medical heritage. The knowledge of Ayurveda if positioned in the appropriate transdisciplinary research platform can transform 21st century healthcare and make India a world leader in health sciences. This positioning involves visualization of bold initiatives and collaborative partnerships of genuine Ayurveda knowledge holders with the best science institutions in India and abroad. This is a complex organizational task that requires outstanding leadership. The program needs critical and sustained support for 10 year missions on strategic problems. It needs to be executed in a coordinated way by visionary and missionary leadership located in a network of institutions.

India should harness Ayurveda to fulfil two promises that it holds. The first promise is health security for millions in primary healthcare and public health while the second promise is to make original contributions to the world of medicine and life sciences. The need of the hour is for consortium of public spirited thought leaders and industrialists to mobilize private and public resources to invest in strategic translational research, integrative education and integrative healthcare through an innovation fund managed not by government but by a council of visionaries who have track records of achievement.

References

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