

Health sector reforms for 21st century healthcare

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ABSTRACT

The form of the public health system in India is a three tiered pyramid-like structure consisting primary, secondary, and tertiary healthcare services. The content of India's health system is mono-cultural and based on western bio-medicine. Authors discuss need for health sector reforms in the wake of the fact that despite huge investment, the public health system is not delivering. Today, 70% of the population pays out of pocket for even primary healthcare. Innovation is the need of the hour. The Indian government has recognized eight systems of healthcare viz., Allopathy, Ayurveda, Siddha, Swa-rigpa, Unani, Naturopathy, Homeopathy, and Yoga. Allopathy receives 97% of the national health budget, and 3% is divided amongst the remaining seven systems. At present, skewed funding and poor integration denies the public of advantage of synergy and innovations arising out of the richness of India's Medical Heritage. Health seeking behavior studies reveal that 40–70% of the population exercise pluralistic choices and seek health services for different needs, from different systems. For emergency and surgery, Allopathy is the first choice but for chronic and common ailments and for prevention and wellness help from the other seven systems is sought. Integrative healthcare appears to be the future framework for healthcare in the 21st century. A long-term strategy involving radical changes in medical education, research, clinical practice, public health and the legal and regulatory framework is needed, to innovate India's public health system and make it both integrative and participatory. India can be a world leader in the new emerging field of "integrative healthcare" because we have over the last century or so assimilated and achieved a reasonable degree of competence in bio-medical and life sciences and we possess an incredibly rich and varied medical heritage of our own.

Key words: Healthcare, integrative medicine, public health

LIMITATIONS OF INDIAN PUBLIC HEALTH SYSTEM

Introduction

The public health system in India despite growing investments in every national 5-year plan (1.1% of GDP in 2012) and even after over 65 years of its functioning, has not yet delivered universal primary healthcare to the citizens of India. Around 70% of the Indian population spend money for primary healthcare services from their

own pockets. This article argues that it is necessary to urgently reform the content of public health system and make it more pluralistic. Medical pluralism in India is specially relevant because of the richness of India's Medical Heritage which offers a unique opportunity to integrate across 5 traditional systems of healthcare. A new national policy 2015 to replace the last policy formulated in 2002 is on the anvil. This policy can usher in a new regime of integrative healthcare.

The Indian public healthcare system has 3 tiers. The 3 tiers operate through a large number of Government, that is, taxpayer financed, primary secondary and tertiary healthcare institutions and a larger number of private (for-profit) institutions and a much smaller number of private (not for profit) organizations. At the base of the pyramid of the health system, are the primary healthcare institutions in the form of dispensaries and small-sized general hospitals. A substantial number of them are in the government-sector, but they have a larger presence in the private sector. Higher up the pyramid are the secondary institutions (like district and private hospitals) and at the top are the tertiary services provided by few well-equipped medical college hospitals and mostly by corporate super specialty establishments.

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Experts have identified a host of operational issues and gaps that plague the public health system. These relate to inadequate infrastructure, financing, human resources (HRs), drugs, HR policies, health information system, insurance and governance.^[1] It is therefore in need of radical reform. The government is aware of the gaps in the functioning of the public health system as is evident from official reviews prepared by the Planning Commission. While the gaps do get addressed from time to time, through various schemes, the reform happens in the typical piece-meal fashion that characterizes government interventions. The officially declared goal of the public healthcare system is free and universal primary healthcare. However, even after 66 years around 70% of the population do not receive satisfactory or free primary healthcare and they are therefore forced to seek help from private providers and thus pay out of their own pocket.^[2]

Public health experts in recent times have observed that safe drinking water, sanitation, nutrition, lifestyle, and the environment are key determinants of health and that the health system must address these basic needs. In practice however, the health system does not appear to have any influence, mechanism or programs, to address these key determinants of health because water, sanitation, nutrition, environment are domains managed by ministries other than the health ministry.

Skewed funding and poor integration denies the public of advantage of synergy arising out of the richness of India's medical heritage

The “content” of India's postindependence health system is mono-cultural. It is almost wholly based on western bio-medicine. In fact 97% of the national health budget, since 1947 has been allocated to Allopathy. Postindependence, the idea of integrating and mainstreaming seven other legally sanctioned health systems with Allopathy has been mentioned in the introductory paragraphs, of all national 5 years plan and policy documents. In practice the eight systems of healthcare viz., Allopathy, Ayurveda, Siddha, Sowa-rigpa, Unani, Yoga, Naturopathy, and Homeopathy function in silos. The seven AYUSH systems receive only 3% of the national health budget and the departments of AYUSH across all Indian states operate with this meager funding.^[3] The AYUSH department despite their limited funding, operate a parallel national health service, unconnected to the mainstream 3 tier health system, with around 24,000 dispensaries and 3000 small general hospitals, across 30 states.^[2] The AYUSH public health services are planned and managed by the departments/directorates of AYUSH at the center and states. The planning and administrative machinery for AYUSH is distinct from the Departments of Health and Family Welfare that plan and administer the mainstream public health system, and

thus AYUSH services are not aligned to national health priorities. They are mostly at the level of primary care.

The official AYUSH budget has sub-critical allocation for extramural research, education and for regulation of safety and quality. This is the reason why the AYUSH systems during the last 60 years have hardly generated any evidence-based clinical, pharmacological or pharmaceutical outputs and also the reason why the regulatory system is ineffective.

The not for profit private sector in AYUSH is the public face of AYUSH. While there is no data on its growth and performance, judging from its visibility in the form of private dispensaries and secondary care hospitals, it is perceived to be a more effective provider of AYUSH health services to the community. The Indian public availing AYUSH depends on this sector for quality health services. The limited evidence-based AYUSH research available in the public domain is generated by this sector through mostly, nongovernment funding.^[4]

An overview of the Indian public healthcare system thus clearly suggests that despite the fact that eight legally sanctioned health sciences operate within the health system, due to their skewed funding and poor integration, the public does not receive the advantage of synergy arising out of the richness of India's Medical Heritage.

THE WRITING ON THE WALL: INTEGRATIVE HEALTHCARE APPEARS TO BE THE FUTURE FRAMEWORK FOR HEALTHCARE IN THE 21ST CENTURY

All over the world there is evidence of growing public demand for making available healthcare choices, based upon best knowledge and practices, drawn from different healthcare systems.^[5] In India also we see this trend reflected in the actual health seeking behavior of communities wherein people seek to combine or choose for different health conditions Allopathy or Ayurveda, Siddha, Sowa-rigpa, Unani, Homeopathy or Yoga or a combination. For emergencies and surgery Allopathy is the first choice, for common ailments it is Ayurveda, Sidha, Yoga, Unani, Sowa-rigpa or Homeopathy, for chronic conditions it may initially be Allopathy and then a rebound to some other system, when there is insufficient relief. The public demand for pluralism in healthcare is probably based on a realistic assessment by “laypersons” of the inadequacy of any single system of healthcare to solve all their contemporary health needs. Governments and regulatory bodies also appear to have accepted the imperative for pluralistic approaches in healthcare with the caveat that all new, potentially useful healthcare interventions, must establish their safety, quality

and efficacy. An objective manifestation of the global acceptance of medical pluralism is reflected in the creation of government-sponsored national research institutes for complementary and alternative medicine (CAM) in the United States (like National Center for CAM) and in Europe Norway, (NAFKAM) Sweden and in the introduction of introductory modules on integrative medicine (IM) in medical schools in countries like the US and UK. It is probably this public assessment that is responsible for the dramatic growth of the CAM movement and the nascent evolution of different models of IM in both the public and private sector.

From the globally observed health seeking behavior trends, it is apparent that the era of monoculture in healthcare is coming to an end. Integrative healthcare appears to be the future framework for healthcare in the 21st century.

THE LIMITATIONS OF SINGULAR KNOWLEDGE SYSTEMS

While the mainstream Indian public health system relies largely on one single knowledge system viz., modern medicine, for its services, at the frontiers of medical and life sciences the limitations of singular health knowledge systems are being recognized.

The limitations of bio-medical sciences arise due to the reductionist theoretical framework of science. This framework imposes methodological limitations which permit only partial understanding of complex biological phenomena at the cellular level. Thus, the understanding of life processes which are essentially systemic remains incomplete. Even today, underlying pathways for biological changes are hardly understood and therefore drug actions established after expensive clinical trials, have unpredictable side effects. Today, specially in the context of noncommunicable diseases, the world of medicine is no longer looking for blockbuster drugs aimed at single targets; it is looking for drugs that correct underlying physiological imbalances that manifest as syndromes. Even for infectious diseases, it is no longer looking for single molecules (that inevitably result in drug resistance) but rather for combinatorial drugs. This suggests that our understanding of life is still in its infancy, and intelligent *ab initio* design of therapy is difficult. It is tempting to suggest here that the approach of modern medicine which starts at molecular level and progresses toward building systems, now referred to as systems biology, and the traditional medicine's holistic understanding and approaches will intersect fruitfully if expertise and research are managed carefully leading to new and sustainable solutions and perhaps original contribution to the world of medicine and life sciences.

In fact during the last decade on the knowledge plane, the tremendous potential of trans-disciplinary research in health sciences (integrating in an epistemologically informed manner Ayurveda and Modern biology) is already beginning to be demonstrated. The pioneering work of^[6,7] linking the Ayurvedic phenotypes to genotypes has opened up huge possibilities for new understanding of human physiology, new design strategies for drug development, early detection of diseases and differential schemes for clinical management. Similarly, in the context of community health,^[8] it has demonstrated that the traditional advice for storing drinking water in copper vessels is probably the world's cheapest solution for microbial purification of drinking water. In the context of management of chronic diseases, a recent pilot clinical study from Pune published in rheumatology (Oxford) 2013^[9,10] and another study sponsored by National Institutes of Health, USA^[11,12] have concluded that the systemic, holistic management of rheumatoid arthritis based on Ayurveda, is as effective as the best biomedical treatment with specific drugs and has lesser side effects. The work of IITs^[13] on classical herbo-mineral-metallic preparations of Ayurveda called bhasmas, reveal that bhasmas prepared by these reputed institutions, in exactly the way prescribed in Ayurvedic texts using rudimentary, home scale technologies, resulted in finished products that were of nanoparticle sizes. It was further observed that such microstructures as were produced through traditional technology could not be easily produced through conventional chemistry procedures in laboratories.

Several other examples can be cited about the potential and scope of Integrative research. These leads if pursued consistently and boldly have the potential to create new paradigms in modern science, technology, and medicine.

MODERNIZING INDIA'S HEALTHCARE: INDIA CAN BE A WORLD LEADER IN THE NEW EMERGING FIELD OF "INTEGRATIVE HEALTHCARE"

Integrative healthcare thus needs to be viewed as a modern 21st century agenda. Casual observers wonder how modernity can be advanced by combining modern western biology and biomedicine with traditional Indian health sciences. The reason for doubt is because the mainstream schools of sociology have posited the modern and traditional as opposites. In fact historical analysis of European modernity as a case study, clearly reveals that the roots of modernity lie in tradition (just as the roots of the present lie in the past) and that in effect modernity is evolving tradition. Due to the recent history of colonialism, the colonized nations were led to believe that they needed to import modernity from their colonizers. But

the colonial era is long over and in modern, independent nations it is essential for civil society and polity to realize that modernization of all societies must derive inspiration from their own traditional roots. While import and knowledge exchange, across different cultures, is desirable in a globalized world, neglect of one's own knowledge traditions, when they are of contemporary value is suicidal.

India can be a world leader in this new emerging field of "integrative healthcare" because we have over the last century or so assimilated and achieved a reasonable degree of competence in biomedical and life sciences and we possess an incredibly rich medical heritage of our own.

Outline of health sector reforms for 21st century healthcare

India has over the last 200 years successfully borrowed the modern western model of a 3 tiered institutionalized structure from western nations. We have, however, not yet modernized our own heritage. Casual observers wonder how modernity can be advanced by combining modern western biology and biomedicine with traditional Indian health sciences. The reason for doubt is because the mainstream schools of sociology have posited the modern and traditional as opposites. In fact historical analysis of European modernity rooted in classical Greek tradition, clearly reveals that the roots of modernity lie in tradition (just as the roots of the present lie in the past) and that in effect modernity is evolving tradition. Due to the recent history of colonialism, the colonized nations were led to believe that they needed to import modernity from their colonizers. But the colonial era is long over and in independent nations it is essential for civil society and polity to realize that modernization of all societies must derive inspiration from their own traditional roots. While import and knowledge exchange, across different cultures, is desirable in a globalized world, neglect of one's own knowledge traditions, when they are of contemporary value is suicidal.

Hence, the task of modernizing India's public system is still incomplete.

Today, the Indian public health system is at crossroads. Despite massive investments over the last almost 65 years, it has not delivered even universal primary healthcare.^[1] Health seeking behavior studies reveal that the citizens of the world also recognize the limitation of a mono-cultural health system and are therefore exercising alternative choices.^[14] The moot question before the Indian polity is, should the country further increase investment into a singular system of healthcare or should at this point of time India innovate and diversify its health system by evolving a new integrative healthcare system in the 21st century.

It make sense, in the 21st century for a national government sensitive to social realities of public health seeking behavior which is already exercising pluralistic choices, to expand the scope of the wholly western medicine content of health care and refine it by deriving strategies, content and form, from our own traditional knowledge systems. India has had rich experience in managing healthcare for centuries in the longest surviving, and evolving health tradition in the world. Over 6500 species of medicinal plants, around 300 animal products, 70 metal and minerals are available in AYUSH systems.^[15] The Traditional Knowledge Digital Library, computerized by Council of Scientific and Industrial Research has already documented around 200,000 herbal formulations alongside their therapeutic indications. The total global estimate of Allopathic formulation is of the order of 4000. India possesses an estimated 100,000 medical manuscripts on medicine and surgery which includes sophisticated knowledge of pharmacology, pharmacy, diagnosis, therapies, prevention, and wellness.

We need to utilize our heritage. In the short run, it is necessary to shed unrealistic demands for immediate presentation of a large amount of clinical evidence about AYUSH systems. This is unrealistic because while limited evidence is certainly available, comprehensive clinical and pharmacological evidence is simply not available. The reason evidence is not available is that the State has for the last 200 years not invested in the creation of such evidence. The budget estimates for 2014–2015 of AYUSH Department of Government of India suggest that even in 2014 the extramural research budget of AYUSH is <Rs. 15 cores/year and managed by bureaucrats ignorant of its potential. The demand for evidence is however, well-intentioned. It can only be met when clinical research begins to get supported in a sustained way.

Today, the integrative agenda needs to build on the National Rural Health Mission (NRHM) 2005 policy framework. We need to select prioritized interventions, selected by AYUSH experts for introduction into the newly named National Health Assurance Mission and into the 3 tiered public health system. Thus, the first step towards extending the social reach of healthcare in India is to urgently reform the existing 3 tiers of the public health system by infusing AYUSH content and HRs. This is a complex exercise as can be seen from the fact that although NRHM had the plan and strategy of co-location and co-posting, it has not worked because no homework was done to bring about the integration of health content derived from the different Indian systems of medicine.^[16] The lesson to be learnt from 9 years of NRHM is that a new national integrative, public healthcare system not only needs logistical moves like co-location and co-posting but

serious clinical exercises for identifying specific AYUSH interventions, orienting medical personnel in their use, developing protocols and cross referral guidelines and such operational details. The AYUSH interventions have to be selected for health services at primary, secondary and tertiary levels.

In parallel, an integrative public health system will simultaneously require radical reform in medical education, medical research, regulations, and the legal framework for medical practice. In the 21st century, an integrative model for public health needs a 10-year budget, a detailed action plan, and strategy, in order to achieve this complex goal.

A second radical step toward modernization of health care in India is to invest in and use its heritage to restore two more traditionally available tiers at the bottom of the pyramid to enrich the health system and demonstrate the efficacy of a uniquely Indian, participatory public health system. These community-based and supported layers were existing until the beginning of the 20th century and are still functioning in eroded fashion. They have been overlooked and neglected in India since the country embraced the western model of public health.

The two new participatory tiers needed are noninstitutional tiers. They will add millions of new health providers to the public health system at zero recurring cost. These tiers are to be managed, as was the case for centuries, by millions of households and traditional community-based health workers. Traditionally, the Indian households were carriers and providers of healthcare to the family. The household was a repository of region-specific, self-help health practices based on the use of ecosystem-specific natural resources. Till recently, the Indian households possessed knowledge of at least a 100 home herbal remedies, nondrug health practices and food and nutrition. The homes had competence to manage common ailments, preventive health practices, and healthy ethnic diets. Every home also knew how to achieve microbially free drinking water with zero energy. The creation of this household tier to the public health system will require critical investment in a creatively designed, Information and Communications Technology enabled health education strategy, for reaching millions of rural and urban households. The second additional tier to be introduced in a modern Indian healthcare system is also a noninstitutional tier managed by community-based and community supported traditional health workers. These workers are based in the villages of India. The country still has an estimated 1 million community supported traditional health workers viz., mid-wives, herbalists, bonesetters, and vishavaidyas. This is a larger HR than the recently created ASHAs who are government supported. The momentum of these part-time traditional health workers needs to be

restored. The first step for restoration is to certify, accredit, and enrich the knowledge and skills of existing folk healers. Pilot experiments for certification and accreditation have already been demonstrated as recently as in 2013. The community support base of the 1 million traditional health workers needs to be reinforced and care taken to avoid making them dependent on government support for their services to the community. The next step will be to motivate a new generation of folk healers to replace the older and ageing currently available generation. Tremendous sensitivity is involved in creating two community supported tiers. This is because while the government needs to invest in their revitalization, the action programs for developing these two tiers cannot be executed by the government. They will entirely have to be led by nongovernment actors.

Thus, a very sensitive and long-term strategy is needed to revitalize and modernize India's public health system and make it both integrative and much more participatory.

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