OBSERVER RESEARCH FOUNDATION MUMBAI

Ideas and Action for a Better India

REFORMS IN MEDICAL EDUCATION

to Promote Accessible and Affordable Healthcare for All

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February 2012

Reforms in Medical Education to Promote Healthcare for all
Roundtable held at ORF Mumbai

Dr. Ranjit Roy Chaudhury making his inaugural address

The audience listens in rapt attention to the presentation of Dr. Sanjay Oak
Front Row L-R: Dr. Suhas Shah, Dr. Padmaja Samant, Dr. Kamaxi Bhate, Dr. Jyotsna Kirtane, Mr. Somnath Das, Dr. P. Sripathi Rao, Dr. Karishma Kolhatkar, Dr. Ratna Ashtekar, Dr. Praful Barvalia, and Dr. Rajesh Sarvadnya

L-R Dr. Arun Agarwal, Mr. Sudheendra Kulkarni, Dr. Ranjit Roy Chaudhury and Dr. Sanjay Oak

Foreword

Sudheendra Kulkarni
Chairman
Observer Research Foundation Mumbai

April 23, 2010, was the blackest day in the history of medical education and the medical profession in India. On that day, Dr. Ketan Desai, president of the Medical Council of India (MCI), and his two associates were arrested by the Central Bureau of Investigation while accepting a bribe of Rs. two crore to grant recognition to a medical college in Punjab. His arrest blotted the reputation of a body that had been mandated, through a legislation passed by Parliament, to regulate and guide all the institutions of medical education in India.

The nobility of the medical profession, and the special responsibility of teachers and physicians to uphold professional ethics, has been affirmed by Charaka Samhita, the Hippocratic Oath and their equivalents in all ancient civilisations around the world. This is also underscored by the leading lights of pedagogy and practice of healthcare in modern times. Shockingly, the MCI under Dr. Desai's leadership turned into a den of corruption. 'Inspection Raj', with all its attendant ills of arbitrary recognition and de-recognition of institutions, lack of transparency and accountability, nepotism, blackmail and extortion, became its dominant mode of operation for well over a decade. Dr. Desai doled out favours to corrupt politicians and bureaucrats, who in turn patronised and protected him.

Dr. Desai's arrest finally forced the government to supersede the MCI with a new Board of Governors and also to promise thorough reforms in the regulation of medical education in India.

This unsavoury development in May 2010 prompted the Observer Research Foundation Mumbai to undertake an extensive study on the current state of medical education in India and to recommend a set of radical reforms for its overhaul. The outcome of this research is now ready in the form of this report, which we are pleased to present before all the stakeholders who are interested in seeing major improvements in medical education — and in India's healthcare system in general.

The problems and tasks in medical education cannot be understood without contextualising them in the broader terrain of the challenges of healthcare in India. This report, therefore, begins with a survey of where our country stands at present vis-à-vis

attainment of the goal of 'Health for All', which, as per the World Health Organisation's Alma Ata Declaration in 1978, ought to have been reached in 2000 itself. It then looks comprehensively at the needs of human resource development in the healthcare sector, which is facing humungous challenges of both quantitative and qualitative nature at all levels. It presents an objective critique of the National Commission for Human Resources for Health Bill, 2011, drawing upon the ideas and insights in ORF's widely acclaimed earlier report on the National Council for Higher Education and Research Bill, 2010. Finally, it makes detailed, focussed and practical recommendations for overhauling the curriculum, pedagogy, teacher training, fee structure, administration and regulation of medical and paramedical education. It lays special emphasis on ensuring that the noble profession of medical education and healthcare remains free from the scourge of corruption.

Several studies have shown that skyrocketing healthcare costs have become the main reason for indebtedness among poor and middle-class families in rural as well as urban areas. This has even forced many distressed farmers to commit suicide. High cost of tertiary healthcare can be partly traced to the skew in the supply of professionals and the high cost of acquiring medical education. Consequently, medical education — especially super-speciality education — has become unaffordable to all but the super-rich, a trend that has been made worse by greedy and unscrupulous "merchants of medical education" on the one hand and by corrupt regulatory bodies like the MCI on the other. This situation must be changed. All talk of inclusive development in India is empty while a large section of our population continues to be deprived of the fundamental right to health. Moreover, health is not only a matter of development, but also a matter of justice.

Therefore, we at ORF believe that making quality healthcare universally accessible and affordable for all must remain the never-changing goal guiding the policies and plans of all the stakeholders, both public and private. Readers will find in this report many innovative ideas that can help us attain this overarching societal goal by reforming medical education and human resource development in health.

For example, our report stresses the urgent need to adopt preventive and promotive healthcare, rather than curative and hospital-based healthcare, as the main thrust of India's health policy. It calls for mainstreaming AYUSH or the Indian systems of medicine both in health policy and programmes as well as in medical education. It recognises the important — but, sadly, widely disparaged — role of traditional vaidyas, hakims, nature cure practitioners, ASHA and Anganwadi workers, Auxiliary Nurses and Midwives (ANMs), Village Health and Sanitation Committees, and the so-called 'quacks' in serving the healthcare needs of the poor in rural and urban areas, and calls for a massive programme for their training and knowledge-upgradation. It recommends specific measures to

overcome the present acute shortage of good teachers in medical and paramedical colleges. Further, it proposes a certain degree of flexibility in curriculum and course content, so that teachers have the freedom to introduce creativity and innovation in engaging their students. Our report makes a strong pitch for universalising effective educational technologies supported by a high-speed broadband Internet infrastructure. It also highlights measures to create a de-bureaucratised research environment that is conducive to world-class research in healthcare.

I am confident that this report will make an important contribution to the ongoing debate on how to reform medical education and broaden human resource development in health in India.

Many experts have helped the ORF team in preparing this report. We thank them all. I must, however, single out one person — Dr. Ranjit Roy Chaudhury, a renowned name in medical education and a member of the erstwhile (2010-2011) Board of Governors of the MCI — for special appreciation and recognition. We have benefitted much from his guidance since the inception of this project.

This report is the product of painstaking and meticulous research conducted by my colleagues Dr. Leena Chandran-Wadia, Ms. Radha Viswanathan and Mr. Maulik Mavani. They are not only excellent researchers, but they are also driven by a deep social commitment, which is evident in the pages that follow. I am proud of my colleagues for having enhanced the reputation of the Observer Research Foundation as a leading public policy think tank that truthfully follows its motto — **Ideas and Action for a Better India**.

Mumbai
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List of Abbreviations

AICTE	All India Council for Technical Education
AIIMS	All India Institute of Medical Sciences
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda, Yoga, Unani, Siddha and Homeopathy
BDS	Bachelor of Dental Surgery
BIMS	Bachelor of Integrative Medical Systems
BRHC	Bachelor's degree in Rural Healthcare
CAT	Common Admissions Test
CBI	Central Bureau of Investigation
CHC	Community Health Centres
DCI	Dental Council of India
DoHFW	Department of Health and Family Welfare
DNB	Diplomate of National Board
ENT	Ear-Nose-Throat
GMAT	Graduate Management Aptitude Test
GNM	General Nurse Midwives
GRE	Graduate Record Exam
HLEG	High Level Expert Group
ICU	Intensive Care Units
INC	Indian Nursing Council
JEE	Joint Entrance Exam
MBBS	Bachelor of Medicine, Bachelor of Surgery
MCI	Medical Council of India
MDS	Masters of Dental Surgery
MHRD	Ministry of Human Resource Development
MoHFW	Ministry of Health and Family Welfare
NBHE	National Board for Health Education
NEAC	National Evaluation and Assessment Committee
NCHER	National Commission for Higher Education and Research
NCHRH	National Commission for Human Resources in Health
NEET	National Eligibility cum Entrance Test
NKC	National Knowledge Commission
NMHA	National Mental Health Act
NRHM	National Rural Health Mission
NREGA	National Rural Employment Guarantee Act
NSDC	National Skill Development Corporation
OPD	Out Patient Department
OT	Operating Theatre
PCH	Primary Health Centres
PCI	Pharmacy Council of India
PG	Post-Graduate
PMO	Prime Minister's Office
UG	Undergraduate
UGC	University Grants Commission
UHC	Universal Health Coverage
VHSC	Village Health Sanitation Committee

Executive Summary

A Bill for the creation of a new regulatory authority for medical education, the NCHRH (National Commission for Human Resources for Health) Bill 2011, has just been introduced in the Parliament (Rajya Sabha) on December 28, 2011. We review this bill and make recommendations for its implementation with a view to creating a world class health work force. The 'Annual Report to the People on Health' of the Government of India (GoI 2010) states that the national goal is 'Health for All'. We reinterpret this goal to mean 'Accessible and Affordable Quality Healthcare for All' and take a holistic view of the reforms in medical education that are needed for achieving it. Our research and advocacy is focussed around three major considerations:

- Orienting the medical education system towards the goal of 'Health for All', particularly in the context of combating communicable diseases and improving primary parameters of the quality of life such as Infant Mortality Rate, Maternal Mortality Rate, Life Expectancy, etc.;
- Including India's rich and holistic health systems into the practice of integrative medicine by enlarging the scope and definition of medical education to include Indian medical systems, and bringing both under one regulatory umbrella;
- Reducing the cost of medical education and healthcare delivery in innovative ways, through greater emphasis on preventive and promotive healthcare practices as well as through knowledge-based self-help practices, by individuals, families and communities.

Although the NCHRH Bill is an important step in the right direction, it has some serious flaws. Notable among these is its silence on the role of AYUSH systems and the lack of clarity vis-à-vis the authority of NCHRH relative to that of the proposed new NCHER (National Commission for Higher Education and Research). Some of our key recommendations include:

- Ensuring that the NCHRH is a flexible and responsive regulatory body, entrusted with the final responsibility for strategic manpower planning and delivery of adequate human resources in health, particularly at the bottom of the pyramid. It must be appropriately empowered for this critical role, and it must be held accountable for the outcomes;
- Courageously discarding approaches that have not worked so far and looking for more viable, systemic, overhauls such as bringing AYUSH systems under the ambit of NCHRH to institutionalise and strengthen the connect between the different schools of medicine, exploring a 'fair-profit' model for institutions imparting medical education to wipe out the scourge of 'capitation fee', and introducing need-based and targeted subsidies;
- Strengthening the MBBS degree in multiple ways to discourage the on-going, inevitable, migration towards post graduate degrees that are increasing costs, and to focus instead on encouraging the creation of large numbers of well trained 'Family Doctors'. The measures include conducting the PG entrance exam immediately after the MBBS exams in order to liberate the internship year for clinical work and focussed learning;
- Introducing a new, shorter, Bachelor's degree in Integrative Medical Systems (BIMS) which includes careful training in Indian systems of medicine for greater relevance to rural healthcare. However we also recommend that this course is not announced without simultaneously working out career growth pathways for these degree holders, including the possibility of them becoming MBBS doctors eventually.

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1 Introduction

Reforms in medical education have been on the anvil since June 2009, when the Union Ministry of Health and Family Welfare (MoHFW) first announced the formation of a Task Force for the National Council for Human Resources in Health under the chairmanship of the then Union Health Secretary, Shri Naresh Dayal. The Task Force produced a report[1] and a draft bill[2] before it was disbanded at the end of September 2009. The bill was placed before the public for comments and circulated to the States for consultation. Meanwhile, the continuing horror of corruption and scandal in the Medical Council of India (MCI) in which its chief, Dr. Ketan Desai, was caught red-handed forced the hand of the government. The President of India, in an unprecedented move, promulgated an ordinance on 15th May, 2010, superseding the MCI with a new Board of Governors headed by Prof. S. K. Sarin. Predictably though, the new Board of Governors and the Ministry ended up on a collision course, resulting in a completely new Board being put in place as of May 2011[3]. The revised and renamed bill (MoHFW, National Commission for Human Resources for Health Bill 2011), has been tabled in the Rajya Sabha[4] in December, 2011.

The Union Ministry of Human Resource Development (MHRD) had also set up a Task Force of its own in September 2009 for the creation of an overarching regulatory body namely, the National Commission for Higher Education and Research (NCHER). The creators of the draft NCHER Bill[5] made the suggestion that medical education be included under the purview of the NCHER. During the consultation process of the bill, MHRD found widespread support for this suggestion and what followed was a turf war between the two ministries for regulatory control over medical education. The Prime Ministers' Office (PMO) helped to bring about an amicable settlement[6] under which the NCHRH will lay down the minimum standards of medical education, while health-related research will come under the purview of the NCHER. The latter bill, revised and renamed (The Higher Education and Research Bill 2011), has also been introduced in the Rajya Sabha in December, 2011. However, since neither bill has so far been passed by either house of Parliament, it is clear that the last word on this turf war has not yet been said.

The fact that the future of education and research in the country is determined by ministerial boundaries and turf wars is extremely disquieting given some of the key challenges facing higher education, including medical education, in the country today:

- Excessive controls exercised by regulatory bodies, which are focussed on ensuring minimum standards of education, have resulted in an inflexible system of education that

[1] Report of the Task Force for setting up of the National Council for Human Resources in Health, 2009, MoHFW.
[2] The National Council for Human Resources in Health Draft Bill, 2009, MoHFW.
[3] http://articles.timesofindia.indiatimes.com/2011-05-14/india/29542727_1_mci-president-new-board-medical-colleges accessed, February 2012.
[4] http://articles.timesofindia.indiatimes.com/2011-12-23/india/30550551_1_health-bill-professional-councils-human-resources accessed, February 2012.
[5] The National Commission for Higher Education and Research Bill, 2010, MHRD.
[6] http://www.hindu.com/2011/02/16/stories/2011021667152400.htm accessed, February 2012.

leaves little scope for innovation, in the provision of quality education, at even the best 5-10 percent of our educational institutions today;

- The regulatory and administrative bodies in medical education (such as the various councils and the state-level medical universities) are themselves highly vulnerable to control and interference by politicians and bureaucrats with links to vested interests;
- There is too much fragmentation of higher education. Well over 35,000 colleges and 600 universities cater to some 18 million students, in contrast with China, where just 4,000 universities cater to nearly 26 million students (Ernst & Young 2010);
- A natural consequence of this fragmentation is the lack of opportunities for students to benefit from interdisciplinary and multidisciplinary education;
- Research and Education continue to be largely separate, despite it being well known that cutting-edge research and quality education have many synergies. The proposal to assign medical research and medical education to different ministries leaves, absolutely no room for this situation to be corrected in the foreseeable future;
- Flawed policies with respect to access and equity, such as low fees (which typically contribute only 10 percent of the running costs of an institution), are hurting the overall quality of education across disciplines;
- Another consequence of flawed access policy is that private education, accompanied by much higher fees, has begun to grow very rapidly, polarising society even further and maximally hurting the very people the policy is seeking to serve;
- The prevalent turf wars are not inter-ministerial ones alone. The stubborn refusal, within the ministry of health, to incorporate Indian systems of medicine into mainstream healthcare education and delivery is of great concern. Indian systems of medicine enjoy extensive public patronage and contribute significantly to low-cost healthcare delivery, particularly in rural areas.

There must be a genuine commitment to reforms in higher education. It is unacceptable that the government fails to live up to the hopes and aspirations of our youthful population

While these are just a few of the larger issues plaguing the higher education system, they are sufficient to highlight the need for strategic vision and planning among decision makers, without which there is a very real threat to the future of our country. It is instructive to study our demographic profile (SAC-PM 2010), shown in Figure 1, to understand just how many lives are at stake.

Simultaneous reform in higher and medical education gives us an unprecedented opportunity to gift the country a modern, flexible, adaptive and progressive higher education system. It is imperative to convert this opportunity through a genuine commitment to reforms. Given the many years of neglect, only a sustained effort in a mission mode will serve the country well. However there is little evidence of any such commitment. ***It is unacceptable that the government fails to live up to the hopes and aspirations of our predominantly youthful population.***

In September 2010, Observer Research Foundation (ORF) Mumbai conducted a Roundtable on the topic of 'Reforms in Medical Education to promote Healthcare for All'. This document is the result of the discussions and the recommendations made by the participants at the Roundtable, as well as of independent research conducted by the authors. Earlier, in March 2010, we had also organised a Roundtable on the draft NCHER Bill, 2009, and brought out a detailed report (ORF 2010) pointing out many flaws in the bill.

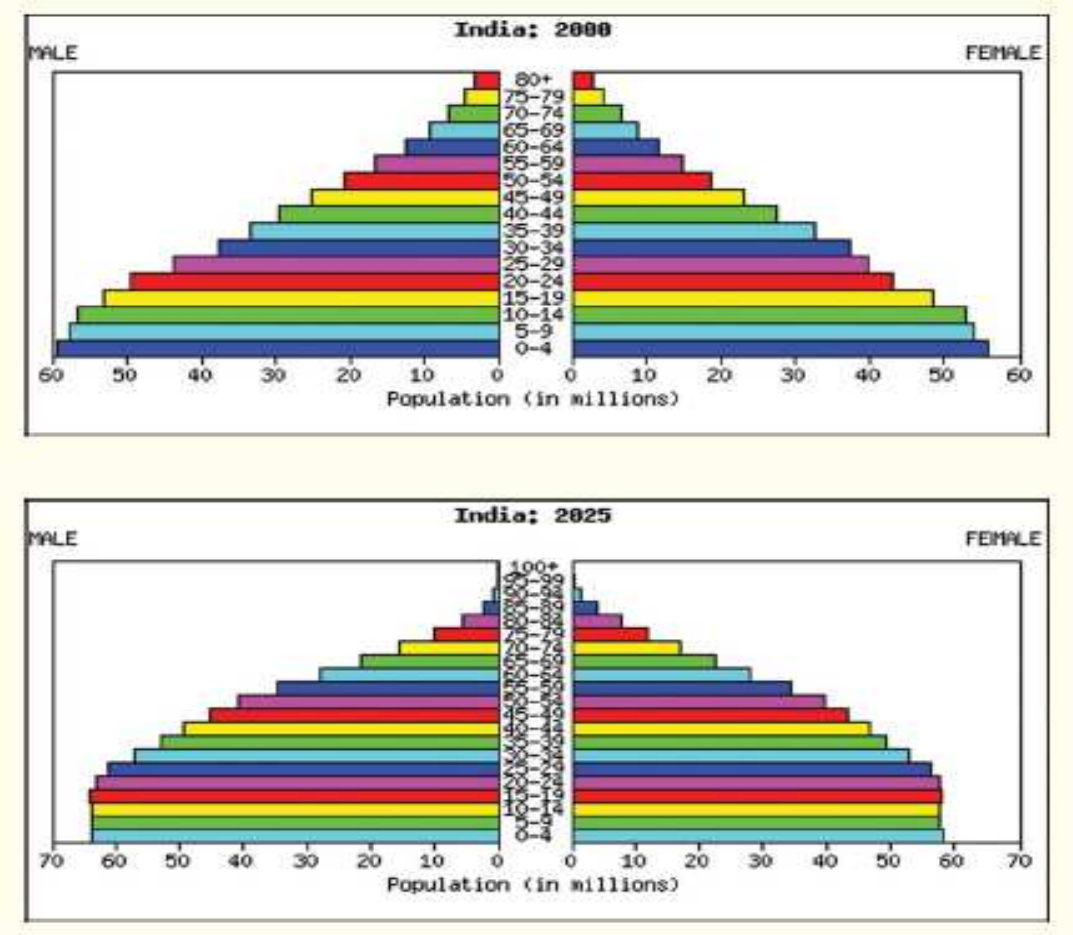

Figure 1: Demographic profile of the Indian population in the year 2000 and 2025
Source: Report of the Scientific Advisory Council to the Prime Minister 2010. http://www.dst.gov.in/Vision_Document.pdf

We begin this report with a brief overview of the situation prevailing in the country today with respect to challenges in the healthcare sector, covering healthcare delivery, human resources in health, and the healthcare education system. We follow this up with a report of the Roundtable and then devote the remaining sections to detailed ORF recommendations. Keeping in mind the national goal of 'Accessible and Affordable Quality Healthcare for All', we have touched upon several broader issues regarding the education and training of not just doctors and specialists, but of all categories of human resources in health. In the final section we outline a wish list for some additional, bold, reforms in the regulation of medical education that are critically needed today.

2 Challenges before India's Healthcare Sector

Human resource is a key determinant of economic growth and two vital characteristics of human resource are education and health. There is a strong correlation between health and economic growth (MoHFW, Report of the National Commission on Macroeconomics and Health 2005). In the absence of equity in healthcare the poor bear a disproportionately higher burden of illness, injury, and disease than the rich. The adverse implication in terms of loss of work and pay is compounded by their inability to obtain adequate healthcare leading to more poverty and poorer health status. India finds itself caught up in this vicious cycle of events at this time. Some startling conclusions of the extent of financial catastrophe that can occur on account of illness are the following (MoHFW, Report of the Task Force on Medical Education for the National Rural Health Mission 2005):

- ***An Indian who is hospitalised spends more than 50 percent of his annual income on health;***
- ***24 percent of those hospitalised fall below the poverty line as a result of the financial blow;***
- ***Out-of-pocket expenses can push up to 2.2 percent of the population below the poverty line in a year.***

A major factor behind the growing rural indebtedness, which compels many farmers to commit suicide, is the impoverishment due to the disproportionately high healthcare expenditure.

The main challenges to the good health of Indian citizens come from the lack of 1) very basic and essential provisions for nutrition, drinking water and sanitation for large sections of the population, and 2) an efficient, accessible and affordable healthcare system. *The country is therefore reeling under the dual onslaught of communicable as well as non-communicable diseases.* The former category, which includes infectious and parasitic diseases, is one of the three leading causes of death in the country[7]. In the non-communicable disease segment, cardiovascular disease is also among the three leading causes of death, having accounted for nearly 26 percent of deaths in 2004.

India has also been slipping in rankings relative to its neighbours in South Asia with respect to social and health indicators such as access to improved sanitation, infant and child mortality rates, immunisations and many others as pointed out in Figure 1 reproduced from a recent report by Jean Dreze and Amartya Sen[8]. Quoting from the article: ***"To take some other examples, only five countries (Afghanistan, Cambodia, Haiti, Myanmar and Pakistan) do worse than India in child mortality rate; only three have lower levels of "access to improved sanitation" (Bolivia, Cambodia and Haiti); and none (anywhere—not even in Africa) have a higher proportion of underweight children".***

[7] Side Effects: Challenges facing healthcare in Asia. A report from the Economist Intelligence Unit, 2010. http://www.eiu.com/report_dl.asp?mode=fi&fi=817147866.PDF accessed February 2012.
[8] "Putting growth in its place", Jean Dreze and Amartya Sen, Outlook Magazine, November 14, 2011. http://www.outlookindia.com/ARTICLE.ASPX?278843 accessed February 2012

The primary responsibility for healthcare in the Indian Constitution rests with the States, and in general a major chunk of public expenditure comes through the budgets of the State governments. The total expenditure on healthcare in India is estimated to be roughly 5 percent of GDP, of which approximately 70 percent comes from out-of-pocket expenses borne by individuals and families. Public spending on health (expenditure incurred by health departments of Central and State Governments) has stagnated at about 0.9 percent of GDP ever since the mid-1980s. *What is worse is that the share of spending of the health budget, on prevention of ill-health and promotion of good-health during this entire period has been a paltry 0.5 percent* (MoHFW, Report of the National Commission on Macroeconomics and Health 2005). India ranks 171 out of 175 in public health spending with only Myanmar, Indonesia, Sudan and Nigeria investing a lower percentage of their GDP (MoHFW, Report of the Task Force on Medical Education for the National Rural Health Mission 2005).

MIRROR, MIRROR... HOW INDIA RANKS IN SOUTH ASIA

INDIA'S RANK AMONG SIX SOUTH ASIAN COUNTRIES (TOP = 1, BOTTOM = 6)

	IN 1990	AROUND 2009
GNI per capita	4	3
Life expectancy	3	6
Infant mortality rate	2	5
Under-5 mortality rate	2	5
Maternal mortality ratio	3	3
Total fertility rate	2	4
Access to improved sanitation	4-5[a]	5-6[a]
Child immunisation (DPT)	4	6
Child immunisation (Measles)	6	6
Mean years of schooling	2-3[a]	4-5[a]
Female literacy rate, age 15-24	2-3[a]	4
Proportion of underweight children	4-5[a]	6

[a] Ambiguous rank due to missing data for Bhutan (or Nepal, in the case of "underweight children"). Source: See Table 1. The six countries considered here are Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka.

Figure 2: Comparison of India's "rank" among South Asia's six major countries in 1990 and around 2009
Source: http://www.outlookindia.com/ARTICLE.ASPX?278843

The National Rural Health Mission (NRHM) contributed to an increase in public health spending of up to 2.6 times, between 2004-5 and 2009-10, but there is need to dramatically increase the government health budget and the capacity to spend it effectively, in order to reach the targeted 2

percent of GDP in the present 11th Five Year Plan. In terms of actual numbers, public expenditure needed to go up to Rs. 160,000 crore in 2011-12, up from the budgeted Rs. 66,000 crore in 2009-10 (GoI, Annual Report to the People on Health, MoHFW 2010). It is extremely unlikely that these very high levels of spending have been achieved.

2.1 India's Healthcare Delivery System

The implementation of the findings of the Bhore Committee (GoI, 1946) after Independence, albeit only partial, ensured that the country was given a well-structured three-tier public health infrastructure, comprising Primary Health Centres (PHC), Community Health Centres (CHC), and District Hospitals spread across rural and semi-urban areas. Besides these, there are also Sub-Centres and sub-district level hospitals in many districts. Multi-speciality hospitals and medical colleges providing tertiary medical care are located almost exclusively in urban areas. The Sub-Centre is the first peripheral contact point between the primary healthcare system and the community. It is meant to be manned by one female Auxiliary Nurse Midwife (ANM) and one male health worker with one LHV (Lady Health Visitor) for every six Sub-Centres (MoHFW, Annual Report 2009-2010). Sub-Centres are assigned tasks relating to maternal and child health, family welfare, nutrition, immunisation, diarrhoea control and control of other communicable diseases programmes. They are provided with basic drugs required for taking care of essential healthcare for women and children.

The PHC is the first point of contact between the village community and a medical officer (MoHFW, Annual Report 2009-2010). It is meant to be manned by one medical officer and 14 staff. It acts as a referral centre for six sub-centres and has four to six beds for patients. It performs curative, preventive and promotive, and family welfare services. At the next level, CHCs are established and maintained by the state governments, and as per standards (MoHFW, Indian Public Health Standard 2010). Each CHC is supposed to be manned by four specialists – a surgeon, a physician, a gynaecologist and a paediatrician supported by 21 paramedical and other staff. It has 30 in-door beds with one Operating Theatre (OT), X-Ray and Labour room and laboratory facilities and serves as a referral centre for four PHCs. It provides emergency obstetrics care and specialist consultations. As per standards (MoHFW, Indian Public Health Standard 2010) these must be upgraded to include six medical specialists including an anaesthetist and an eye surgeon (for every five CHCs) supported by 24 paramedical staff and an addition of two more nurse mid-wives to the existing count of seven. There are 145,894 Sub-Centres, 23,391 PHCs and 4,510 CHCs in the country as of March 2009 (Directorate General of Health Services 2010).

A district hospital is at the secondary referral level, and every district is expected to have a district hospital. As the population of a district is variable, the bed strength also varies from 75 to 500 beds depending on the size, terrain and population of the district. Every district hospital is expected to provide all speciality services which have been categorised as essential – Out Patient Department (OPD), indoor and emergency services in neonatal care, accident and trauma, mental health and disaster management. Selected super speciality services such as cardiology, neurology, nephrology, oncology and endocrinology, to name a few, are considered desirable. *In addition, the district*

hospital is expected to have facilities for skill based trainings for different cadres of healthcare workers (MoHFW, Indian Public Health Standard 2010).

Table 1: NRHM Delivery Monitoring Report for the period ending 31-12-2011.
Source: http://www.mohfw.nic.in/showfile.php?lid=718

				2011-12
1	ASHA	Total Number of ASHA in position as on 01-04-2011	High Focus states	**550,638**
			Other Than High Focus states	**304,530**
		Total Number of ASHA selected and trained upto IV module	High Focus states	**470,105**
			Other Than High Focus states	**220,318**
		Number of VHSCs	Required	**593,731**
			Constituted	**498,378**
2	Upgradation of Sub Centres	Number of SCs	Required as per NRHM	**175,000**
			Available	**147,069**
		Sub Centres which are functional	without ANM	**6,127**
			with one ANM	**140,942**
			with two ANMs	**63,915**
3	Upgradation of PHCs	Number of PHCs	Required as per NRHM	**27,000**
			Available	**23,673**
		PHCs and equivalent where three staff nurses have been positioned		**7,040**
4	Upgradation of CHCs	Number of CHCs	Required as per NRHM	**7,000**
			Available	**4,535**
		Number of CHCs/SDH & equivalent which have been upgraded to FRU status	as on 31-3-2005	**803**
			as on 31-3-2011	**2,317**
			as on date	**2,317**
5	Upgradation of DH	Number of DH & equivalent which have been upgraded to FRU status	as on 31-3-2005	**240**
			as on 31-3-2011	**574**
			as on date	**596**
6	Number of Institutional deliveries (% to total reported deliveries) (upto Nov 2011)			**1,01,31,447 (80.1%)**
7	Flashlights (critical areas based on Disease Surveillance during quarter)			
8	Number of Children Fully Immunized upto Nov 2011 (%)			**1,38,50,246 (53.2%)**
9	Number of male & female sterilisations conducted upto Nov 2011 (% to estimated unsterlised couples)			**20,16,980 (1.6%)**
Note:	Provisional figures			

Unfortunately, much of this infrastructure has been dysfunctional in many states until very recently. The physical infrastructure itself has been in shambles in most cases and there has been a severe shortage of all categories of health workers required to staff these centres. The NRHM, the government's flagship health scheme for rural India (MoHFW 2005), has taken up the task of upgrading the facilities in a phased manner, providing State governments with the necessary funding and support to upgrade the physical infrastructure and also to train the required numbers of healthcare workers. As indicated in the recent NRHM Delivery Monitoring Report in Table 1, significant progress has been made during the last five years towards up-gradation of the basic infrastructure of CHCs, PHCs and Sub Centres and towards stationing Accredited Social Health

Activists (ASHAs) at these centres. The 'Annual Report to the People on Health' (GoI 2010), states that *"the crisis in unavailability of skilled human resources in the health sector has been addressed through the rapid expansion of medical education in the country"*. While this statement refers to the progress made during the NRHM the bulk of the task of providing adequate human resources in health still lies ahead of us, as will be evident from the following section.

2.2 The Human Resource Challenge

The inability of policy makers, over several decades, to identify the manpower requirements at different levels of healthcare delivery and to plan for these innovatively has created a tremendous shortage of skilled healthcare providers at the grassroots level. A severe indictment of our health system is contained in the government's own report of the Task Force on Medical Education for the National Rural Health Mission (MoHFW 2005), before the Mission began: *"The health system has created an impasse where no health services of any acceptable quality can reach a vast number of the citizenry. By insisting on health services through graduate doctors, or nothing, the medical fraternity has created a situation in which vast numbers get nothing".* Similarly, the Task Force for the proposed National Council on Human Resources in Health (MoHFW 2009) made the observation that "*Many of the issues facing India's health sector today can be traced to distortions in the area of human resources in health*".

Table 2: Doctor Population ratio in India as compared to other countries in the world
Source: Report of the UG Education Working Group, 2010 of the MCI

The current doctor population ratio in India is 1:1700 when compared to a world average 1.5:1000. The committee came to a consensus that targeted doctor population ratio should be 1:1000 by 2031.

Doctor Population ratio around the world				
Somalia	1: 10,000		Singapore	1:714
Pakistan	1:1,923		Japan	1:606
Egypt	1:1,484		Thailand	1:500
China	1:1,063		UK	1:469
Korea	1:951		USA	1:350
Brazil	1:844		Germany	1:296

There are large geographic variations in the health workforce - across States and between rural and urban areas - which makes the impact of shortages even more severe. Across all categories, over 60 percent of the health workers are based in urban areas even though only 32 percent of the country's population resides there (Census 2011). The average ratio of an MBBS doctor to the population is thought to be 1: 400-500 in urban areas and 1: 2,000-3,000 in rural areas (ORF Roundtable). The overall ratio in India is 1 doctor to every 1700 patients compared to a world

average of 1.5 doctors to every 1000 patients as shown in Table 2. Specialisation and migration have both cut into the numbers of general practitioners available today. Of the 32,000+ MBBS students who graduated in 2008-09, it is thought that approximately 8,000 students migrated; most of the rest took up Post Graduate (PG) education and only about 6,000 remained as MBBS doctors (ORF Roundtable). While the all-India figure for the number of doctors deployed at PHCs is just 23,982 as of March 2009, the number of specialists (including surgeons, obstetricians and gynaecologists, physicians and paediatricians) available at CHCs is a paltry 5,789 (Directorate General of Health Services 2010).

One of the main recommendations of the Bhore Committee (GoI, 1946) was the creation of a 'Basic Doctor' whose effectiveness and reach is enhanced many times by supporting him/her with adequate numbers of technicians and ancillary personnel. However, Indian policy-planners did not ensure the full implementation of this idea. ***The crippling weakness of the Indian healthcare system even today is the lack of access to a 'Basic doctor', for very large sections of the population.***

One of the main recommendations of the Bhore Committee (1946) was the creation of a 'Basic Doctor' whose effectiveness and reach is enhanced many times by supporting him/her with adequate numbers of technicians and ancillary personnel. Sadly, policy planners have completely neglected the concept of a 'Basic Doctor' serving the community

In this context, the words of Muktabai Pol, a village health worker from JAMKHED (Maharashtra) at a conference in Washington, DC, May 1988 strikes a poignant note. ***"Doctors are like chandeliers, beautiful and exquisite, but expensive and inaccessible…I am like a little lamp inexpensive and simple and I can transfer light from one lamp to another, lighting the lamp of better health easily, unlike the chandeliers. Health Workers like me can light another and another and thus encircle the whole earth. This is Health for All."***

The wise words of this ordinary village health worker contain the genesis of a solution to the crippling shortage of doctors, one that policy-planners would do well do adopt. It calls for a much greater focus on primary healthcare and for deploying large numbers of healthcare workers at the base of the pyramid. Despite the significant progress made during the NRHM (Table 1), many categories of such healthcare workers are also in short supply. The acute shortage of nursing staff, particularly ANMs, is well known. Similarly, large numbers of community health workers and allied health professionals at appropriate levels of healthcare delivery must be made available equitably across all the States. The report of the National Skill Development Corporation (NSDC) on Human Resources in Health[9] projects the manpower requirements in the year 2022, in some key areas of healthcare (Table 3). The challenges of meeting these targets are truly of gargantuan proportions,

[9] Human Resource and Skill Requirements for the Healthcare Service Industry http://www.nsdcindia.org/pdf/healthcare.pdf accessed Feb 2012.

especially since we are well short of even the 2008 numbers for nurses, technicians, paramedics and ancillary staff.

Table 3: Projected human resource requirements for medical personnel in India till 2022 (in Thousands)
Source: National Skill Development Corporation http://www.nsdcindia.org/pdf/healthcare.pdf

	2008	2012	2018	2022	Increase in 2022 relative to 2008 (%)
Doctors	725	1,208	1,947	2,705	373
Nurses	1,600	2,416	5,192	10,822	676
Technicians, paramedics	27	232	530	812	3007
Dentists	80	121	389	676	845
Pharmacists	681	724	779	811	119

Nearly 650-700 lakh people in India are in need of care for various mental disorders in all age groups. This amounts to a prevalence rate of 6-7 percent for common disorders and 1-2 percent for severe mental disorders. Treatment gap in the case of severe disorders is as high as 50 percent and in the case of common disorders it is over 90 percent (DoHFW, Annual Report 2010-11)! The manpower development component of the National Mental Health Plan which is to be integrated with the NRHM, hopes to relieve some of the problems (Guidelines for NMHP for 11th Five Year Plan April 2009).

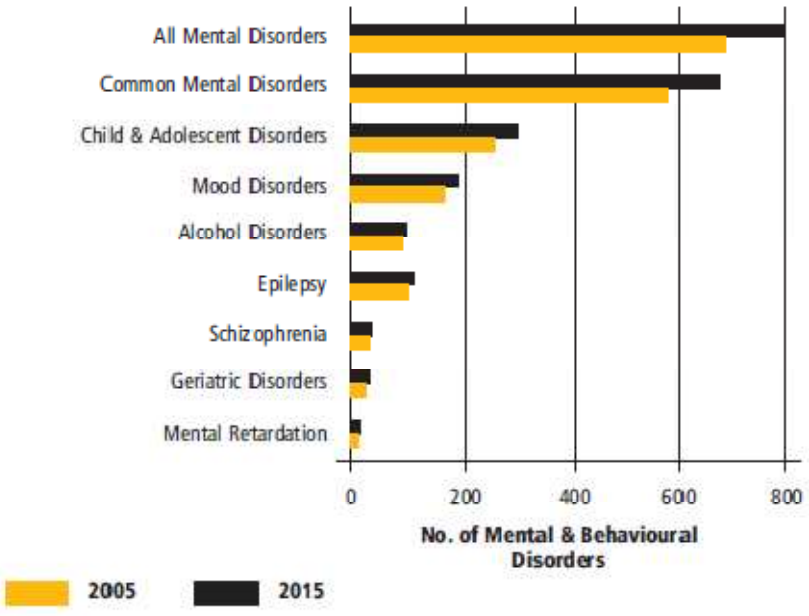

Figure 3: Disease Burden in India due to psychiatric disorders (in lakhs)
Source: Report of the National Commission on Macroeconomics and Health, MoHFW, 2005

Awareness, infrastructure, training and services catering towards mental healthcare in India are all lacking. Mental health is part of the general health services, and carries no separate budget. The implementation of the National Mental Health Programme (NMHP) has proved successful in only very few districts in the country primarily due to the lack of an efficient system to monitor its progress and also due to the shortage of key resources such as psychiatrists, clinical psychologists, psychiatric social workers and psychiatric nurses (DoHFW, Annual Report 2010-11). Additionally, it has been seen that the programmes have so far catered only towards improving the lives of those suffering from extreme cases of mental disorders. The draft Mental Health Care Act 2010 seeks to correct some of these deficiencies (MoHFW 2010).

The Prime Minister, in his Independence Day address on August 15, 2011, declared that health would be accorded the highest priority in the 12th Five Year Plan which will become operational in 2012. The High Level Expert Group (HLEG) instituted by the Planning Commission with the mandate of developing a framework for providing easily accessible and affordable healthcare for all Indians has recently submitted its report on Universal Health Coverage (UHC) for India (HLEG 2011). The extensive and detailed report contains many excellent recommendations for dealing with the challenges in healthcare delivery, in human resources in health, and envisions that every Indian citizen should be entitled to essential primary, secondary and tertiary healthcare services that will be guaranteed by the government. The services, offered as a National Health Package comprising cashless in-patient and out-patient care provided free of cost, will be made available through the public sector and contracted-in private facilities. The report envisions that health insurance will make way for UHC, and that the costs for UHC will be paid for by a tax-based system of health financing.

3 Organisation of Healthcare Education in the Country

There are two systems of medical education in India, the Allopathic system of medicine (also called modern medicine) and the Indian systems of medicine which include Ayurveda, Unani and Siddha. Homeopathic medicine, which is distinct from the Indian systems, came to India during colonial times and became popular here. It is now combined with the Indian systems under the Department of AYUSH (Ayurveda, Yoga, Unani, Siddha and Homeopathy) in the Ministry (MoHFW). Allopathic medicine including all the professional councils associated with it, such as the Medical Council of India (MCI), the Dental Council of India, the Indian Nursing Council (INC) and others, are under the care of the Department of Health and Family Welfare (DoHFW). We provide a quick overview of healthcare education in the country, beginning with the undergraduate MBBS degree.

3.1 MBBS

As of Dec 2009, there were 300 recognised medical colleges in the country with an intake capacity of 34,595 students into the MBBS programme (Directorate General of Health Services 2010). The number of colleges grew to 314 in 2010-11, of which approximately 165 are in the private sector. The undergraduate enrolment capacity in medical colleges grew by about five times between 1950 and 2005. The number of institutions grew by eight times in the same period. This growth has been led primarily by the private sector which grew 900 percent between 1970 and 2004! The increase in inequality of the geographical spread of enrolment capacity was particularly marked after 1980, with the enrolment share of the poorest 50 percent locations declining from 37 percent in 1980 to less than 25 percent in 2004 (Mahal and Mohanan 2006). This is clearly visible in Figure 4, which shows the state wise distribution of medical colleges. The poorer states of the country, and the most populous ones, have relatively few medical colleges.

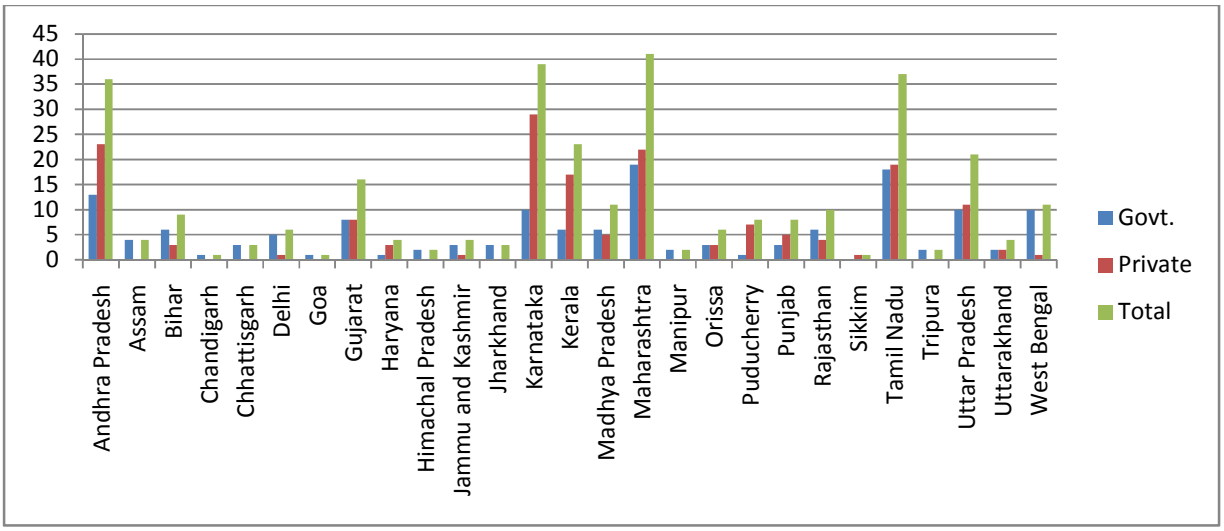

Figure 4: State wise distribution of medical colleges in India showing large geographical variations (2011-2012)
Source:http://www.indiastat.com/education/6370/institutionsforprofessionaleducation/369745/medicalcollegesinstitutions/449429/stats.aspx

3.2 Post-Graduation

PG education is either a three-year degree course or a two-year diploma course and not all of the 314 medical colleges offer them. Besides these, there are 450 institutions accredited by the NBE (National Board of Examinations) for imparting training in various specialities leading up to the 'Diplomate of National Board' (DNB) diplomas which are considered to be on par with University degrees. Although the NBE was originally set up with the intention of providing uniform standards and mechanisms for evaluation, this has not happened and one of the goals of reform now is to create a single standard for PG education nationwide. There are also super speciality courses that can be taken after a PG degree (Sood 2008).

3.3 Dental

There are 289 colleges which offer Bachelors of Dental Surgery (BDS) courses with an intake capacity of 21,547. Of these, 140 colleges offer the Masters' degree (MDS) with a capacity of just 2,783 (Directorate General of Health Services 2010).

3.4 Nursing

As of 31 March, 2010, there were 2,028 institutions catering to General Nurse Midwives (GNMs), with an admission capacity of 80,332 and 676 institutions with admission capacity of 15,335 catering to Auxiliary Nurse Midwives (ANMs) (Directorate General of Health Services 2010). So far 1,073,638 GNM nurses, 576,542 ANMs and 52,375 LHVs have been registered with the various State Nursing Councils as of 31 Dec 2009 (Directorate General of Health Services 2010) but it is not known as to how many of these registered nurses are actually in active practice. The profession is being hurt by the repressive policies of the corrupt Nursing Councils and the overlap of jurisdiction between the State Nursing Councils and the Indian Nursing Council (INC) which often results in confusing and conflicting regulatory policies. The sector also suffers from inadequate funding, lack of infrastructure, shortage of qualified educators, lack of accountability on the part of educational institutions, and geographic mal-distribution of training capacity. The poor career advancement opportunities for public health nurses (Raha, Berman and Bhatnagar Aug 2009) combined with the low position accorded to them in the health work force hierarchy, has led to large-scale migration of nurses to developed countries, further exacerbating nursing shortages in India.

3.5 AYUSH Systems

AYUSH systems which are popular with urban and rural populations alike have been kept alive primarily by the private sector in response to demand by society (Abraham 2005). Most people in India use some or all of these systems either simultaneously or sequentially for the same ailment. This phenomenon is so ubiquitous that very few families are likely to be free of this therapeutic pluralism. The Bhore Committee report (GoI 1946), on which post-independent India's medical system is based, focussed only on Allopathic medicine. The government recognises AYUSH systems but provides very little by way of funding. Yet, there are almost an equal number of AYUSH qualified physicians in the country today as there are MBBS doctors - approximately 7.5 lakh

doctors relative to roughly 8 lakh MBBS doctors in 2010 (Directorate General of Health Services 2010) - which in itself is quite amazing. These AYUSH physicians cater to a far greater population per capita than the MBBS doctors, since they serve primarily among the rural and urban poor. Despite this, the funds allocated to this sector are only about 5 percent of that allocated to Allopathic medicine (Abraham 2005). The sector suffers from poor infrastructure, lack of qualified and committed teachers and the mushrooming of sub-standard colleges due to corruption in the regulatory bodies.

In the AYUSH systems, there are 492 Medical colleges including 99 Post Graduate institutions with an admission capacity of 30,086. The break-up is as follows: Ayurveda-249, Unani-39, Sidha-8, Naturopathy-10, and Homoeopathy-186 (Directorate General of Health Services 2010). Medical Colleges in Ayurveda and Homeopathy are spread across the Indian states, while those of Siddha and Unani are concentrated in just a few states – largely Tamil Nadu in the case of Siddha, and UP, Maharashtra and Bihar in the case of Unani. As mentioned earlier, the involvement of the private sector is extremely pronounced in this sector accounting for over 75 percent of all institutions. The non-uniformity in geographical spread of enrolment capacity is also just as pronounced. The proliferation of new institutions also shows plenty of regional variations, with UP having very few and states such as Karnataka and Maharashtra having many more under the 'capitation fee' regime.

3.6 Pharmacy Sector

The Pharmacy Council of India (PCI) has approved 608 institutions with 36,115 places for a diploma in pharmacy (Directorate General of Health Services 2010). The number of registered pharmacists in the country as of 31 December 2010 is 656,101, but again this count does not necessarily reflect the actual number of practitioners on the field. Predictably, the state-wise distribution of pharmacists is extremely skewed, as can be seen from Figure 5. "*Pharmacists have the potential to fill (at least partially) the gap created due to shortage/unavailability of doctors and nursing personnel in health facilities in rural areas"* (WHO 2007). The regulatory authorities must therefore undertake to set up pharmacy institutions in underserved areas in order to correct these regional imbalances. This can be achieved through a policy initiative to redefine the role of pharmacists in the Indian healthcare system.

The main drawback of pharmacy education in India is that graduates lack the skills needed for practice. Much of what is taught, though pedagogically relevant, does not offer the student a feel for what to expect in industry, hospitals or in a community setting (WHO 2007). Since the syllabus is a heterogeneous mixture of clinical and industrial subjects, pharmacy education is regulated by both the Pharmacy Council of India (PCI) and the All India Council for Technical Education (AICTE) which only compounds the problems.

The pharmaceutical industry in the AYUSH systems of medicine is continuously expanding despite the over 60,000 allopathic formulations that are available in India. The issues of concern here are the quality of drugs, lack of uniform standards in the preparation of drugs, use of banned and spurious drugs and the lack of adequate oversight and enforcement of rules. Some of these are

being addressed by the government currently. The National Mission on Medicinal Plants[10], launched in 2008, seeks to reverse the depletion of plant resources that has resulted from the exploitative manner of procuring plant raw materials in this sector, a much-awaited and welcome move. It will be implemented by the National Medicinal Plants Board, set up in 2000. The Indian Medicine and Homeopathy Pharmacy Bill 2005[11] will regulate dispensing by AYUSH practitioners in the future.

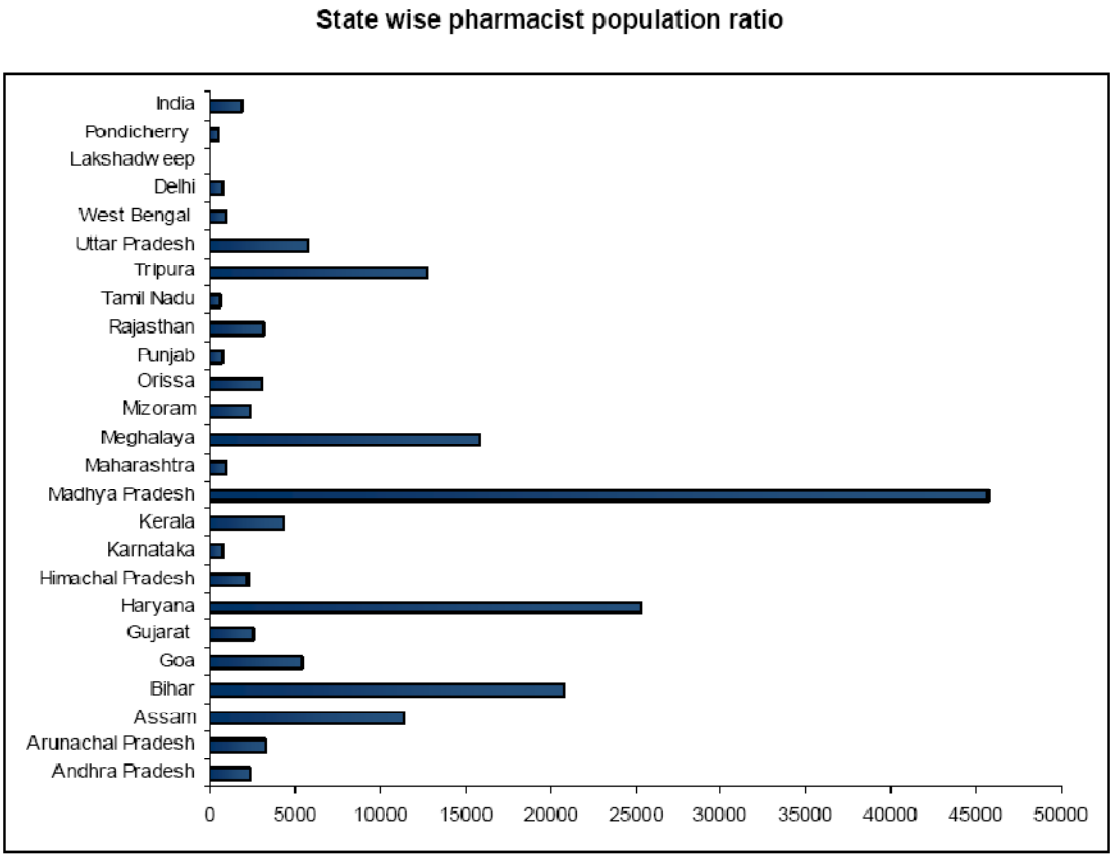

Figure 5: State wise ratio of pharmacists to population (2003 data)
Source: MoHFW and WHO India Office report on 'Human resources in the Pharmacy sector in India', 2007.

3.7 Paramedical Personnel

The training of most categories of paramedical personnel is largely unregulated. Only a few states - Madhya Pradesh, Delhi, Maharashtra and Himachal Pradesh - have separate councils to regulate this sector, so this is probably the most neglected among all categories of health workers. Since there is no central regulation of these professions there is little or no reliable data, on the number of practitioners across the country or even on the number and types of educational courses on offer. A listing of some of the categories of health workers that fall under the umbrella of paramedical

[10] http://nmpb.nic.in/index1.php?level=1&sublinkid=793&lid=430 accessed February 2012.
[11] http://www.prsindia.org/index.php?name=Sections&action=bill_details&id=6&bill_id=449&category=43&parent_category=1 accessed February 2012.

personnel is given in Table 4. Admission criteria and the quality of education too leave a lot to be desired. For instance, for the key role of lab technicians, most institutions impart only a 9-month course for which any 12th standard degree holder, even in the Arts/Humanities, is considered eligible! There is an urgent need to upgrade this course into a full 3-year undergraduate degree say, B.Sc (Bachelor of Science) in Laboratory Technology. The limited knowledge and expertise of most diploma holders, coupled with lack of training in soft skills, renders them unsuitable for community practice. At the same time paramedical personnel is the category in which the maximum shortage has been identified by the NSDC (see Table 3). Regulation of this sector, as in the case of the pharmacy sector, is the task of the AICTE which is completely perplexing given the need to link paramedical education closely with practice.

Table 4: Institutions and Admission capacity to Paramedical courses in India
Source http://www.indiastat.com/Health/16/HealthEducation/81/458575/data.aspx

Number of Institutions and Admission Capacity in Para Medical Courses in India (2007-2008)		
Courses	**No. of Institutions**	**Admissions Capacity /No. Admitted**
Dental Hygienist	17	65
Dental Mechanics Courses	18	50
B.Sc. (Med. Lab. Technicians)	3	56
Lab. Tech. /lab. Assistant	97	2193
Sanitary/health/malaria inspectors	26	1695
Radiographers	33	410
X-ray technicians	41	426
Operational therapist Assistant	6	59
Physiotherapist	8	174
Occupational therapist	4	75
Speech therapist	3	72
Orthopedist	4	24
Optician & Refractionist	7	134
Health workers (male) under M.P.W	102	5334
Miscellaneous (incl. Ophth. Assistant)	90	2668

3.8 Present system of Regulation of Medical Education

Regulation is done through statutory regulatory (professional) councils established at the National and State levels for the various professions. The Medical Council of India (MCI), Dental Council of India (DCI), Indian Nursing Council (INC) and others monitor the standards of medical education, promote medical training and research activities, and oversee the qualifications, registration, and professional conduct of doctors, dentists, nurses, pharmacists, paramedics and of practitioners of the AYUSH systems of medicine. The State Councils deal primarily with enforcement of standards and registration of professionals. In addition, the University Grants Commission (UGC)), an apex body of the government of India, has the overall responsibility to determine and maintain standards in all institutions of higher education in India. ***However none of the professional councils, even those set up after the UGC started functioning, recognise any role for the UGC!*** (Agarwal 2009). As mentioned earlier, the AICTE regulates a bulk of the professional technical education programmes, which includes some sections of medical education such as pharmacy and paramedical education.

The present regulatory system controls the curriculum, the intake of students and the fees, at even private institutions. *By keeping the revenue from fees at an unnaturally low percentage of the running costs of the institutions, government has sacrificed not just the quality of education but also paved the way for institutionalised corruption in the form of 'capitation fee' regimes.* Institutions have insufficient funds for critical infrastructure such as libraries, laboratories, information technology support etc., and for incentivising teachers, all of which have contributed to the decline in the quality of medical education across the country.

By keeping revenues from fees at unnaturally low levels, government has sacrificed not just the quality of education but has also paved the way for institutionalised corruption in the form of 'capitation fee regimes'

MCI was established as a statutory body under the provisions of the Indian Medical Council Act (1933 and then 1956). The main functions of the council (DoHFW, Annual Report 2010-11) have been identified to be:

- Maintenance of uniform standard of medical education at undergraduate and PG level;
- Maintenance of the Indian Medical Register;
- Reciprocity with foreign countries in the matter of mutual recognition of medical qualifications;
- Provisional/Permanent registration of doctors with recognised medical qualifications, registration of additional qualifications, and issue of Good Standing certificates for doctors going abroad;
- Continuing Medical Education.

The role of the MCI overlaps with that of the State medical councils and also of State governments. With respect to its first function namely, maintenance of uniform standard of medical education, its role also overlaps with that of the UGC. This role includes many activities such as a) recognition of

institutions, b) approval of new courses, c) approval of additional seats and d) maintenance of overall standards through specification of curriculum, accreditation norms etc. Although MCI and UGC regulate higher education, it is the State governments that exercise effective control over the institutions. The latter are therefore subject to multi-layered and complex control processes, prompting the National Knowledge Commission to describe the higher education system as 'over-regulated but under-governed'[12]. More importantly, the vesting of so many regulatory functions with the same agency has resulted in the latter becoming all powerful and, consequently, exceedingly corrupt.

The events leading up to the dismissal of Dr. Ketan Desai and the dissolution of the MCI, in May 2010, are by now very well known. Dr. Desai, the former President of MCI, abused the considerable regulatory powers provided to the MCI to amass personal wealth and earn political patronage. The numbers of seats in medical colleges were capped in order to keep the demand high and capitation fees higher. Inspections were used as tools to control and manipulate private medical colleges, giving the quality of medical education a complete go by. Although the MCI is meant to be an impartial regulator of medical education, Dr. Desai made himself a single-point authority. The threat of de-recognition of Kasturba Medical College, Manipal, and G.S. Medical College, which are both among the best medical colleges in the country, smacked of arbitrariness and a lack of transparency that came to be associated with Dr. Desai's MCI.

The CBI probed Dr. Desai under the Prevention of Corruption Act for the first time in 2001, after the Delhi High Court found him guilty of taking a bribe and abusing power. The court asked the agency to inquire further and prosecute him. The CBI, curiously, gave him a clean chit and Dr. Desai staged a comeback after the Supreme Court disposed the case. Between 2001 and 2009, Desai continued to wield his clout over the system. ***It would be naive to assume that Dr. Desai could have continued with this level of corruption on his own, without the cooperation and connivance of politicians in various parties, the bureaucracy and the ministry.***

The other professional councils also suffer from overlapping jurisdictions between the Central and State councils, with the consequent lack of clarity in their separate roles and responsibilities. The overlap in the jurisdiction of the Pharmacy Council of India and the AICTE in overseeing education in the pharmacy sector has already been mentioned. Similar problems beset the education of technicians and paramedics. As was the case with the disbanded MCI, AICTE has become a highly bureaucratic and inefficient body, routinely tainted by reports of corruption. It is not surprising therefore that over-regulation has been described as being responsible for the complete deterioration in the quality of higher education in India today[13]. It is in this environment that the country is embarking on reforms and it remains to be seen if the NCHRH, the NCHER and all the other entities being created by the reforms process will the able to avoid similar pitfalls. In the rest of this report we will argue that much more needs to be done before the vision of 'Accessible and Affordable Quality Healthcare for All' can become a reality.

[12] http://www.knowledgecommission.gov.in/recommendations/higher1.asp accessed February 2012.
[13] Comment by Prof. Sebastian Morris, Prof. IIM Ahmedabad, at a Roundtable on 'ICT in Education' held at ORF Mumbai in May 2010.

4 Report of the Roundtable held at ORF Mumbai

The Roundtable, held at ORF Mumbai on 5 September 2010, was extremely well-attended by a representative cross-section of stake holders – eminent doctors, specialists, administrators, and many students - from well-known institutions across the country and from Nepal (see Annexure I). The inaugural address made by Dr. Ranjit Roy Chaudhury, member of the erstwhile (2010-2011) Board of Governors of MCI, was very comprehensive and touched upon many important issues in MBBS and PG medical education. Dr. Roy Chaudhury began by saying that we as a nation must grab this historic and unprecedented opportunity to frame the medical education policy of the country and make it more sensitive to the needs of those who are deprived of quality healthcare today namely, the poor, the marginalised, the elderly, and those living in rural areas. Towards this goal he outlined the thinking of the Board with respect to: 1) ways to improve medical education, and 2) the governance structure that is likely to replace the National and State Councils such as the present MCI. He listed out some of the main weaknesses in medical education today and went on to describe measures proposed by the Board to address these weaknesses.

We as a nation must grab this historic and unprecedented opportunity to frame the medical education policy of the country and make it more sensitive to the needs of those who are deprived of quality healthcare today namely, the poor, the marginalized, the elderly and those living in rural areas

Dr. Sanjay Oak, G. S. Seth Medical College and KEM Hospital, Mumbai, who spoke immediately after Dr. Roy Chaudhury, made some bold proposals for reforms in medical education, even disagreeing on occasion with one or two of the suggestions made by Dr. Roy Chaudhury. The general reaction from the participants, at the end of the two presentations, was one of palpable relief, satisfaction, and no mean excitement. It was clear to everyone that the members of the Apex body were completely aware of the issues of concern and were committed to making a serious effort to resolving them. It was also clear that active inputs were being encouraged, even solicited. This set the stage for the animated discussions that followed and a barrage of additional inputs came in from the stakeholders present at the Roundtable. There was plenty of lively discussion and participants, including students, actively shared their own experiences and those of their home institutions, contributing further insights and recommendations on all key issues. We provide a summary of these discussions and the recommendations on each of the topics.

4.1 Quality of Institutions

There was consensus that both the number and the quality of institutions imparting medical education needs to be improved considerably. On specific issues regarding quality, the following were some of the points discussed:

4.1.1 Transparency

Dr. Roy Chaudhury informed the audience that, as a first step towards transparency on the part of the Board, information about all colleges are now available online for everyone to verify. He mentioned that decisions such as recognition of new medical colleges, new courses, and the sanctioning of additional seats in existing courses used to be the ones for which a lot of money changed hands in the past. He clarified that the Board of Governors has now fixed this problem. Inspection of institutions will in the future be replaced by assessment, and assessors for individual colleges will be picked randomly by a computer program. He cautioned that assessors and colleges must work together in partnership and that colleges must cooperate with regulators by not introducing fake faculty and fake patients during assessments.

4.1.2 Norms for Assessment of Institutions

New norms for assessment of institutions are being created, said Dr. Roy Chaudhury. Since it is true that many more good quality doctors are required, rational norms need to be put in place for new colleges based on faculty availability, number of proposed beds, available land and other infrastructure. He mentioned that an expert committee was looking into the possibility of assessing colleges not just on physical and quantitative norms, but also on the basis of the quality of teaching and the quality of the product (student) being produced. He welcomed suggestions from the audience on this topic.

Dr. Sandhya Kamat, Lokmanya Tilak Muncipal General Hospital, Mumbai, reinforced Dr. Roy Chaudhury's statements and expressed the view that "*institutions must be judged by the quality of the human resources they produce, rather than on just infrastructure related norms*". Her views were echoed by many people in the audience. Dr. Rashmi Vyas, Christian Medical College, Vellore, added an interesting twist to this discussion by suggesting that everyone spend some time trying to define "Who is a good Doctor?" She emphasised that this exercise would help in no small way to define the requirements from the undergraduate medical education program and also to spell out evaluation criterion for the students. No final definition of a 'good' MBBS doctor was agreed upon at the Roundtable, but many excellent inputs did come in. The recently released Vision 2015 document of the erstwhile Board has adopted a competency based definition, discussed in the following section.

4.2 The Undergraduate MBBS Degree

Dr. Roy Chaudhury pointed out that there was a wide variation in the student quality at intake as well as in the standard of training imparted. Consequently the quality of the end product namely, the quality of the MBBS doctor, showed a large degree of variation around the country. Dr. Agarwal, Maulana Azad Medical College, Delhi, pointed out that even among the medical fraternity, there was a feeling that the MBBS degree was not good enough to stand on its own. This is why almost all MBBS students feel compelled to acquire a PG degree. He urged everyone to work towards strengthening the MBBS degree so that the cost of training good doctors could be brought down and the supply of doctors increased.

4.2.1 Single Entrance Examination

Dr. Roy Chaudhury mentioned that the Apex body had suggested conducting a single nation-wide entrance examination, much like the JEE for admission to the IITs and the CAT for admission to management institutes. At present there are seventeen different entrance examinations to select the current intake of 35,000 students into MBBS. He said that the Board proposed to conduct the entrance examination in English as well as in regional languages and to make the results available within just four days of conducting the exam.

He added that during consultation with the State governments the suggestion for a single entrance examination had not met with the enthusiasm it deserved, presumably because some of the key provisions of the plan had not been correctly understood. The plan, he said, was to continue to allow domicile and all other quotas applicable in the States, to allow private colleges to select from the same list in order of merit, and to ensure that no one who was not on the list was given admission in any medical college, making this an extremely fair and transparent system of selection.

The advantages of a single entrance examination are of course 1) the incredible convenience to students, 2) the standardisation of intake quality, and 3) the fact that equity-selection could be made from the merit list. He said that the dialogue with the State governments was continuing and he was hopeful that the concept of a single entrance examination would eventually be accepted.

4.2.2 Restructuring of the current MBBS degree

Dr. Oak began the discussion on changes in the organisation of the MBBS degree by listing out some of his own suggestions. The topic clearly resonated with everyone present, particularly the students, because suggestions on this topic continued to be made all through the day.

Dr. Oak suggested that the duration of the first year of MBBS be changed to 18 months and the second year be reduced to 12 months. He argued that students must be completely exempt from having to go to hospitals during their second year, so that they can concentrate on their course material and the associated laboratory training in subjects such as pharmacology, microbiology, parasitology, forensic medicine, and others. He felt that the third year could be of 24-month duration and split into 2 parts, to cover ENT, ophthalmology, orthopaedics, paediatrics, general surgery, medicine and obstetrics. He also emphasised the value of vertical integration, in surgery as well as in medicine, so as to connect all the subjects to their clinical side.

4.2.3 Flexibility in Curriculum

This topic also came in for discussion often, all through the day. Dr. Roy Chaudhury acknowledged that the present curriculum needed upgrading as it had not been changed radically for decades. ***"Medical education today is not producing the kind of doctors needed by the country and the curriculum is particularly insensitive to the needs of the rural India"***, he said. Doctors lacked basic skills and what is worse they spent most of their precious internship time, during which they could be learning practical skills, studying for the PG entrance examinations. He mentioned that an expert committee was looking into creating a new curriculum, which would incorporate the use of IT for imaging and simulation, and preparing skills packages for the use of colleges. The committee

had also been given the mandate to introduce humanities and communication skills, ethics, and some basic knowledge of finance into the curriculum, which could help doctors to establish their private practice.

Dr. Oak also talked about how the curriculum must be local and socially relevant. Malaria, Leptospirosis, Dengue and Swine Flu are the emerging killers in Mumbai city and students here must be capable of handling these. If India is going to become the capital of lifestyle-related disorders such as Diabetes, then our curriculum must also prepare students for these.

Dr. Avinash Supe, GSMC and KEM Hospital, Mumbai, pointed out that the previous MCI had not just specified the curriculum but had gone as far as specifying the time table in which it was to be taught! He urged the Apex body to discontinue this practice and to ***allow colleges to have a say in the curriculum by leaving about 30 percent of the course content to be determined by them***. This turned out to be an extremely attractive suggestion to the audience, and most members felt that its implementation would pave the way for experimentation by colleges resulting in localisation and diversity in the overall curriculum as also the evolution of best practices.

4.2.4 Teachers

Regarding the acute shortage of teachers, Dr. Roy Chaudhury outlined several steps that were likely to be taken to relieve some of the pressure. These include

- Extension of retirement age to 70 years;
- Better use of the second stream of postgraduates in the country namely, the holders of the DNB diplomas;
- Request to teachers of PG courses to also teach some UG courses;
- Use of suitably qualified and experienced doctors from the private sector for teaching in medical colleges;
- Use of non-medical experts for teaching subjects such as biochemistry, physiology and pharmacology.

In the case of areas of acute shortage such as anatomy, physiology, biochemistry and forensic medicine, he made the suggestion that specialists in other subjects could be asked to teach these subjects for some time as an interim measure.

Dr. Roy Chaudhury stressed the importance of trying to ensure that teachers from government hospitals were not lost to higher-paying private colleges or corporate hospitals. He pointed out that more than anything else, these teachers were looking for dignity of their profession. Apart from loosening bureaucratic controls, he suggested measures such as giving them better remuneration, more academic freedom, more facilities for research, allowing them to keep a portion of the research grants that they bring in, and allowing them to be paid consultation charges.

Dr. Oak added to this by saying that we ought to change our definition of teachers. We do not necessarily need only full-time teachers. Contract, part-time, teachers are also a great source of inspired teaching, he pointed out. There are 11 teaching sessions of 5.5 hours each week and we

can allow people to teach a flexible number of sessions, subject to a minimum of say 5 sessions, he said. This view was later endorsed by Dr. Noshir Wadia, Jaslok Hospital, Mumbai, who sent us his inputs post the Roundtable. Dr. Oak also urged doctors attached to private hospitals to convince their managements to grant them permission to teach at nearby medical colleges.

4.2.5 Shortage of Doctors

Dr. Roy Chaudhury suggested that besides increasing seats in existing medical colleges, government must start new colleges in areas where there is a shortage of doctors - in public-private partnership if need be. In particular, he suggested starting medical colleges in

- Areas where good district hospitals are already functioning, a suggestion that is endorsed by the High Level Expert Group (HLEG 2011) for providing tertiary care in rural areas;
- Private hospitals;
- Railway/ESIS/Army hospitals.

He emphasised that these larger numbers of doctors cannot be allowed to be created at the expense of quality. Dr. Oak, during his presentation, outlined ways to increase the intake in existing colleges by making use of Information Technology and by introducing by two overlapping shifts in colleges.

4.2.6 Humanities and Ethics

On the question of Ethics, Dr. Roy Chaudhury talked about the delicate relationship between doctors and the pharmaceutical companies. Dr. Oak also addressed this subject and gave examples of how it is inevitable that doctors will have to interact with pharmaceutical companies and that it was unrealistic therefore to expect a complete separation. Dr. Roy Chaudhury touched on the system of "shared fees for referrals", saying it was an unacceptable practice that must go away. He also said that they were very keen to reduce the number of cases of medical negligence. The different aspects of medical ethics and the need to prepare students, faculty, and staff to handle challenges related to ethics were discussed all through the day. It was felt that education in this subject must be an integral part of medical education, becoming a part of all the courses.

Education in the humanities was another subject that was discussed in different forms all through the day. There was complete consensus on the need to include humanities into the curriculum. Dr. Ravi Shankar, KIST Medical College, Kathmandu, described some innovative ways in which this was being done at his college in Nepal. Dr. Roy Chaudhury agreed with some of the suggestions and undertook to try and build it into the curriculum. Dr. Sripati Rao, Kasturba Medical College, Manipal, described the activities of the Department of Humanities in his college where non-religion based ethics and concepts such as distributive justice and communication skills are some of the subjects that are being taught.

4.3 Post Graduate Degree

Here again Dr. Roy Chaudhury pointed out that the quality of the PG student varies considerably. No monitoring is being done as of now regarding how PG courses are taught. There is a tremendous shortage of seats and admission processes are not transparent. The process of providing

recognition for centres of PG education is also erratic. What is needed here, as in the case of MBBS, is to have a single entrance and a single exit exam throughout the country so that post graduates from India will be of a uniform quality and will be recognised all over the world.

One important suggestion that came in from the Roundtable was that PG entrance examinations must be conducted immediately after the final MBBS examination so that students are not preparing for it during their internship/residency. Just as the GMAT and GRE scores remain valid for a certain period these scores can also be considered to be valid for 2 years or more, so that students can use them to get admission either immediately after completing their internship or after getting some research experience or even after taking more courses of interest.

Dr. Roy Chaudhury stated that specialists of many types were in short supply at all district hospitals, particularly in the fields of cardiology, nephrology, gastroenterology and endocrinology. However specialists were also needed for teaching so it was important to increase the number of post graduates sharply. This could be done, he said, by adding more seats in existing courses, by allowing private hospitals to start PG courses, starting more diploma courses and also by starting PG courses in new streams such as oncology and vascular surgery.

4.4 Rural Healthcare

On the subject of healthcare in rural areas, Dr. Roy Chaudhury announced the likelihood of the launch of a new Bachelor's degree in Rural Healthcare (BRHC) with the objective of creating a separate cadre of health professionals who can deal with common ailments and refer serious patients to tertiary care. Students from rural areas who have cleared the 12th standard are eligible for this course. The course would comprise of three years of study period and an internship period of 6 months. The teaching facilities at the district hospitals would be used for the purpose. BRHC students would be given annual registration and be allowed to practise in the rural areas.

More than 80 percent of healthcare delivery in rural India relies on the so-called 'Quacks' and the non-MBBS healthcare workers, both of whom are outside the purview of the MCI

Dr. Oak, in his presentation, suggested that this course incorporate Indian systems of medicine and be called BIMS standing for 'Bachelor of Integrative Medical Systems'. This suggestion was reinforced in the presentation of Dr. Shyam Ashtekar, Bharat Vaidyaka Sanstha, Nashik, who underscored the fact that more than 80 percent of healthcare in rural India relied on the so-called 'Quacks' and the non-MBBS healthcare workers, both of whom are outside the purview of MCI. *Dr. Ashtekar despaired of the dichotomy between India and Bharat and pointed out that the base of the pyramid of human resource in healthcare is being largely neglected.* He said that medical education must cover the entire spectrum of human resources in health, from ASHAs to super specialists. Dr. Kamaxi Bhate, GS Seth Medical College & KEM Hospital, Mumbai, supporting Dr. Ashtekar's claim further, pointed out that the paramedical staff, be they ASHAs, ANMs or the village health workers, are really the backbone of all national programmes in health.

There was a lot of discussion on the topic of rural postings for MBBS students. Most participants at the Roundtable agreed that the effort to enforce rural postings has failed so far. While students cited lack of facilities, particularly for women, many participants felt that it was necessary to look beyond rural postings. Dr. Sanjiv Lewin pointed out that even at St John's Medical College and Hospital, Bangalore, which specialises in training doctors for rural areas, an analysis of data spread over 45 years has shown that only 31 percent of doctors have actually gone to rural areas and only 24 percent have stayed on for the full 2 years. However, Dr. Oak felt that it was imperative for MBBS doctors to serve one year in rural areas - if not immediately after their MBBS degree, then certainly at some time during their careers. Dr. Kamaxi Bhate added that although compulsions of having to prepare for the PG entrance examinations prevented students from taking their rural posting seriously, interns from GS Seth Medical College provide efficient medical cover to thirteen PHCs that are within 30-40 Kms of Mumbai.

4.5 New System of Regulation of Medical Education

In the second half of his talk, Dr. Roy Chaudhury described the prevalent thinking among the members of the Board of Governors, about the new system of regulation of medical education that was likely to come into force. Several models had been considered, and wide-ranging consultations had been held at different centres in the country before arriving at a selection. He described the details of the model that been agreed upon, but cautioned that there was still room for change.

At the Apex would be the NCHRH whose function it would be to coordinate all aspects of education - medical, nursing, dental, pharmacy and paramedical. In addition it would provide strategic planning for the country and play an advisory (and perhaps also a monitoring) role.

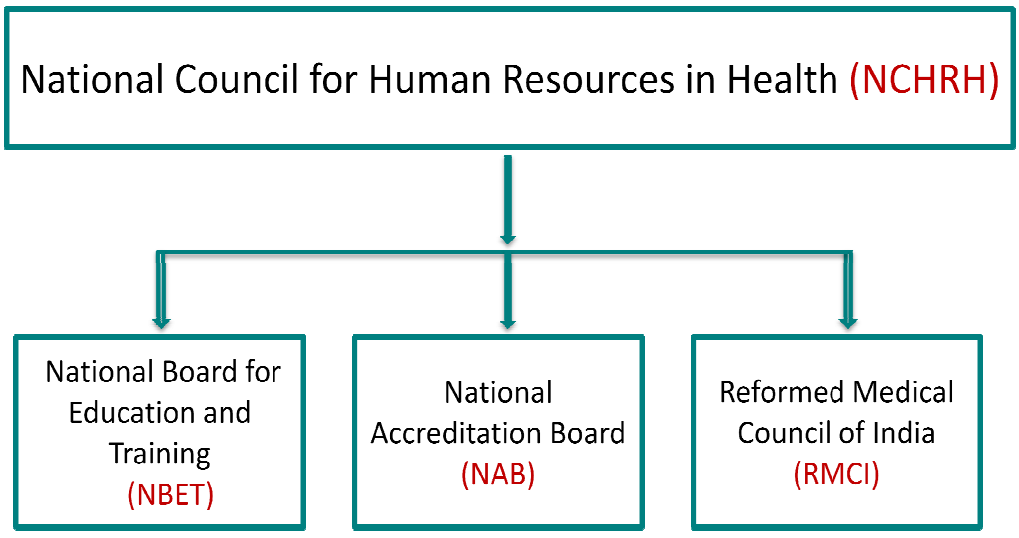

Figure 6: Proposed new system of regulation of medical education by the Board of Governors (2010-2011) of MCI

A new National Board of Education and Training (NBET) (renamed National Board for Health Education (NBHE) in the NCHRH Bill, 2011) would be constituted which would look into all

academic functions including preparation of norms and curricula, faculty development programs, conduct of examinations and recognition of colleges. The vision is that, eventually there must be only one M.B.B.S degree of uniform and good quality across India. This must also be true of the post graduate degree (MD/MS).

A National Accreditation Board (NAB) (renamed National Evaluation and Assessment Committee (NEAC) in the NCHRH bill, 2011) would be entrusted with the task of giving approvals to new institutes, colleges and courses. The NAB would also assess the quality of medical education and teaching centres, the quality of the infrastructure, and the quality of the doctors that were being produced. The NBHE, NEAC and the reformed National and State Councils will report to NCHRH and will, between them, cover all the regulatory aspects of medical education.

4.6 Updates since the Roundtable

In the months since the Roundtable several of the suggestions made in the presentation by Dr. Roy Chaudhury, such as those pertaining to teaching faculty[14], criteria for opening of new medical colleges and for additional intake in existing colleges etc.[15], have been incorporated into the recommendations to MoHFW. So also, assessors in charge of quality control have been advised to look very closely at patient load, quality of faculty, equipment and infrastructure before granting permissions for additional intake or new colleges. The reports of the Working Groups on Undergraduate and Postgraduate education have been compiled into a Vision 2015 (MCI 2011) document which contains many excellent suggestions for improving the quality and supply of doctors and specialists. An extensive and carefully thought out list of competencies that a good MBBS doctor must have, has been compiled and the necessary changes in curriculum that allow these competencies to be realised has been outlined. A new, completely revamped, curriculum is eagerly awaited in the near future. In the case of PG education, careful attention has been paid to rationalising the various types of PG degrees so as to cater not just to delivering quality healthcare but also to overcoming the acute shortage of faculty in medical colleges today.

Detailed plans for a National Eligibility cum Entrance Test (NEET) for aspirants of UG as well as PG courses have been outlined, and it was intended to conduct these tests beginning in the 2012 session. However, several States have taken objection to the early dates, claiming paucity of preparation time for students, among other issues and the matter is also in the courts. The Board of Governors of MCI has been replaced as of May, 2011. The new Board, under the chairmanship of Prof. K.K. Talwar, will oversee the implementation of Vision 2015[16], prepared by the erstwhile Board. The introduction of the Bachelor of Rural Healthcare (BRHC) degree is also on the anvil[17] and the NCHRH bill has been introduced in the Rajya Sabha.

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[14] http://www.tribuneindia.com/2010/20101129/cth2.htm accessed February 2012.
[15] http://www.igovernment.in/site/india-needs-500-medical-colleges-2015-mci-38424 accessed Feb. 2012.
[16] ORF researchers, Radha Viswanathan and Maulik Mavani in private conversation with Dr. Rajiv Yeravdekar, member, Board of Governors, MCI (2011-12).
[17] http://post.jagran.com/mci-to-deploy-trained-health-workers-in-villages-after-rural-health-care-course-1325750357 accessed February 2012.

5 ORF Recommendations: Structure and Role of the NCHRH

We begin this section on ORF recommendations by taking up where the description of the Roundtable left off, namely, the proposed new regulatory structure for medical education. The new NCHRH Bill, 2011, is a comprehensive and good bill with provision for allocating different regulatory functions to different bodies, which is an extremely welcome move. However, we believe that the role of the Apex body, the NCHRH, must be expanded considerably so as to empower it sufficiently to deliver on the country's critical needs for human resources in health. The ongoing, simultaneous, reforms in medical and higher education must play a strategic role in revolutionising the development of healthcare education.

5.1 Roles and Responsibilities of the NCHRH

The NCHRH must work actively to encourage inter-departmental and inter-ministerial collaboration so as to do justice to the increasingly multi-disciplinary nature of medical education and research. While it is true that an attempt has been made, in the NCHRH bill, to ensure representation in the Apex Body from subjects such as management education, science and technology and even law, the effort to integrate with the rich Indian healing traditions namely, the AYUSH systems, is conspicuous by its absence! *Such a refusal, to integrate across another department within the same ministry, is symptomatic of a more serious malaise that does not augur well for affordable healthcare.* So also with medical research and with education in the allied health sciences (which covers paramedics, optometrists, lab technicians, radiologists and the like), where overlap in jurisdiction with the NCHER will have to be explicitly ironed out. ORF recommends that the roles and responsibilities of the NCHRH are determined by the requirements of the subjects involved, and by the healthcare needs of the Indian people, rather than by ministerial boundaries or other such administrative concerns. Towards this goal, NCHRH must envisage for itself the following additional responsibilities:

5.1.1 Autonomy, Responsibility for Strategic Planning and Execution

No explicit mention has been made in the NCHRH Bill, 2011, about autonomy of functioning of the NCHRH and its constituent bodies. While it is acceptable that, as per the bill, the NCHRH is assigned an advisory role with respect to healthcare delivery, when it comes to medical education, ORF believes that it must not be just an advisory body at all. *Here, the NCHRH must take full responsibility for strategic manpower planning and coordination, for quality medical education and research that will impact quality healthcare delivery.* It must be empowered for this role and must also be held accountable for delivering results. However, there is no mention in the bill of any reviews of the work of the Apex body itself and no clauses relating to non-performance, which is a cause for concern.

5.1.2 Integration and mainstreaming of AYUSH systems

As discussed, AYUSH systems contribute to keeping healthcare costs affordable and are, in fact, the healing systems of choice for large sections of the population. AYUSH practitioners are also providing the bulk of accessible healthcare services in rural areas. The stubborn refusal of the

Department of AYUSH and the Department of Health and Family Welfare to establish institutional linkages and to work together is nothing short of foolhardiness, given that the issue of lack of access to affordable healthcare is such a serious one already.

ORF strongly recommends that the Department of AYUSH is represented in the NCHRH, so that integration and mainstreaming of AYUSH systems can take place. That Indian systems of medicine have a key role to play in the delivery of affordable healthcare in India is acknowledged in several publications of the Ministry itself – see for example, (National Rural Health Mission. Meeting People's Health Needs in Partenership with States. The Journey so far 2005-2010.). Similarly, in the 'Annual Report to the People' by the Government of India (GoI 2010), mainstreaming of AYUSH systems and better integration with modern medicine are explicitly stated as future goals. Therefore it is baffling that no pressure is being brought to bear on both sides, for better coordination between them through the NCHRH.

5.1.3 Inter-Ministry Cooperation - NCHER and NCHRH

The report of the Task Force for the NCHRH, 2009, correctly suggested bringing Pharmacy and the 'Allied Health Sciences' (which includes paramedics, lab technicians, optometrists, radiology technicians and others) under the purview of the NCHRH. These have so far been in the domain of the AICTE which is slated to be subsumed into the new NCHER. However it is not completely clear yet, from the content of the two bills, as to whether this will indeed happen. It is fairly obvious that it will not always be possible to align the management of interdisciplinary subjects within the boundaries of the various ministries. They will grow and expand in different directions guided by cutting-edge research and discovery. The NCHER and the NCHRH must, between them, be equal to the task of accommodating these developments, and to working with other ministries as needed. For example, the development of Health Information Systems and the need for creation of quality professionals in the area of IT in health can benefit from the collaboration of institutions which are part of the Ministry of Communications and Information technology.

Given that the IITs, which are under the administrative purview of MHRD, are foraying into medical education, these kinds of overlap issues will be brought more sharply into focus in the future. Our new regulatory system, and in particular the NCHRH and the NCHER, must respond quickly and efficiently to resolve them. The Joint Mechanism for settling differences of opinion between the NCHRH and the NCHER (described in clause 52 of the NCHER bill) provides for a time period of two months for settling each such dispute, which is much too long.

The mandate of the NCHRH, as stated in subsection (I) of section 16, is 'to determine, maintain, co-ordinate minimum standards of health human resources and promote their education and training commensurate with their demand in different States and UTs'. However clause (t) of subsection (I) of section 30 of the same bill specifies that the NCHER has the authority to prescribe 'higher' standards for health educational institutions. *This is reminiscent of the role of the UGC with respect to the MCI in the past, and is just the kind of overlap of jurisdiction that can be detrimental to both.*

5.1.4 New cadres of health administration and management professionals

The quality of healthcare delivery in the country is critically dependent on 1) the inculcation of a service mentality among all levels of healthcare workers, and 2) the creation of large numbers of professional healthcare administrators and managers. Smooth running and optimal usage of healthcare facilities will require services and management training to be given to all healthcare workers, either as separate short term courses, or as modules within their respective professional training courses. Management schools are already producing post-graduates with some health related specialisations such as hospital administration. However, it should also be possible for different cadres of workers within the healthcare system – diplomas, graduates, post-graduates, and others - to take specialised courses designed by, and preferably also delivered by, reputed management schools. Topics such as problem solving techniques, team work, and communication, etiquette for interaction with patients and families, and even disaster management, must be customised to the need for patient-centric services.

5.1.5 Coordination with the National Skill Development Mission

The National Skill Development Corporation (NSDC) has put out a series of skills gap reports on their website, including one on healthcare[18]. The report titled 'Human Resource and Skill Requirements for the Healthcare Service Industry', based largely on the data available from the National Health Profile 2008[19], invites the participation of the private sector and entrepreneurs to fill the gaps. It is expected that the respective Sector Skill Councils will ensure quality of the manpower being produced. Irrespective of who regulates the courses being launched through the National Skill Development Mission, there will be a need for better coordination between these courses and the requirements of the healthcare industry, as also with similar courses conducted by the NCHRH and its constituent bodies. Since the healthcare sector is potentially a very large employment generator[20], ORF urges the NCHRH to work closely with the NSDC to provide guidelines and set quality norms and benchmarks for this critical activity.

5.1.6 Provision for Continuing (Lifelong) Medical Education

Provision for continuing medical education is mentioned as a desirable goal in the NCHRH Bill. Here we highlight some expectations that continuing education must fulfil namely, to act as a refresher course in the respective subjects and also to prepare candidates with additional training associated with their career growth paths. There must be a well-defined growth path created for every cadre of healthcare professional and regular skill enhancement and refresher courses must be mandatory for everyone. Pathways must also be created between AYUSH and allopathic systems so that people can move from one stream into another if they so prefer. For example, it should be possible for a student of either BIMS or BRHC to eventually earn an MBBS degree. ORF urges the NCHRH, in collaboration with the National and State professional councils, to make provisions for the

[18] Human Resource and Skill Requirements for the Healthcare Service Industry http://www.nsdcindia.org/pdf/healthcare.pdf accessed February 2012.
[19] National Health Profile (NHP) of India – 2008 http://cbhidghs.nic.in/index2.asp?slid=1000&sublinkid=706 accessed February 2012.
[20] Pointed out by Dr. Devi Shetty, renowned Cardiac surgeon and member of the erstwhile Board of Governors MCI, during his visit to ORF Mumbai, in April 2010.

mandatory and regular up-gradation of the skills of all cadres of health workers. As indicated in the bill, this activity can be tied to the renewal of enrolment into the professional councils.

In this context, the recent move by the AICTE to ban part-time MBA courses[21] is an extremely retrograde move. Part-time and evening courses are the lifeline of *ALL* continuing education programs all over the world, since it is the only way in which professionals can upgrade their skills. *The blanket ban by AICTE, in response to some cases of malpractices, smacks of arbitrariness and control - the very mind-set that must be set aside completely if India is to gift itself an internationally competitive education system.*

5.1.7 National Register for Human Resources in Health

A well-kept and up-to-date database of human resources in health is critical to the task of strategic manpower planning and the fact that the NCHRH, in conjunction with the National and State Councils, is being given the responsibility to commission, create and maintain the proposed database of human resources in health is a welcome move. While it is true that the respective professional councils have always been tracking registered practitioners, they have not so far been able to ensure that multiple registrations (for example nurses registering in more than one state) are avoided, and that names of professionals who migrate or stop working are weeded out. Since the value of such a database cannot be overstated, it is imperative that the database is kept frequently updated and error-free. Coordination with all the States is critical for this. However, a mechanism for coordination of this critical activity is yet to be specified.

5.2 Role of the National Board for Health Education

Setting the minimum standards for health education is the specified role for the NBHE. *However this mandate overlooks the existence of institutions of excellence, those which are of far higher quality than the minimum.* Institutions at the top-end of the quality spectrum have not been provided for at all in the present bill. Such institutions need additional support, in the form of academic autonomy coupled with the appropriate degree of financial autonomy, in order to enable them to scale even greater heights. ORF recommends that mechanisms are put in place to allow the best institutions to innovate around courses, faculty and curriculum. The best practices they evolve can be ploughed back into higher baseline standards for everyone.

Curriculum design is another of the key tasks assigned to the NBHE. ORF suggests that the curriculum provided to medical colleges is treated more in the nature of guidelines, and that *some 30 percent of the curriculum is left to each individual institution to select, so that they may include topics of local relevance.* This practice will result in plenty of healthy activity around localisation of curriculum. If, in addition, these institutions are required to share their innovations with the NBHE and with other institutions, curriculum will improve continuously and remain aligned with the healthcare delivery system. ORF recommends that, as a general principle, curriculum is reviewed at least once a year and revised as often as necessary.

[21] http://www.business-standard.com/india/news/aicte-shuts-doorpart-time-mba-courses/427513/ accessed February 2012.

5.3 Role of the National Evaluation and Assessment Committee

As a general principle, regulatory bodies must only issue guidelines and must entrust the actual verification/checks of compliance with regulation to the private sector. An eco-system of private players must be allowed to grow and proliferate so that they compete among themselves to perform specific individual functions, such as accreditation, against norms laid down by the regulatory body. ***Excellence in education requires that a plethora of agencies are involved in the enforcement of regulation, so that collusion towards subverting quality guidelines set by the regulator is either minimised or prevented completely.*** The duties of the NEAC, as outlined in the NCHRH Bill, do make provision for the use of third-party evaluation and assessment agencies. What is puzzling however is that the bill does not require NEAC to ensure that all educational institutions are mandatorily accredited at regular intervals, say once every 3-5 years. One of the scourges of the present system is that only a very small fraction of all educational institutions have been accredited so far. This needs to be set right immediately.

5.4 Role of the National and State Councils

The reconstituted National and State Councils will now restrict themselves to being a body that provides 'License to Practice'. Some of their responsibilities include:

a. Permanent registration/provisional registration of doctors with recognised medical qualifications, registration of additional qualifications, etc.;
b. Responsibility for ensuring continuing education for its registered practitioners. In this role, the councils must identify requirements for new and refresher courses for doctors and other healthcare workers from time to time and work with the NCHRH towards their delivery;
c. Maintenance of a National Register;
d. Handling of reciprocity with foreign countries in the matter of mutual recognition of medical qualifications;
e. The promotion of a code of ethics and standard of professional conduct and etiquette.

As mentioned earlier, the responsibility of ensuring continuing education for all cadres of healthcare workers is a very important one and its contribution to quality healthcare cannot be minimised. ORF urges the National and State Councils to evolve a well thought out continuing education system that is the envy of the world.

The grievance redressal mechanism in the NCHRH Bill, for members of the public who are unhappy with the professional services provided by the healthcare workers leaves a lot to be desired. As per the present provision, the complaint must be filed within sixty days and the Council is obliged to decide on the complaint within one hundred and twenty days. There are no means to escalate the matter further if the complainant is dissatisfied with the decision of the Council, nor are there any provisions for penalising the health worker in cases of genuine grievances.

6 ORF Recommendations: MBBS and Post Graduate Education

We begin this section by taking up the question of 'Who is a MBBS Doctor'. Contrary to expectations, even a small sampling of the participants at the Roundtable produced several different views of who a doctor is. This is not surprising given that doctors are expected to fulfil many different roles. The following discussion makes a strong case for defining outcome-based training of MBBS Doctors. It helps students know what to expect from their education, teachers know how to orient the education they provide, and evaluators know what to test for.

6.1 Who is a good MBSS Doctor?

A definitive answer to this question is a key input into defining the goals of reforms in medical education, and the methodology for achieving them. Figure 7, reproduced from the specification of the 'Overarching Undergraduate Medical Education Program Objectives', by the Faculty of Medicine and Dentistry at the University of Alberta, Canada, provides us with an illustrative example. ***"The faculty's objectives are to develop knowledgeable, compassionate, collaborative, reflective and professional physicians committed to quality healthcare and life-long learning."*** In a short three-page document they list 42 different characteristics classified into the five roles envisaged. Their overall definition of the main role - that of being a professional – reads, *"As Professionals, our graduates will demonstrate a commitment to professional service and responsibilities; they will adhere to high standards of ethical practice and professional conduct as it relates to the health and well-being of individuals and society."* Their expectations from graduates in each of the roles 'Skilled Clinician', 'Patient-Centred Caregiver', 'Health Systems Practitioner and 'Scholar' also makes enlightening reading.

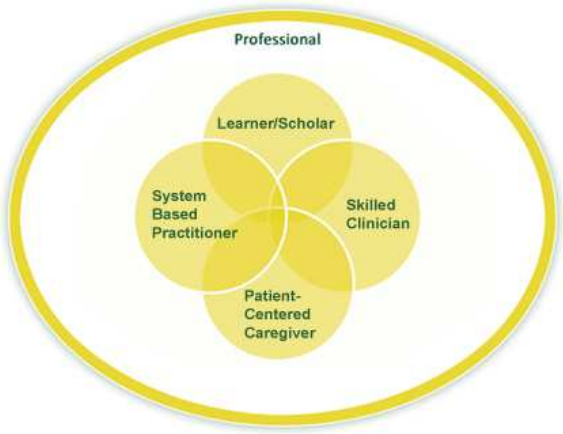

Figure 7: Objectives of undergraduate medical education
http://www.med.ualberta.ca/Education/UME/documents/OverarchingProgramObjectives_Concise_20090602_000.pdf

The CanMEDS (Canadian Medical Education Directives for Specialists) framework in Figure 8 below is yet another guide to the essential abilities that physicians need for optimal patient outcomes. The

core competencies are organised thematically around seven key physician *'Roles'*. The diagram illustrates the centrality of the role of the medical expert and also the interconnectedness among all the roles. The CanMEDS framework is competency-based. *'Competencies'* are important observable knowledge, skills and attitudes that a post-graduate learner must have, and the seven Roles have been clarified and defined by key competencies. Each role is also defined by *'Elements'* which are terms or phrases that describe each role in more detail. The CanMEDS framework document describes the elements and the competencies in detail and serves as the basis for resident evaluation. In their Vision 2015 document, the MCI has recommended a competency based framework consisting of five roles described by 35 characteristics (MCI 2011). ORF endorses this approach and suggests that this framework be implemented widely.

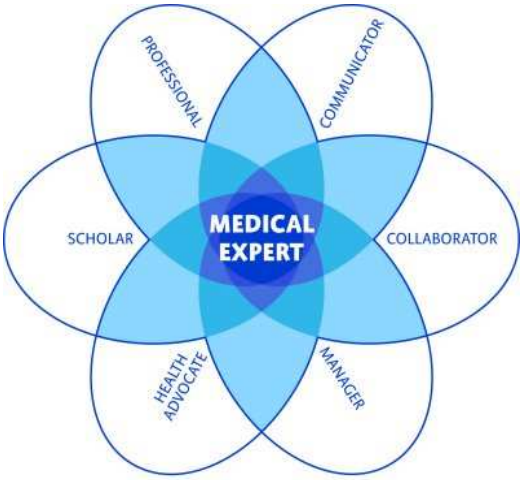

Figure 8: CanMEDS framework of core competencies organised thematically around 7 key physician roles
Source: http://www.collaborativecurriculum.ca/en/modules/CanMEDS/CanMEDS-intro-background-01.jsp

It is clearly very important that our reform process creates a similar blueprint for other categories of healthcare education since it serves to provide clarity to the different stakeholders - educators, teachers, trainees, practising physicians, researchers, administrators and other healthcare professionals. Students will learn about the big picture and about the expected outcome from their education. Educators and teachers will find clarity regarding the kind of professionals they need to produce. Assessments, examinations and other forms of evaluations can be devised keeping these goals in mind. Without this kind of goal setting for everyone concerned, our education process will fall short of the expectation that our society has from its healthcare professionals.

6.2 Curriculum Reform and Duration of the MBBS course

The curriculum for the present MBBS course has been identified as having two key weaknesses. It requires urgent rationalisation so that irrelevant and obsolete material can be replaced by new curriculum that provides early clinical exposure as well as the development of social skills that have been identified as critical requirements for family physicians. As discussed at the Roundtable it is generally acknowledged, even among the medical fraternity, that the present MBBS course is not

rigorous enough to command respect or stand on its own and must necessarily therefore be followed by specialisation of some kind. Weighed down by a needlessly exhaustive curriculum, students have no time to gain perspective or even do justice to the course. *Yet, even this exhaustive curriculum falls far short of international standards because of a relatively narrow focus that leaves out many critical aspects of the training of family physicians.*

The MCI, in its effort to fix this deficiency and to create an internationally recognised 'Indian Medical graduate' who is also a skilled 'Basic Doctor' has proposed several new approaches to curriculum and teaching in its Vision 2015 document. *All of these recommendations - the foundation course, the proposal to provide early clinical exposure with student-doctor method of training, the horizontal and vertical integration of curriculum and many others - are extremely well thought and very welcome.* Although the curriculum itself is not yet available in the public domain[22], we expect it to be excellent. ***In the interests of preserving uniform standards, MCI's full curriculum (core curriculum plus optional portions) ought to be provided as detailed guidelines and a select group of good colleges must be allowed to innovate around it, with the NCHRH and the NBHE playing a monitoring role to ensure that standards are not diluted.***

The length of the MBBS course is to remain the same, at 4.5 years with 1 additional year of internship. Given the rich selection of electives that have been drawn up for the students, the skill development opportunities (with mandatory as well as optional components) that are planned and the ambitious table of contents for the foundation course, it is unlikely that justice can be done to such a rich curriculum within such a short time. Clinical training, which is crucial, is also slated to be expanded and introduced early in this curriculum. This can only mean further pressure towards covering sufficient material to make an MBBS student confident enough to practice as a 'Family doctor' without seeking PG qualifications. ***We at ORF firmly believe that the basic MBBS training must be rigorous and of very high quality. Therefore we recommend that MCI allows students who want to take advantage of the larger selection of electives available (post the implementation of Vision 2015), to optionally spend an additional year at college before graduating.***

The basic MBBS training must be rigorous and of very high quality. ORF recommends that MCI allows students who want to take advantage of the large selection of electives available, to optionally spend an additional year at college before graduating

This would be a good way to discourage excessive emphasis on specialisations and create many more family physicians, which is the crying need in society today. Keeping the scores of the PG entrance examinations (NEET-PG) valid for a longer period and allowing deferred admissions, will give even those students who have admissions to PG courses a chance to make use of this opportunity. *In fact, even practising doctors can be allowed to return to study some of the electives on offer as part of a continuing education program. The additional year can also be used to create opportunities for MBBS students to get a flavour of*

[22] http://articles.timesofindia.indiatimes.com/2011-05-17/india/29551614_1_medical-colleges-post-graduate-medical-seats-mci accessed February 2012.

medical research. It should be possible for all interested students to spend 6 months to one year working on a serious research project. This will provide a much needed fillip to medical research in the country today. The activity can also be incentivised by giving students additional credits, which can be used towards admission to PG courses (see section 6.7). The counter argument to increasing the length of the MBBS course that is often put forward - that students need to be able to start earning and supporting their families - is partly negated by the heavy rush for PG seats (involving 2-3 additional years of study) that we see today. ***ORF expects that, given the opportunity, large numbers of students will avail the additional year, provided the electives are well conceived and well taught and opportunities for cutting-edge medical research are made available.***

6.3 Pre-Medical courses

ORF believes that in the long term it is advisable to introduce a two-year pre-medical course for all aspiring medical students, in collaboration with science colleges in the country. The innovation here is to consider making better use of the 11th and 12th grades in high school and junior college. MBBS students necessarily have to take the science stream i.e., physics, chemistry and biology. A quick assessment of the syllabus throws up enormous opportunities to streamline these two years without detracting from the quality of the science training, yet making optimal use of this time to give students some much-needed orientation towards the medical profession. The Department of AYUSH has already made a move in this direction. The Central Council for Indian Medicine (CCIM) has already cleared a proposal for a seven and a half year course in Ayurveda, post the 10th standard examination[23].

ORF believes that in time, the only competitive way forward for India will be to have all professional courses – healthcare, engineering, law, agriculture, management and even vocational education - conducted in multi-disciplinary settings, ending the artificial separation of higher education into silos which has been to the detriment of everyone concerned

The challenge of course is the need to co-ordinate curriculum with junior colleges and with MHRD but we believe that this challenge is here to stay and is well worth taking on. Pre-med courses will provide far more flexibility to create alternate space for courses on soft skills, on medical humanities, and on other training that contributes towards creating 'social' doctors. It will also be more in keeping with the realities of the evolution of the medical field which has increasing overlap with many fields of science, technology, humanities, management and law. ***ORF believes that in time, the only competitive way forward for India will be to have all professional courses – healthcare, engineering, law, agriculture, management and even vocational education - conducted in multi-disciplinary settings, ending the artificial separation of higher education into silos which has been to the detriment of everyone concerned.***

[23] http://articles.timesofindia.indiatimes.com/2010-07-10/pune/28301983_1_ayurveda-medicine-ccim-ayurveda-degree accessed February 2012.

6.4 Single Entrance and Exit Examinations

A single national-level entrance exam for the MBBS course will prevent fragmentation of the first level entrance criterion and relieve students of considerable stress. The NEET (National Eligibility cum Entrance Test) suggested by the MCI is a step in the right direction. However, it appears to have already run into difficulties with several State governments, largely due to the early start date set for summer 2012.

ORF recommends that MCI puts off the implementation date by at least 2 years and works with all stakeholders to get NEET accepted, both at UG and PG levels, in the interests of the students. The entrance examination for both UG and PG levels must include an 'aptitude test', something that was also suggested by several attendees of the Roundtable. The timing of this examination for PG entrance is also important. *ORF endorses the recommendation made at the Roundtable that it be conducted immediately after the final MBBS exams, before internships begin, so that students are free to make the best possible use of their internship period for getting much needed clinical experience instead of studying for the NEET-PG.*

The 'Indian Medical Graduate' (IMG) Licentiate examination suggested by MCI, which will be a nationalised exit examination, is yet another good move towards achieving a uniform and good quality in the teaching of the MBBS course nationwide. However, *ORF disagrees with MCI's recommendation of keeping this exam separate from the NEET-PG.* The reason put forward namely, that the IMG is only designed to assess minimum defined standards and the NEET-PG is geared towards differentiating students on merit, is not an insurmountable problem. For instance, the NEET-PG could be split into two parts with the common portion doubling up as the IMG and the second portion, appropriately designed (see section 6.7 below), used exclusively to identify students who qualify for the PG course. There could be other solutions as well. ORF believes that MCI's decision to have two separate examinations needs to be reviewed for the compelling reason that if IMG were a separate examination there would be no incentive for most students to take the examination, unless it is made mandatory (scheduled for 2017). *Even so, making students take two different exams (based on the same course material) for two different purposes, just one year apart before and after the internship year, is an unnecessary and avoidable burden.*

6.5 MBBS Internship – Serving Rural and Semi-Urban Areas

The MBBS internship period, once freed from the distractions of studying for the PG entrance examinations, can be used very effectively by students to gain a lot of confidence and prepare for a career as a family physician. Governments can benefit from this time too, by rotating the locations where students are posted - covering PHCs and CHCs in the rural as well as semi-urban areas. *ORF agrees with the students' representation at the Roundtable that it is a waste of their training time if they are posted in places where they do not have the facilities to practice their craft.* However, in the longer term, if the NRHM continues to roll out and physical infrastructure in rural and semi-urban areas improve, these kinds of postings will become feasible and must certainly be incentivised and even mandated.

In the meantime, semi-urban areas which are in just as much need of good doctors and low-cost healthcare facilities should be the focus of postings for resident doctors. State governments can work with medical colleges to free up space for setting up many government-run health clinics in slums and other poorly-served urban and semi-urban areas supporting dense populations. A few such clinics can be given to each individual college to run. Resident doctors can then become a very valued resource in re-establishing referral systems for large government hospitals and for taking up public health initiatives in these areas to serve the urban poor.

6.6 Teaching Faculty

The acute shortage of teaching faculty in medical education is evident from the numbers in Table 5. The issue of compensating for non-availability of faculty, and training new faculty, is however a very complex one. As with the MBBS degree itself, the quality and standing of teaching faculty has deteriorated considerably over the years.

ORF suggests that remuneration and working conditions for all teachers be reviewed with a view to restoring the dignity of the teaching profession. Faculty must be given the opportunity to invest in themselves. Flexible mechanisms that allow them to choose between research and limited private practice, fewer bureaucratic controls and more academic freedom, are only a few of the measures that need to be considered while creating an attractive package for them.

A related serious concern is one of not having sufficient 'good faculty'. Many good suggestions towards coping with the shortage in numbers in the short term were put forward at the Roundtable. These include allowing DNB holders to teach, allowing practising doctors to teach part-time, roping in doctors from private sector hospitals, and many others. In the longer term, the only approach is to ensure that teaching becomes an attractive option that doctors vie for. In order to ensure that only the best teachers are retained in the long term, tenure track positions must be created for all new faculties.

It is imperative that faculty be given attractive remuneration and working conditions. By the same token they must also be held accountable to the constituency they serve, namely the students. ***ORF recommends that all teaching faculty be subject to an appropriate, continuous, evaluation process which has a bearing on their career paths.*** Student evaluations are being successfully used around the world, and best practices with respect to these are well known. Faculty who receive consistently poor reviews from students, peers and seniors must be discouraged from teaching further unless they take remedial courses. The Kasturba Medical College, Manipal, follows the practice of compulsory teaching evaluation and personality development courses for faculty. Performance appraisal of faculty also incorporates student evaluation. While Sixth Pay Commission scales are paid to faculty; a part of this is given as performance incentives. Research papers are assessed on the basis of the impact factor. These policies have helped the college remain among the top 10 colleges for over 10 yrs.

Table 5: Shortfall of teaching faculty in various subjects
Source: Report of the UG Education Working Group, 2010, MCI

	Current Need	Current Shortfall	Projected Need	Total Additional Need
Anatomy	2000	1000	2000	3000
Physiology	2000	1000	2000	3000
Biochemistry	2000	600	2000	2600
Pharmacology	2000	600	2000	2600
Pathology	2000	600	2000	2600
Microbiology	1600	500	1600	2100
Forensic Medicine	2000	1500	2000	3500
Community Medicine	2400	500	2400	2900
Medicine	2000	200	2000	2200
Surgery	2000	200	2000	2200
Obstetrics & Gynaecology	1600	160	1600	1760
Psychiatry	800	80	800	960
Dermatology	800	80	800	960
Anaesthesia	1600	160	1600	1760
ENT	800	80	800	960
Ophthalmology	80	800	960	800
Orthopaedics	1600	160	1600	1760
Radiology	1000	100	1000	1100
Total	**29400**	**6340**	**29160**	**35740**

6.7 Post Graduate Education

ORF concurs that it is imperative to increase the number of PG seats as quickly as possible, particularly in subject areas which suffer from acute shortages. A persuasive argument for the need to increase PG seats is the critical shortage of teaching faculty all over the country. The estimates provided by the working group of the MCI in 2010, reproduced in Table 5, show that an increase of more than 100 percent in the number of PG seats will be necessary for meeting the teaching

requirements. ***ORF recommends that the NCHRH, even while working to increase the availability of PG seats, simultaneously works towards reducing the pressure on PG admissions by strengthening the MBBS degree.***

ORF recommends that the NCHRH, even while working to increase the availability of PG seats, simultaneously works towards reducing the pressure on PG admissions by strengthening the MBBS degree

The suggestion was made at the Roundtable that *selection of candidates for the PG courses ought to be made on the basis of more than just a single entrance exam. ORF believes that there is considerable merit in this suggestion.* Students ought to receive credits throughout their MBBS degree, for several activities – the quality of their clinical work, fulfilment of rural postings, any research they may have undertaken, participation in campaigns for public health etc. These credits, in addition to a common entrance exam and an interview, should be the full criteria on which PG admissions are based, as discussed earlier in section 6.4. Assessing students for the quality of their work throughout their MBBS degree is a much fairer way of selecting candidates for PG courses. The practice will also ensure some degree of accountability among students during their MBBS.

7 ORF Recommendations: Human Resources for Rural Healthcare

The NRHM has gone a long way towards addressing the long standing needs of the rural population, both in terms of improved local infrastructure at the various health centres and in terms of the training and deployment of large numbers of human resources at the bottom of the pyramid. While the program continues to run and consolidate its gains further, we look at some further recommendations relating to rural healthcare. These include a discussion of the pros and cons of the decision to introduce a new Bachelor's degree, the Bachelor of Rural Healthcare (BRHC), by some state governments and recently also by the MCI[24].

7.1 Bachelor's degree in Rural Healthcare

The move basically brings back the LMP (Licentiate Medical Practitioner) degree of the past which was abolished after the Bhore committee report (GoI, Report of the Health Survey and Development Committee - Vol II Recommendations 1946). The decision to abolish the LMP was a difficult one then just as the decision to reintroduce the equivalent, a new Bachelors' degree, is difficult now. ***ORF believes that given the prevailing, acute, shortage of 'Basic Doctors' in the rural areas, the move to introduce a new, shorter, Bachelor's degree is, on balance, a good decision.***

The decision is difficult because many of the original concerns that the Bhore committee expressed, while recommending the abolishment of the LMP degree (GoI, Report of the Health Survey and Development Committee - Vol II Recommendations 1946), still hold true today. Their concerns, reproduced below, highlight the difficulty very clearly:

- *IF the main recommendation of the 'less well trained' doctor is the fact that they can be produced in much larger numbers then this may be nothing but a pipe dream given the paucity of resources available for training.* The success of the new Bachelor's degree will depend critically on the selection of content and the quality of teaching – it will have to be an extremely well designed and well taught course – and this is certainly a critical challenge at the present time.
- *An imperfectly trained doctor is likely to forget his own limitations and attempt ministrations which are beyond his ability, to the detriment of the public.* This is a very real danger and there are no easy solutions to the problem.
- *A regular Doctor who is supported by adequate and efficient technicians and other ancillary personnel is able to extend his sphere of public utility to an extent that is well beyond anything that can be achieved by his less well trained counterpart.* This is something that ought to have been done diligently in the past and needs to be done even now.

[24] http://post.jagran.com/mci-to-deploy-trained-health-workers-in-villages-after-rural-health-care-course-1325750357 accessed February 2012.

However, there are also many newer considerations that need to be taken into account. It is amply clear that the effort to get MBBS doctors to serve in rural areas has been singularly unsuccessful. Lack of infrastructure and facilities, both professional and personal (particularly for women), at the rural posts has been cited as the main reasons for this. There is already a crippling shortage of doctors in the country which cannot be wiped out any time soon. Therefore it is unlikely that doctors will migrate to rural areas while there are still plenty of opportunities in urban areas, even though the rural infrastructure is now getting considerably upgraded under the NRHM.

It is important that even as incentives to MBBS doctors to serve in rural areas, such as credits towards PG admissions, access of NRHM infrastructure for judicious use in private practice etc. must continue to be offered, other solutions must also be explored. ***The root of the problem is that far too few students hailing from rural areas - those who are most likely to return to their home towns to serve - are making it through the MBBS admission process. The issue has therefore become one of access for the right group of students.*** The intense competition in the entrance examination effectively filters out rural students who do not have access to coaching classes, and poor students who are unable to afford them. It is imperative however that rural students be given a chance to study and serve in their own areas. This fact tilts the argument in favour of the new degree to which rural and poor students could get easy, or even preferential, access.

Two states, Chhattisgarh and Assam, have introduced this Bachelor's degree already. The 'Rural Medical Assistants' in Chhattisgarh have been the subject of a detailed case study (Sundararaman, et al. 2010).The conclusion appears to be that on balance, provided appropriate precautions are taken, introduction of this degree has benefited the local population. In Assam too, preliminary reports suggest that the course is paying dividends[25]. The move has found favour with members of parliament[26] and has also been endorsed by the HLEG of the planning commission.

7.2 Bachelor's degree in Integrative Medical Systems (BIMS)

Given that most of rural healthcare at present is based on AYUSH systems, ORF believes that *it is preferable to introduce a rural healthcare degree which includes training in Indian systems of medicine, rather than one based purely on Allopathic medicine. We therefore recommend a Bachelor's degree in Integrative Medical Systems (BIMS) which includes careful training in AYUSH systems of medicine, along with escalation paths into Allopathic diagnostics and treatment for secondary and tertiary care.*

This view, first aired by Dr. Sanjay Oak at the ORF Roundtable, is also endorsed by Dr. Bhushan Patwardhan, Symbiosis International University Pune, and formerly with Institute of Ayurveda and Integrative Medicine, Bangalore, who is a strong votary of integrative medicine. Dr. Patwardhan believes that an Allopathy driven model is not sustainable for India from a resource-cost

[25] http://outlookindia.com/printarticle.aspx?277222 accessed February 2012.
[26] http://www.thehindu.com/news/national/article2144882.ece accessed February 2012.

perspective[27] and that integrative medicine can address issues of affordability and accessibility in India's healthcare delivery.

Dr. Patwardhan advocates a collaborative partnership between traditional medicine, modern medicine and science. Modern diagnostic techniques can and must be applied to traditional medicine. On the other hand, prognostic methods are not as well developed in modern medicine as in Ayurveda. In realisation of the importance of integrative medicine, many medical schools in the world have separate departments of integrative medicine, he points out. The study and practice of integrative medicine will also be useful for the urban and semi-urban populations. The admission criterion for these courses must be such that 'local' (defined suitably) students are given almost exclusive access.

ORF recommends however, that the new Bachelor's degree is NOT announced without taking a decision on the very important issue of the growth path for these students. There must be opportunities for them to become fully qualified MBBS doctors and post graduates in the longer term, if they wished to do so. These pathways must be specified up-front, at the time the course is announced. For instance, these students could be given lateral entry into the MBBS course (say into the third year) after a certain minimum number of years of service in rural areas. The report of the HLEG on UHC (HLEG 2011) has specified career growth pathways for many professions, but not for bridges between Integrative medicine and Allopathic medicine. *ORF also recommends looking into the possibility of inducting students into the BIMS course directly after the 10th standard.* This move would provide a longer time frame - five and a half years - and more flexibility to better train these students.

7.3 'Quack' doctors to be integrated into the mainstream, not stigmatised

The discussion on healthcare in rural and in urban slums would be incomplete without addressing the issue of 'quack' medicine men and women. There are large numbers of such practitioners who are meeting an unmet need at present, of serving those sections of society that are completely neglected by modern medicine. In this sense they are performing a service to society even though on the basis of them not having had any formal training or certification one would tend to think of them as quacks. The only workable option here, given the futile attempts in the past to shut down their operations, is to give them the necessary training and certification, largely in Indian systems of medicine but also some basic knowledge of modern medicine. This effort can become part of the NRHM, as well as the National Urban Health Mission when it is launched, and be rolled out in cooperation with the National Skill Development Mission.

It may be mentioned here, that Mahatma Gandhi was also a self-taught 'quack' doctor. However, he developed an original, highly effective and extremely low-cost approach to healthcare, which was based largely on nature cure.

[27] Private conversation with ORF researchers, Radha Viswanathan and Maulik Mavani.

8 ORF Recommendations: Economics of Healthcare Education

This historic opportunity for reform must also be used to address some of the long standing thorny issues that have always been part of higher education and particularly medical education. One such issue is that of the relatively low fees that has negatively impacted the quality of infrastructure and facilities and the overall standard of education in our institutions. It has resulted in enormous skews in educational opportunities through the active encouragement of capitation fee regimes, which in turn has perversely made medical education more expensive for many students. One serious impediment is the complete anathema, within government, to the idea of allowing 'for-profit' institutions in the education space. ***We argue here that since non-profit education coupled with low fees have failed to produce the result they were designed for, they must be set aside to make way for other, more viable, alternatives.***

8.1 Fees and affordable medical education

It is time now to revisit the politically sensitive issue of fees and make some key enabling decisions that are long overdue. It is important to acknowledge that the consequence of the clamp down of fees at unrealistically low levels, covering only as little as 10 percent of the running cost in some institutions, has been the extremely poor quality of infrastructure at educational institutions. Funding for libraries, laboratories and information technology support for education and research, have all taken a back seat, setting the country back by decades, when it comes to competing internationally. Many students pay far less in fees than they can afford to pay, or would be willing to pay, and certainly a lot less than what they pay for coaching classes. It is also true however that there are many students who cannot afford even the present level of fees, so any solution that is adopted must cater to such students too.

ORF recommends that fees for higher education is upgraded to more realistic levels in both government run institutions and private institutions. Simultaneously, schemes must be devised and put in place to ensure that admitted students who require financial assistance are given either adequate financial aid and/or scholarships depending on their needs. The financial assistance does not necessarily have to come from government coffers. Educational institutions must be encouraged to work with banks to provide a combination of low-interest loans and subsidies, ensuring at the same time that government subsidy burdens are not increased substantially. In the case of professional courses such as healthcare education, it is important to link the fees to the means of the student and to the earning capacity of the profession that the student is studying for. The additional funding generated from these fees must be invested in incentivising teachers, improving all aspects of infrastructure and of the quality of education being offered. Verification of this can be done through the accreditation process.

It is critical to ensure that the schemes for long term education loans and scholarships are in place at institutions *before* they are allowed to raise fees. At the same time, institutions must be mandated to declare their fees and all other charges up-front and adhere to stringent transparency and accountability standards. There must be no scope at all for charging capitation fees in this system.

ORF does not recommend allowing the fees to be determined by market forces. Regulatory authorities can be asked to recommend guidelines for the fees that are chargeable based on pre-agreed criteria, connected to the realistic running costs of institutions.

8.1.1 Subsidies for BIMS rather than MBBS courses

ORF recommends that government subsidies are shifted away, at least partially, from the MBBS degree towards the proposed BIMS degree. This will provide a powerful incentive for the BIMS course to find many takers among the target population of young people who form part of the rural and semi-urban poor. Although this will certainly make the MBBS course more expensive, meritorious and needy students in this category can be supported through scholarships and loans, as is done in the best educational institutions around the world.

8.1.2 Low-cost educational material including textbooks

The cost of medical education has been distorted by capitation fees, by the rush for specialisation and super-specialisation, and also by the dependence on foreign text books and other educational material. ORF advocates that a serious effort be undertaken to bring down costs of healthcare education by taking a holistic view of this problem. Even while we advocate loosening up of the fee structure, we also advocate innovations to lower costs so that fees need not climb through the roof. Once such innovation could be the *launch of a national initiative on educational material* - both online materials as well as textbooks. *Once the revised curriculum has been specified, a national competition for the best educational material can be instituted with handsome prizes.* This will result in a multiplicity of good text books being created. Innovations such as this are critical for us to break away from our dependence on foreign teaching material and to enable students to study more locally relevant material.

8.2 Exploring a 'fair-profit' model

The argument for allowing the 'for-profit' model of educational institutions, a long-standing demand, is strengthened considerably by the proliferation of corrupt administrations among many 'non-profit' players today. Barring a few exceptions, the best education in every field of higher education continues to be provided by government run institutions such as the IITs, IIMs, AIIMS and others. Given that the regulatory authorities control the curriculum, the intake, and the fees at private institutions and peg the 'official' fees at unrealistically low levels, a lot of imagination goes into creating alternate ways of siphoning off funds. This is generally done through the creation of 'for-profit' companies that provide a host of services to these institutions[28], through charging capitation fees and a whole host of additional fees (bus, food, computers etc.), all of which serve to line the pockets of a few people. The problem is compounded by the fact that only Trusts and Societies are allowed to run educational institutions and neither of these are subject to the careful scrutiny of their finances that companies (including the non-profit Section 25 companies) are normally subject to.

[28] IDFC-SSKI India Research report 'Indian Education Sector: Long way from graduation', January 2009. Available from http://www.educomp.com/DataImages/Downloads/Education%20Sector%20-%20Jan09.pdf

Teachers in these 'non-profit' institutions are exploited considerably, often being paid wages well below the sixth pay commission standards of the government of India and many more are hired on contract or on an hourly basis. Their working conditions are poor and they have very little say in the way these institutions are run. There is very little empowerment with respect to teaching - they are given very few avenues to grow and enrich their own knowledge and the dignity of their profession is completely eroded. Why then must we continue with this model?

Once a model is completely discredited, it is foolish to continue with it for poorly thought out ideological reasons. The stubborn refusal to allow 'for-profit' institutions to come in has only resulted in genuine players in the education space being forced to stay away, while only those players who are open to re-interpret the law in devious ways are left standing. Today it is only in the interests of politicians and businessmen to enter 'the business' of education. Elsewhere in the world this space is the preserve of educationists and philanthropists.

The report of the Technology Advisory Group on Unique Projects[29], headed by Nandan Nilekani, has suggested the creation of *private companies with a public purpose*: 'profit-making' but not 'profit-maximising' institutions. Such institutions do not have quarterly targets and do not work towards maximising profits. They adjust windfall profits and increase in revenues through reduction of tariffs and charges. This could be one possible definition of a 'fair-profit' model that can be adapted and used in the education sector.

Kasturba Medical College, Manipal University, the first private college outside the missionary sector, is an excellent example of good Public Private People Partnership (PPPP) in medical education and healthcare. Established in 1953 and declared to be a private deemed university in 1993, the college has many practices that are worthy of emulation. It has a transparent, on-line entrance examination conducted over a period of 3 weeks. All fee transactions are done in a transparent manner. The college does not have a reservation policy but sets aside 28 seats for the Government of Karnataka at government fee levels and also 38 seats for foreign students. The top 8 meritorious students also receive a 100% fee waiver. The university contributes Rs 1 crore towards laboratory investigation in the government hospital. They have a 3-tier healthcare delivery system – 7 rural maternal and child hospitals, 2 secondary level hospitals and a tertiary referral hospital in Manipal with 1700 beds.

[29] Released 31 January 2011. Available from http://finmin.nic.in/reports/TAGUP_Report.pdf accessed February 2012.

9 Other Recommendations

We close out our recommendations in a few final categories that are critical to enlarging the scale of low-cost healthcare delivery and to improving the quality of medical education.

9.1 Public Health Initiatives

A comprehensive national initiative on public health for preventive and promotive healthcare is critical to dealing with the scourge of communicable diseases. The effort must involve doctors, administrators and all categories of health workers, working in close co-ordination with related missions such as the Total Sanitation Campaign[30], in a strategic initiative. Only determined initiatives can help us deal with the country's communicable disease burden and the unacceptably high mortality rates from diseases such as Tuberculosis. In recent years, the Public Health Foundation of India (PHFI) has been making strong efforts in education, training, research, advocacy and support systems for public health initiatives of the government[31]. Some useful initiatives that can also be taken up include:

1) Coordination with various State governments for preventive health and better response to seasonal epidemics such as malaria and others;
2) Better coordination with urban planning authorities for creating space to setup clinics for General Practitioners (GPs) at relatively low cost so that the urban poor can have access to affordable healthcare;
3) Ongoing interaction with curriculum creation bodies to incorporate preventive and promotive health related teaching into school curriculum. Preventive healthcare relies heavily on good habits and lifestyle changes, which can be achieved through sustained campaigns for education and training of adults as well as children. For example, the contents of the 'Healthy India'[32] website, maintained by PHFI, must become part of such continuing education courses;
4) Use of AYUSH systems for promotion of good health. In Annexure II we describe one such pilot project being conducted by the MoHFW in partnership with the ISHA foundation. Given that the pilot appears to be successful, similar efforts must be rolled out at scale.

9.2 Use of Information Technology

It is well known that judicious use of Information and Communication Technology (ICT) can help improve the quality of healthcare delivery in many ways. Yet, there has been relatively little use of ICT so far despite the fact that it can be used everywhere - health records, MIS, data gathering and analysis for effective disease control programs, research and response to regional variations in prevalence and control of disease, and much more. The benefits of using ICT to improve delivery of

[30] Ministry of Drinking Water and Sanitation http://tsc.gov.in/RuralSanitationNew/HomePage.aspx accessed February 2012.
[31] Public Health Foundation of India http://www.phfi.org/ accessed February 2012.
[32] http://healthy-india.org/ maintained by PHFI, accessed February 2012.

medical education - particularly the use of distance education tools for teaching, mentoring and even for remote clinics is also well known. Infrastructure for doing this is long overdue at all educational institutions. Dr. Oak discussed this extensively in his presentation at the Roundtable, citing audio visual aids, tele-mentoring, and virtual classrooms, as ways to promote e-learning and modular learning. In Kasturba Medical College, Manipal, all lectures for pre and para-clinical tutorials are available to students on the intranet. As reported at the Roundtable, the college has also developed a skills laboratory, using simulation mannequins, where students undergo competency training on routine procedures.

The National Knowledge Commission had recommended the creation of the 'Health Information Network'[33], which must be taken up on a priority basis. There are several projects that are looking into providing high-speed broadband connectivity at the national level such as the National Knowledge Network (NKN), the National Mission for Education through ICT (NMEICT) of the MHRD and also the plan to connect 250,000 panchayats through a fibre network[34]. ORF recommends that the latter be extended to include the nearby health centres and the schools, so that both education and healthcare can benefit simultaneously.

ORF has created a detailed blueprint of how ICT can be deployed at scale in educational institutions (Chandran-Wadia 2011). A similar approach can be used to address the problem of inducting ICT for quality medical education and healthcare delivery. The idea is to create an expert group of educators and technologists who can help medical colleges get over the knowledge barrier of what kind of technologies to induct and how to induct them. This approach gets around one of the key stumbling blocks today namely, the paucity of knowledge among decision makers about technology solutions available in the market. Another important efficiency thrown up by this approach is the ability to share knowhow and infrastructure across institutions, lowering costs through efficiencies of scale. A spectacularly successful example of using ICT at scale to provide quality healthcare delivery at relatively low costs to large numbers of people is the work of the Aarogyasri Trust in Andhra Pradesh[35].

The success of ISRO (Indian Space Research Organization) in implementing pilot projects in the areas of Tele-health/Telemedicine[36] - linking hospitals and healthcare centres in remote areas with specialty hospitals in cities through a satellite link - has allowed citizens in far flung areas such as Kargil and Leh, and remote villages in Orissa, Andaman, Nicobar and Lakshadweep islands to have access to specialty healthcare. In recognition of this potential several telemedicine projects are being implemented by the MoHFW[37]. However, Telemedicine faces severe challenges from the lack of sustained electricity supply in many rural areas and the lack of adequate capacity building efforts to have trained manpower at these locations – challenges that need to be tacked in innovative ways at the earliest.

[33] http://www.knowledgecommission.gov.in/recommendations/hin.asp accessed February 2012.
[34] http://www.rediff.com/business/report/tech-2-point-5-lakh-panchayats-to-have-broadband-pitroda/20110107.htm accessed February 2012.
[35] https://www.aarogyasri.org/ASRI/index.jsp accessed February 2012.
[36] http://www.isro.org/publications/pdf/Telemedicine.pdf accessed February 2012.
[37] http://www.telemedindia.org/MoHFW_projects.html accessed February 2012.

9.3 Mainstreaming Medical Humanities in Healthcare Education

India is no stranger to the worldwide phenomenon of commoditisation of medical services. Professionals look to a career in medicine as a passport to wealth, status, influence and power. It is a widely accepted fact that the emphasis in medical education in India is only on professional development and imparting technical competence. ***In order to forge a more patient-centric approach, it is imperative to inculcate in the care givers, values such as empathy, cultural sensitivity, truthfulness with patients, avoidance of conflicts of interest, impermissibility of abuse of power, etc. Under the circumstances introduction of 'Medical Humanities' in the curriculum for all health care workers becomes a compelling need.*** Subjects such as psychology and sociology, and topics such as healing traditions in India and around the world, role of arts and culture in healthcare, health economics, ethics & human rights, service orientation towards all categories of patients especially those belonging to deprived communities, and inspirational profiles of great medical practitioners from around the world, should be included in the training of doctors, paramedics and nursing staff.

9.4 Health Insurance and Universal Health Coverage

The ability of the Aarogyasri Trust to provide health insurance cover for a family of five, to the tune of Rs. 2 lakh annually at a premium of just Rs. 450 per month, is well worth replicating all across the country. The scheme is remarkable in many ways and has drawn the attention of the healthcare industry in India as well as abroad, as a trailblazer in the area of inclusive healthcare. Over 70 million citizens (identified to be below the poverty line) have been provided with the opportunity to avail cashless tertiary health care as needed, with the cost of insurance being completely subsidised by the State government. What distinguishes this scheme from others in the same genre such as the Rashtriya Swasthya Bima Yojna[38] (RSBY) of many State governments, or the Yeshasvini[39] co-operative healthcare scheme in Karnataka, is the fact that the Aarogyasri scheme does not attempt a partial solution but tackles the full challenge of providing health insurance as well as healthcare delivery to all targeted citizens. *This allows the exploitation of efficiencies of scale to bring down the costs, which is in the spirit of ORF's recommendations on the use of information technology in healthcare and in education, as described in section 9.2 above.* Very recently, the Government of Maharashtra has announced a similar scheme for its citizens[40] in which they can avail cashless tertiary medical care to the tune of Rs. 1.5 lakh per family.

The proposal by the HLEG to introduce Universal Health Coverage is a welcome one. The vision draws on the concept of centralised coordination and management of healthcare delivery prevalent in Aarogyasri, but seeks to replace tertiary care under health insurance cover with entitlement for cashless healthcare services for not just tertiary care but also primary and secondary care. However, the challenges of achieving UHC are many, and the proposal is still only a dream in the eyes of some.

[38] Rashtriya Swasthya Bima Yojna http://www.rsby.gov.in/ accessed February 2012.
[39] Yeshasvini scheme, Karnataka, http://yeshasvini.kar.nic.in/about.htm accessed February 2012.
[40] Jeevandayee, Maharashtra, http://www.jeevandayee.org accessed February 2012.

10 A Wish List for Bold Reforms in Medical Education

The national goal of achieving 'Accessible and Affordable Healthcare for All' requires a significant shift in mind-set – towards making education holistic and patient centric rather than practitioner and technology centric**.** Although we have so far made several specific recommendations regarding reforms in medical education, what is really needed in the country today is bold reforms aimed at bringing about the necessary change in mind-set.

India needs a completely new approach to the regulation of medical education. For too long regulation of any kind in India, particularly in the education sector, has been all about prescriptive policies. In the quest to maintain minimum standards we have over-specified norms and only succeeded in producing a common denominator that is far beneath world standards, while crushing grassroots innovation at the same time. *It is time now to make a break from this approach and initiate a quest for excellence.* Regulators must see themselves only as facilitators and watchdogs. We must create an environment in which leading educational institutions opt to be at the forefront of this quest, by becoming autonomous and working towards making themselves nationally and internationally competitive.

Apart from providing Accessible and Affordable Quality Healthcare for All, the country must also try to leverage the strategic economic opportunity of becoming one of the best and most inexpensive healthcare destinations for the rest of the world

History has shown that excessive regulation has increased malpractices instead of curbing them. It is time therefore to make a paradigm change – to make the rules more liberal and focus on penalising wrongdoers rather than constraining everyone uniformly. It is time to impose transparent accountability norms and involve all the stakeholders in enforcing these norms. Apart from providing 'Healthcare for All' the country must also try to leverage the strategic economic opportunity of becoming one of the best and most inexpensive healthcare destinations for the rest of the world (PwC 2007). The NCHRH bill has made a good beginning, but bringing about this mind-set change will require embracing some key principles as the basis for reforms:

10.1 A flexible and responsive regulatory system

This is a critical requirement for generating confidence in the process of reform and for inculcating the belief that the result of this process will be a world-class system. Unintended bad consequences of well-meaning rules and regulations become apparent only after they have been in use for some time. ***Therefore, ORF urges the creation of systems that are nimble and can adapt quickly to changing requirements. For this to happen regular and frequent reviews must be held so that the flaws in the regulatory systems can be found and fixed.*** The NCHRH, NEAC and all the new National and State councils such as MCI, PCI, INC etc., must be reviewed carefully at least once every

year, with the involvement of the communities they serve. *The review must not be against arbitrary performance metrics, but against detailed, pre-agreed, outcomes set at the beginning of the 5-year term of the members of the regulatory body, as well as at the beginning of each year. Besides the performance of the individual bodies, the review must also focus on proactively identifying issues that are falling between the gaps of the jurisdiction of the different bodies and address them.* The NCHRH must be the final authority responsible for the outcomes related to human resources in health.

10.2 Wider participation of stakeholders

India needs a huge leap forward in the quality of its institutions. This can only happen when the base is energised, when every institution is thinking and experimenting continuously, and working with its stakeholders - students, faculty and staff - towards higher goals. *Instead of following a set of rules specified by a small group of people, rules that are rarely revised and cannot distinguish between excellence and mediocrity, institutions and individuals must be encouraged to participate and be innovative, even while being accountable.* Rules, when specified, must as far as possible be more in the nature of guidelines. Positive deviation from the guidelines must be actively encouraged provided they are reported back to the regulatory authorities. The progress of reforms must be through an active two-way participatory process in which institutions, individuals and regulators work together to identify best practices. Competition between institutions must be encouraged, excellence rewarded and mechanisms put in place for sharing success stories and best practices across institutions. There must be online forums where institutions and individuals can submit ideas and proposals on a regular basis. These can be evaluated and the good ones among them provided the necessary institutional support for implementation.

10.3 Transparent accountability norms, measurements and monitoring

Norms for accountability are often missing when new initiatives are launched by governments at the Centre as well as the states. However, in the National Rural Employment Guarantee scheme transparent norms enforced using extensive IT support along with public vigilance in the form of social audits are being attempted with varying degrees of success. Transparency and accountability relies on timely and extensive data gathering in a standardised format. Health schemes can also be better audited against reliable baseline data. The Annual Health Survey in 284 districts spread over 9 states across India, to assess the impact of the NRHM, is a step in the right direction[41]. Similarly, emphasis on proactive disclosure with respect to details of decision making, provisions for monitoring and evaluation at various levels, accountability norms for all the stakeholders, appropriate penalties for non-conformance and the provisions for grievance redressal, are all approaches that are critically important in the context of medical education and healthcare delivery. These will ensure that colleges, hospitals and health centres, and all healthcare workers, collaborate towards building a system which contains feedback mechanisms and enough checks and balances to be a robust, living and evolving system, capable of learning from its mistakes and improving at every opportunity.

[41] Annual Health Survey http://censusindia.gov.in/2011-common/AHSurvey.html accessed February 2012.

10.4 Active participation of State Governments

Many of the deficiencies in the implementation of various programmes in the country can be traced to the lack of coordination between the Centre and the States (MoHFW, Report of the National Commission on Macroeconomics and Health 2005). This is also reflected in the overlap in jurisdiction of the professional councils that regulate medical education at the Centre with their counterparts in the States, resulting in conflicting guidelines and uncoordinated decision making. We hope that the reconstitution of the professional Councils at the National and the State levels will tackle some of these long standing issues and encourage the States to become partners in change with renewed vigour and enthusiasm.

Since education is the primary responsibility of the State governments and the bulk of the funding for higher education comes from their coffers, their role is crucial in ensuring quality education. In this context the minutes of the meetings of the Central Advisory Board on Education (CABE), which is the highest advisory body on education in the country consisting of all the education ministers of the States among others, makes very interesting reading[42]. Two important threads stand out clearly in the discussions: 1) There is a constant clamour for new IITs, IIMs and Central Universities to be located in their respective States from all the education ministers, and 2) any move to discuss increase in fees, at any institution, is immediately snuffed out citing equity concerns.

In a federal model there is no reason why State governments cannot create quality institutions, of the IIT, IIM vintage, on their own. In recent years some states have begun to do that, but the uniform and sustained neglect of most State-run educational institutions by their respective governments have taken them to the brink of ruin and it will need considerable will to correct the situation. Fees at the State-run institutions are typically fixed by committees set up for the purpose by the respective governments. It is unrealistic and poorly thought out to have a fixed, relatively low, fee regime in a country/state with as much economic diversity as India. The only outcome of doing this, over several decades, has been a uniform drop in the quality of education that has compromised every student, irrespective of background. Even in countries with far less diversity, realistic fees and targeted subsidies have made a much better impact than a uniform low-fee regime. *We need to have the courage to shed these unviable approaches and actively explore new avenues.* ***ORF urges the State governments to rise to the occasion and take the initiative in bringing in reforms in regulation focussed on the goal of quality higher education. We also urge the Central and State governments to work together to create complimentary but non-overlapping mandates with buy in from all stakeholders so that reforms can proceed at the rapid pace that it needs to.***

[42] Central Advisory Board of Education (CABE) http://www.education.nic.in/CABEMain.asp accessed February 2012.

11 Conclusion

Some of the recommendations made in this document have already been made earlier, by one or more of the many individuals and committees that have looked into reforms in medical education in the country, over the past several decades. The stumbling block, as always, lies in the caring, thoughtful and determined implementation of these recommendations in the face of many and varied challenges. For instance, even as India celebrates its greatest public health achievement of becoming polio-free - no mean achievement - we have just been confronted with the fact that multi-drug resistant strains of tuberculosis have been identified.

Just as the Abraham Flexner Report of 1910 helped convert the evolutionary process of reforms in medical education in the United States into a revolution that changed the face of American medical education[43], India too needs a 'Visionary and Strategic Blueprint' for launching a revolution in medical education towards quality healthcare delivery in which 'patient care' is the central goal. However, unlike the Flexner report, the Indian blueprint must be tailored to the varied needs of the Indian people and must focus on low-cost care and on strengthening the Indian medical systems. The imagination and creativity that we put into responding to the present opportunity will be the key to building an enviable medical education system in India. It is imperative that policy makers and administrators respond to the need of the hour with commitment.

The report of the HLEG on Universal Health Coverage is a step in the right direction. As we go to press, news of the government planning to triple spending on health and proposing to create a public health cadre during the Twelfth Plan Period (2012-2017), based on the recommendations of the HLEG and the National Commission for Macroeconomics and Health, is heartening[44].

The HLEG report does not, however, touch upon regulation of healthcare education. Since regulation plays a key role in enabling the training and deployment of adequate human resources in health, critically needed for delivering on the promise of Universal Health Coverage, we hope that our analysis of the NCHRH Bill and our recommendations for its implementation provides a useful supplement.

The NCHRH and the HER bills are just the beginning and much more needs to be done towards creating a world-class health work force, as pointed out in our report. This is not all. We have to couple this with a parallel effort for the creation of a revamped healthcare delivery infrastructure, so as to empower our society with a holistic healthcare system that strives to keep costs low and yet provides quality care. *All this needs to be done with a deep sense of urgency.* Such large scale reforms often take a decade or two to make an impact. Meanwhile, with every passing year, millions of youth are forced to make do with poor quality education that leaves them ill-prepared to realise their dreams, and millions of citizens are obliged to make do with poor quality healthcare services.

[43] American Medical Education 100 Years after the Flexner Report.
http://www.nejm.org/doi/full/10.1056/NEJMra055445 accessed February 2012.
[44] http://www.livemint.com/2012/02/29224450/Government-to-triple-spending.html accessed Feb. 2012.

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Annexure I – Participants at the Roundtable Discussion held at the Observer Research Foundation Mumbai

Invited Participants

- Dr. Arun K Agarwal, Dean, Maulana Azad Medical College, New Delhi
- Dr. Niranjan Agarwal, Association of Medical Consultants and Bombay Hospital
- Mr. S. B. Agnihotri, DG Shipping and ex-officio, Additional Secretary to Govt. of India
- Dr. Ratna Ashtekar, Sanjeevani Hospital, Dindori, Nashik
- Dr. Shyam Ashtekar, Bharat Vaidyaka Sanstha, Nashik
- Dr. Praful Barvalia, M.B.Barvalia Foundation's Spandan Holistic institute, Mumbai
- Dr. Kamaxi Bhate, GSMC (G.S. Seth Medical College) & KEM Hospital, Mumbai
- Ms. Sunita Chatta, Reliance Industries Ltd.
- Dr. Ranjit Roy Chaudhury, Member, Board of Governors MCI
- Mr. Somnath Das, OSD, Manipal University
- Dr. Sandhya Kamat, Dean, Lokmanya Tilak Muncipal General Hospital, Mumbai
- Dr. Dilip Karnad, Seven Hills Hospital, Mumbai
- Dr. Jyotsna Kirtane, ex-HoD, Paediatric Surgery Dept., JJ Hospital
- Dr. Karishma Kolhatkar, Foundation for Medical Research, Mumbai
- Dr. Sanjiv Lewin, St.John's Medical College Hospital, Bangalore
- Dr. Lopa Mehta, GSMC & KEM Hospital, Mumbai
- Dr. Sanjay Oak, Director (Medical Education) GSMC and Dean, KEM Hospital, Mumbai
- Dr. Harshad Punjani, Bombay Hospital
- Dr. Ravi Ramakantan, GSMC & KEM Hospital, Mumbai
- Dr. Radha Ramaswamy, Independent Researcher, Bangalore
- Dr. Vinita Salvi, Seven Hills Hospital, Mumbai
- Dr. Padmaja Samant, GSMC & KEM Hospital, Mumbai
- Dr. Rajesh Sarwadnya, MD (Homeopathy)
- Dr. P. Sripathi Rao, Dean, Kasturba Medical College Manipal
- Dr. Sameer kumar Shah, J.J. Hospital, Mumbai
- Dr. Suhas Shah, Association of Medical Consultants
- Dr. Ravi Shankar, KIST Medical College, Lalitpur, Kathmandu, Nepal
- Dr. Avinash Supe, GSMC & KEM Hospital, Mumbai
- Dr. Rashmi Vyas, Christian Medical College,Vellore

Student Participants

- Udit Dalmia, MBBS Student, GMC & JJ Hospital
- Karan Doshi, MBBS Student, LTMMC & LTMGH
- Mihir Gangakhedkar, MBBS Student, GSMC & KEMH
- Vira Jayesh Y, MBBS Student, GSMC & KEMH
- Ninad Maniar, MBBS Student, GSMC & KEMH
- Kushal Naik, MBBS Student, GSMC & KEMH
- Roneil Parikh, MBBS Student, GSMC & KEMH
- Prajakta Patil, MBBS Student, GSMC & KEMH
- Shraddha Patil, MBBS Student, GSMC & KEMH
- Soumil Patwardhan, MBBS Student, GSMC & KEMH
- Savni Satoskar, MBBS Student, GSMC & KEMH
- Neal Shah, MBBS Student, LTMMC & LTMGH
- Manali Shilotri, MBBS Student, GSMC & KEMH
- Ajeet Tiwari, MBBS Student, GSMC & KEMH
- Amar Udare, MBBS Student, GSMC & KEMH
- Radhika Parikh, MBBS Student, GSMC & KEMH
- Ronak Sheth, MBBS Student, GSMC & KEMH

ORF Participants

- Shri Sudheendra Kulkarni, Chairman ORF Mumbai
- Dr. Leena Chandran-Wadia (Co-author of report)
- Ms. Sharmeen Contractor
- Ms. Shreyashi Dasgupta
- Ms. Unisha Lohade
- Mr. Maulik Mavani (Co-author of report)
- Ms. Varsha Raj

Annexure II: AYUSH-ISHA Organic Health Systems

AYUSH-ISHA is a one year collaborative pilot project between the ISHA Foundation and the Ministry of Health and Family Welfare, Government of India. The project seeks to improve people's health by combining AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy) health practices and integrating it with existing preventive and curative public health systems.

ISHA Outreach, an independent trust set up by the ISHA Foundation to conduct outreach work for rural rejuvenation across four areas - rural educational reform focussed towards skill development, community sports, environmental responsibility and healthy lifestyle for the communities. ORF was invited by ISHA Outreach to visit their newly initiated AYUSH-ISHA project across 275 hamlets in the Kolli Hills in Nammakal district of Tamil Nadu.

This case study has been created by ORF researcher Shubha Srinivasan, based on her visit and documentation of the work being done by the ISHA Foundation on the AYUSH-ISHA pilot project.

AYUSH-ISHA and the Kolli Hills: Perfect backdrop for an ambitious pilot

Kolli Hills is nestled amidst the deciduous forests of the Eastern Ghats. It is home to the Malayali tribal community with 42,000 inhabitants spread across 14 panchayats, accounting for 275 hamlets. The larger hamlets have about 40 homes each.

The hills are about 1000m to 1300m in height, covering an area of approximately 280 square Km, and are commonly called the Sanjeevani of the South because of the richness of plant species available there. An ethno-medicinal survey conducted by the Department of Plant Biology and Plant Biotechnology, St. Joseph's College, Tiruchirapalli showed that the Malayali tribe used '50 plant species distributed in 45 genera belonging to 33 families to treat various diseases'.

Most of the community depends on farming and government generated jobs under the MNREGA scheme. The mountain range is covered with dense forests but a lot of space has been cleared for farming. The local farmers are engaged mainly in producing tea, coffee, pineapple, jackfruit, and more recently, tapioca.

The Malayali tribal community have a loose social structure with the women bearing the brunt of supporting the family. Prior to AYUSH-ISHA's presence in the Kolli Hills some of the healthcare related problems documented within the community were the following:

- The local dietary habits have shifted from eating minor millets like Bajra, Ragi, white millet and thinnai to a staple rice-based diet resulting in increased life style induced diseases such as heart problems, blood pressure, diabetes, anaemia and obesity;
- Limited access to preventive healthcare and limited awareness of basic health and hygiene concepts;
- Lack of affordable primary healthcare and over burdening of basic healthcare needs on hospitals;

- High Maternal Mortality (MMR) and Infant Mortality Rates (IMR) due to poor nutrition;
- Lack of confidence amongst the women-folk.

AYUSH-ISHA Community Participation Strategy:

The strategy adopted by the ISHA Foundation to take AYUSH to the community in a structured manner for sustainable impact is split into three parts:

Step 1: Cluster Approach

The hamlets were subdivided into clusters (Sangams). AYUSH-ISHA set up an office in the Kolli Hills. They held a launch function (AYUSH Vizha), in October 2010, with the involvement of the panchayat and complimented this with a large information and awareness campaign across all the hamlets, in which the local people were introduced to the AYUSH-ISHA Mobile Health Clinics and awareness vans. Yoga and a sports clinic were made an integral part of AYUSH-ISHA, which made inroads into the local community using a door to door approach through the appointment of cluster coordinators. They also took the AYUSH-ISHA programme to the public schools as shown in the Figure alongside.

The cluster co-ordinators collect data (such as haemoglobin levels of women and children) on maternal and child health in each hamlet. He/She is also made responsible for creating a community environment, engaging people through yoga and sports. Through these activities, the co-ordinators introduced people to AYUSH concepts and enrolled qualified men and women as AYUSH sevaks. The pre-requisites for becoming an AYUSH sevak are that the man or woman should be older than twenty years of age, be inclined towards community service, and have studied till the 10th standard. Apart from this he/she must have received training at an AYUSH-ISHA yoga and herbal education workshop.

Step2: Locally tailored AYUSH related awareness campaigns

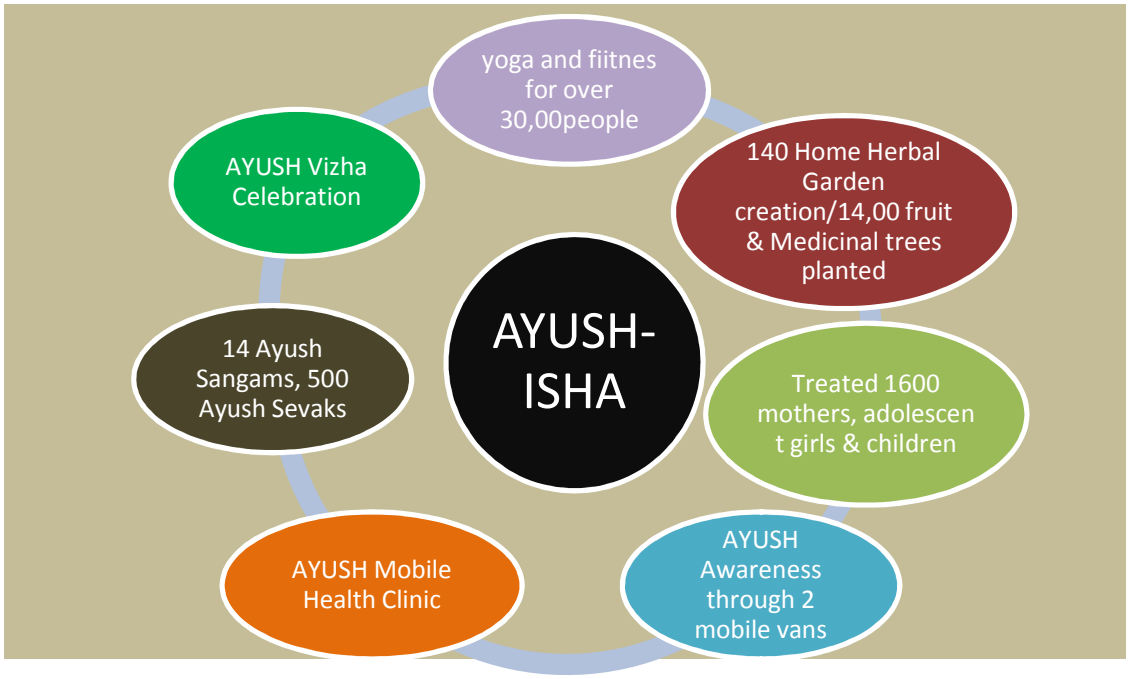
AYUSH and ISHA jointly developed an Oyilatam movie to improve awareness amongst the local people of alternate

health practices, preventive measures and greater nutritional knowledge. Oyilatam is a popular folk dance of Tamil Nadu, where a row of men tie colourful handkerchiefs to their hand and dance rythmically to the 'tavil' or barrel shaped drum as shown in the picture above. Since the village people leave their homes early in the morning for field work and return only in the evening, this movie is screened in the evenings, inside the awareness vans, to a mixed audience (of all ages) from across the clusters of hamlets.

Step 3: Sapling distribution and dietary instruction
The local people have received and planted over 14,000 thousand fruit trees and the herbal garden team has distributed over 1400 herbal plants.

One Year Later: Salient achievements of AYUSH-ISHA

The entire AYUSH-ISHA initiative can be captured in the figure below.



An accessible, affordable and sustainable community-based model of health has been created that can claim the following achievements:

- 8700 people have been treated over six months through the mobile vans and AYUSH sevaks
- Anaemia and poor nutrition plagued the women and children in the region. AYUSH-ISHA addressed that need through nutritional sessions and AYUSH medicinal supplements;
- Preventive healthcare awareness has improved within the community;
- Yoga has evolved as an instrument of public healthcare and improved the immune system;
- Community sports is a powerful medium of breaking barriers, promoting communal harmony, improving nutritional habits towards better performance in the sport, and a break from substance abuse amongst the male population;

- Many people have started cultivating small herbal gardens of at least 5 medicinal plants and have also planted fruit bearing plants in their backyards, addressing basic health and nutritional needs;
- The awareness van has a demo screen with interactive knowledge sessions with AYUSH sevaks leading to active health promotion;
- **AYUSH-ISHA** has created a huge network over 14 Ayush sangams and 500 Ayush sevaks.

AYUSH sevak:

Mrs. Chintamani Selvi, seen in the picture along with ORF researcher Shubha Srinivasan and an ISHA cluster coordinator, is a mother of two girl children whose husband passed away recently. She says that AYUSH-ISHA has given her the opportunity to lead life with a new sense of confidence. After learning yoga and participating in the AYUSH workship she received a basic AYUSH sevak kit. The kit contains basic medication to cure cold, headache, skin lesions, deworming, eye irritation and toothache. She mentioned that the Ayush sevak also interacted with expecting mothers within the cluster, closely monitoring their nutrition and check-up schedules. The Ayush sevak can also provide a new mother with lactation advice and herbal supplements to encourage nursing. Selvi also captains the community throw ball team and is a pillar of strength for the women in the community. The AYUSH-ISHA sevak name plate has been provided to her for display outside her door giving her local accreditation. Following are excerpts of an interview with her:

What is your Name?
Chintamani Selvi

How long have you practised Yoga?
I attended the three day AYUSH-ISHA yoga workshop and have been practising at home everyday.

Have your kids learned Yoga as well?
Yes, they have learned with the AYUSH-ISHA program in school.

Do you play throwball?
Yes. I am the captain of a 14-member team.

When do you play?
We play twice a week in the evenings and come together as a community.

Where do you work?
I work on a farm on a daily wage basis.

Tell me a little bit about your role as an AYUSH sevak?
People come with cold, cough, mild fever, skin disease, body pain, stomach pain and digestive problems. I provide them with basic curative medicines from my Ayush kit, like syrup for cold, herbal powdered drink for stomach pain and herbal oil for body aches.

Do you believe in the AYUSH medicine?
Yes, I have personally seen the effects of the medication and the value it offers. My neighbour's daughter injured her hand in a machine. I supplemented Allopathy medicine with ayurvedic oils.

What do your neighbours and community think about you being an AYUSH sevak?
People come and get treated by me for small ailments and I refer them to the local hospitals for more serious cases.

What is the change at a community level since AYUSH-ISHA?
We have come together as a community and are more proactive in solving problems and meeting our own needs. We have so much energy.

What is your ambition for your children?
I would like them to study and not work on a farm for a daily wage. I would like them to become an educated person like you.

Can the AYUSH-ISHA pilot be implemented in other parts of India?
AYUSH is a holistic healthcare model which bridges ancient medicinal knowledge with modern preventive and curative healthcare systems. This can bridge the urban-rural divide for equitable and affordable healthcare access. AYUSH-ISHA healthcare system can decrease the burden on primary healhcare centres and hospitals, empowering people at the community level to sustain their primary healthcare needs. This could probably "create a significant impact on public health initiatives in India towards affordable healthcare for all".

About Observer Research Foundation Mumbai

Observer Research Foundation is a multidisciplinary public policy think tank started in Delhi in 1990 by the late Shri R K Mishra, a widely respected public figure, who envisaged it to be a broad-based intellectual platform pulsating with ideas for nation-building. In its journey of over twenty years, ORF has brought together leading Indian policymakers, academics, public figures, social activists and business leaders to discuss many issues of national importance. ORF scholars have made significant contributions towards improving government policies, and have produced a large body of critically acclaimed publications.

ORF Mumbai was established in September 2004 to study issues specific to India's financial capital. In January 2010, under the chairmanship of Mr. Sudheendra Kulkarni, ORF Mumbai selected a broader mandate for itself of six diverse areas including Education, Public Health, Urban Renewal, Inclusive and Sustainable Development, Youth Development and Promotion and Preservation of India's Heritage, Arts and Culture. In June 2010 the 'Centre for the Study of Maharashtra @ 50' was inaugurated to commemorate the 50th anniversary year of the state. ORF's Centre for the Study of Indian Knowledge Traditions, inaugurated in May 2010, is working towards reviving the use of relevant Indian knowledge traditions in a modern context. ORF Mumbai's mission statement is: **Ideas and Actions for a Better India**.

Some of the recent research reports produced by ORF Mumbai include:

- 'Time is Running Out': Does Mumbai have Enough Water?
- 'Moving People Not Cars': Why Mumbai needs a Bus Rapid Transport System(BRTS)
- 'Making the Sewer a River Again': Why Mumbai must reclaim its Mithi
- 'ICT in Education': Promotion of inclusive access to quality education in India through ICT
- 'Affordable Housing for Mumbai's Poor': Possible!
- 'Comments and Recommendations on the draft NCHER Bill (2010)': A much needed reform that fails the test
- 'A matter of Human Dignity': Sanitation on Mumbai's Suburban Railways

A selection of the recent Roundtable discussions and other events are:

- Panel Discussion and book release: 'The Caliphate's Soldiers - The Lashkar e-Tayyeba's Long War' authored by ORF Senior Fellow, Wilson John.
- Joint Roundtable with Municipal Corporation of Greater Mumbai on 'A Vision for Mumbai's Healthcare needs'
- Six part speaker series on 'The Future of the Urban Poor' in collaboration with Intellecap and the Rockefeller Foundation
- Roundtable on Fostering a Spirit of Research and Innovation in Academic Institutions, with Nobel Laureate in Chemistry, Dr. Ada Yonath
- A lecture series by eminent scientists titled 'Gurus of Science'. Lectures have been delivered by Nobel Laureate scientists Dr. Jean Marie Lehn and Dr. Harold Kroto. Other speakers included Dr. R. A.Mashelkar, Dr. Spenta R. Wadia and Dr. Syed Maqbool Ahmed

Acknowledgments

The Roundtable on 'Reforms in Medical Education to promote Healthcare for All', held in September 2010, is among the very successful events organised by ORF Mumbai. We were able to put together an extremely representative cross section of stakeholders of the medical fraternity, which included many eminent specialists and administrators from around the country, and many students from nearby medical colleges in Mumbai. The discussions were animated and participative, covering a wide range of issues in medical education and healthcare delivery.

ORF would like to thank all the participants who attended the Roundtable, spent the entire day with us and shared their valuable insights. We are particularly grateful to Dr. Ranjit Roy Chaudhury, member of the erstwhile (2010-2011) Board of Governors of the MCI, for his presence all through the day, his willingness to listen and his commitment to incorporating all the good suggestions, which made the Roundtable so much more satisfying for everyone present. Several participants flew in from other parts of the country and from Nepal. We would like to specially thank all of them. They include Dr. Arun Agarwal from Maulana Azad Medical College, New Delhi, Drs. Shyam and Ratna Ashtekar from Bharat Vaidyaka Sanstha and Sanjeevani Hospital, Nashik, Dr. P. Sripathi Rao and Mr. Somnath Das from Kasturba Medical College, Manipal, Dr. Sanjiv Lewin from St John's Medical College Hospital, Bangalore, Dr. Rashmi Vyas from CMC Vellore and Dr. Ravi Shankar from KIST Medical College, Kathmandu.

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Several participants, notably Dr. Ravi Shankar and Dr. Radha Ramaswamy, contributed towards giving 'Medical Humanities' pride of place at the discussions during the Roundtable. We thank them for consistently drawing our attention to this very important topic. We thank all the students for providing the critical student perspective to all the issues under discussion and for contributing to the liveliness of the discussions. Dr. Noshir Wadia, Jaslok Hospital, Mumbai sent us some of his inputs separately. We are most grateful. We also thank Surg Capt Kaushik Chatterjee, Indian Navy, for his inputs.

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Leena received her Ph.D in physics from IISc Bangalore. Her post-doctoral work was at ETH Zurich, Switzerland. She has been a researcher at several places in India and abroad including NCST Mumbai (now CDAC), EPFL and CERN in Switzerland. More recently she has served as Senior VP and CTO at Netcore Solutions Pvt. Ltd., a start-up company in the space of Mobile Value-Added Services. At ORF she is engaged in research and advocacy in the areas of Education, Public Health and Sustainable Agriculture.

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Maulik graduated as a B.E. (Mechanical Engineering) from Sardar Patel College of Engineering, Mumbai, in 2007, after which he embarked on his preparations to enter the All India Services. Maulik joined ORF Mumbai with 5 months' field-work experience in urban public health and maternal and child health, through the Centre for Studies in Ethics and Rights. At ORF, he has worked on concerns in the fields of public health, medical education, agriculture and rural development. Maulik, a trained DAN 2 (black belt degree 2) Karateka from the World Shotokan Karate Do Federation India, is keenly studying youth development in India through sports and open arts.

Front Cover

FATHER OF SURGERY and TEACHER PAR EXCELLENCE: Sushruta, ancient Indian surgeon and author of the foundational Ayurvedic text 'Sushruta Samhita', preparing to form an artificial earlobe for a patient. Sushruta lived in c. 800 BCE, working and teaching on the banks of the Ganges near present day Varanasi. The image is taken from a lithograph by American artist, Robert Thom.

Reforms in Medical Education to Promote Healthcare for all
Roundtable held at ORF Mumbai

Dr. Ravi Ramakanthan and Dr. Lopa Mehta with student participants

A student participant explains why she thinks that an MBBS degree alone is not good enough

Front L-R: Dr. Sandhya Kamat, Dr. Shyam Ashtekar, Dr. Rashmi Vyas, Dr. Avinash Supe, Dr. Ravi Shankar, Dr. Radha Ramaswamy, Dr. Ravi Ramakantan, Dr Harshad Punjani and Dr. Suhas Shah.
Back L-R: Dr. Sanjay Lewin, Dr. Dilip Karnad, and Dr. Vinita Salvi, with students

Dr. Shyam Ashtekar making his presentation on Rural Healthcare

Dr. Roy Chaudhury summarises the discussions at the Roundtable

Credits

Back Cover : http://siteresources.worldbank.org/INDIAEXTN/Images/hea_pho-health_main.jpg

The scandal that hit the Medical Council of India (MCI) was a blot on the medical education system in India. What can immunise the system against the recurrence of such scandals and ensure healthy development of this noble segment of higher education? How can India move assuredly towards the goal of 'Accessible and Affordable Healthcare for All'? This report contains some answers.

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Ideas and Action for a Better India

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