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The India Healthcare Sector: Governance and Management Challenges

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ABSTRACT

The global health care industry estimated at $ 5 trillion, is one of the world's largest and fastest-growing industries. India's healthcare industry which is expected to be around $45 billion by the end of 2013 accounts for less than 1 % of the global healthcare industry, but has to address the healthcare needs of 17 % of the global population. The India health sector therefore faces severe resource constraints to deliver health services. India spends about 5 % of GDP on healthcare compared with 10-12 % of GDP on healthcare spending by developed countries. The government's share in the total healthcare expenditure in India has remained around 1 % of GDP, and therefore the private sector has become a dominant player in health service delivery. Regulation of the private sector is essential for successful Public private Partnership. The unregulated private healthcare sector also raises serious concerns regarding the accountability, equity and quality of service delivery. India ranks 112 out of 193 WHO countries on health system performance. The WHO Report on Macroeconomics and Health [Jeffery Sachs, et al 2001], followed by the Report of the National Commission on Macroeconomics and Health [GoI, August 2005] provide strategic directions to improve our health system performance. Improvements in our health system performance call for a significant scaling up of resources by the Government of India, and tackling the non-financial obstacles that have limited the capacity to deliver health services. Building health systems that are responsive to client needs requires politically difficult and administratively demanding choices.

Keywords: Healthcare, Management Challenges**,** India

1-2-3 challenge: The Indian healthcare sector faces the 1-2-3 challenge; India needs to add 1 million doctors, 2 million nurses and 3 million hospital beds to achieve the world average of 1.7 physicians, 3.3 nurses and 3.6 beds per 1000 population.

INTRODUCTION

The World Health Organization defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

Healthcare industry, as per the United Nations International Standard Industrial Classification [UN, 2008] consists of three categories, namely,

- Hospital Activities (mostly inpatient services)
- Medical and Dental Practice Activities (mostly out-patient services)
- Other Human Health Activities (mostly non-medical such as nursing, physiotherapy services etc.)

The global healthcare industry, estimated at $5 trillion, is one of the world's largest and fastest-growing industries consuming over 10 per cent of the Gross Domestic Product (GDP) of most

developed nations. Ancillary sectors of the healthcare industry include pharmaceuticals, medical equipment and devices, biotechnology, information technology, medical insurance, medical tourism, and so on.

The India healthcare industry has grown from $4 Billion in 1990-91 to almost $ 40 Billion by 2011-12, thereby registering an impressive growth. However, India's healthcare industry projected at $ 45 billion by the end of 2013 accounts for less than 1 % of the global healthcare industry estimated at $ 5 trillion. Among the ancillary industries, the Indian pharmaceutical industry, growing at 12 % annually and valued at $ 22 billion, is the world's fourth largest by volume and is likely to lead the manufacturing sector of India. The Indian biotech industry, estimated at $ 1 billion is likely to be a leader in the employment of skilled human resources like the IT sector. Other ancillary sectors, especially the medical equipment, and healthcare IT sectors are likely to witness unprecedented growth as result of increasing investments in these industries by the private healthcare sector.

Good health services are those which deliver effective, safe and good quality services. Availability, access, affordability and equity in service provision are important determinants of service quality. Improving access, coverage and quality of health services depends on the ways services are organized and managed. In India, the Ministry of Health and Family Welfare (MoHFW) is the nodal ministry for healthcare service delivery. The MoHFW focuses on prevention and cure of diseases, and coordinates with other ministries to take care of physical, mental and social well-being needs for good health (Please refer to the WHO definition of health mentioned in the beginning). For example, the MoHFW coordinates with the Ministry of Women and Child Development for nutritional supplements to children and pregnant women, Ministry of Human Resource Development for adolescent health and education, Ministry of Rural Development for water and sanitation, and so on.

Health plays an important role in the economic development of any country. The GDP growth of a country and its sustainability requires a healthy workforce to contribute to increased productivity. An unhealthy population would end up consuming more than what it produces and thereby retard the GDP growth.

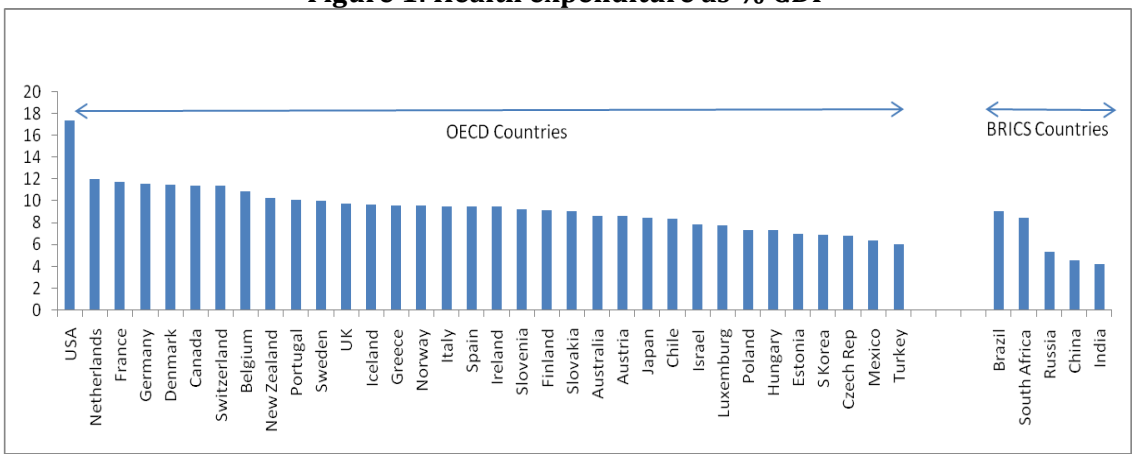
A MACRO-ECONOMIC PERSPECTIVE

A comparison of India's healthcare sector with other developing and developed economies in the world may throw some light for our policy makers to formulate evidence based health policy and planning.

The global GDP is dominated by the OECD1 and BRICS2 groups of countries. Together, the OECD and BRICS groups represent 20 % of the number of countries in the world and account for 80-85 % of the global GDP. In this section, we therefore provide a macro-economic perspective of India's healthcare system Vis-à-vis the OECD and BRICS groups of countries.
Even though India's economy is the third largest in the world, our total expenditure on healthcare is less than 5 % of our GDP, compared with 10-12 % of GDP spent on healthcare by the OECD countries, as can be seen from Figure 1.

[1] The Organization of Economic Co-operation and Development (OECD) group of 34 developed economies account for 60% - 65 % of the global GDP.
[2] Brazil, Russia, India, China and South Africa (BRICS) group of 5 developing economies account for 15-20 % of the global GDP.

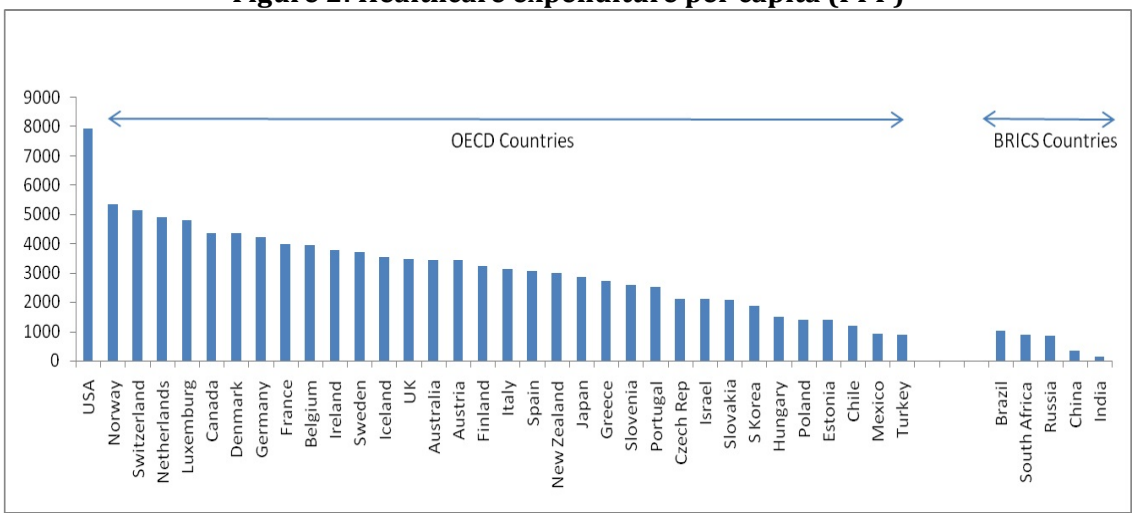
Figure 1: Health expenditure as % GDP



Such a low level of spending on health in India for a population of 1.2 billion translates into $ 45 (at average market exchange rate) or equivalently $ 122 (PPP exchange rate) per capita expenditure on health [WHO, 2011]. As per WHO estimates, a minimum of $ 50 (at average market exchange rate) per capita is necessary to meet basic healthcare needs. Why is India not investing in health?

A comparison of India with OECD and other BRICS countries on per capita expenditure (PPP) on health is shown in Figure 2.

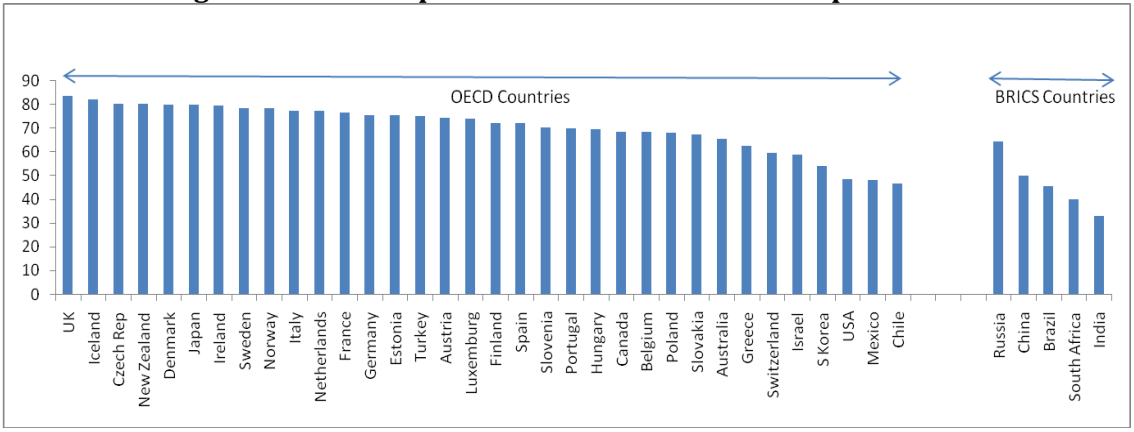
Figure 2: Healthcare expenditure per capita (PPP)



It can be seen from Figure 2 that the per capita expenditure on healthcare among OECD countries ranges from approximately $ 8000 by USA to about $1000 by Turkey. Among the BRICS group of countries, Brazil tops the list on healthcare expenditure per capita while India gets the lowest rank.

A breakdown of the healthcare expenditure into expenditure by the Public and Private Sectors raises more alarms, as can be seen in Figure 3. It can be seen from Figure 3 on next page that USA is ranked 32 out of 34 OECD countries on public health expenditure even though USA tops the world on total healthcare expenditure. Public health expenditure by many OECD countries ranges from 50-80 % of their total health expenditure. In India, public health expenditure accounts for less than 30 % of the total health expenditure. In fact, India is ranked 171 out of 193 WHO countries on public health expenditure.

Figure 3: Public Expenditure as % Total health expenditure



It is also well known that USA which tops the list of countries on per capita expenditure on health, does not top the list of countries on health system performance [WHO, 2000]. This may be because public health expenditure by USA is very low, as can be seen from Figure 3. The same conclusions may be drawn for the poor health system performance by India. It therefore seems to reason that the government's share in the total healthcare expenditure is an important determinant for health system performance; this research is currently underway by the author.

The Planning Commission of the Government of India has committed to increase the public healthcare expenditure from 1 % to 3 % of our GDP by the end of the 12th Five Year Plan. However, there is no reliable data on the projected growth of the unregulated private health sector for the above period, even though it currently accounts for almost eighty percent of the total healthcare expenditure (equivalently 4 % of the 5 % GDP on total healthcare expenditure). The unregulated private healthcare sector raises serious concerns regarding the accountability, equity and quality of service delivery. It is therefore surprising that the Government, at the national and state levels, is actively pursuing Public Private Partnership for improving healthcare delivery with very little knowledge of the private healthcare sector. It would be necessary to regulate the private healthcare sector so that the public and private sectors could work closely for improving our health system performance.

HEALTHCARE FINANCING

The dominance of the private healthcare delivery system in India is evident from the fact that out-of pocket expenditure on health accounts for almost 68 % percent of the total healthcare expenditure, as can be seen from Figure 4 [GoI Sept 2009].

An analysis of the out-pocket expenditure in the rural and urban India (see Table 3) shows that that both rural and urban India depends largely on the private sector for outpatient services, and on the public sector for inpatient services.

Figure 4: Healthcare Financing

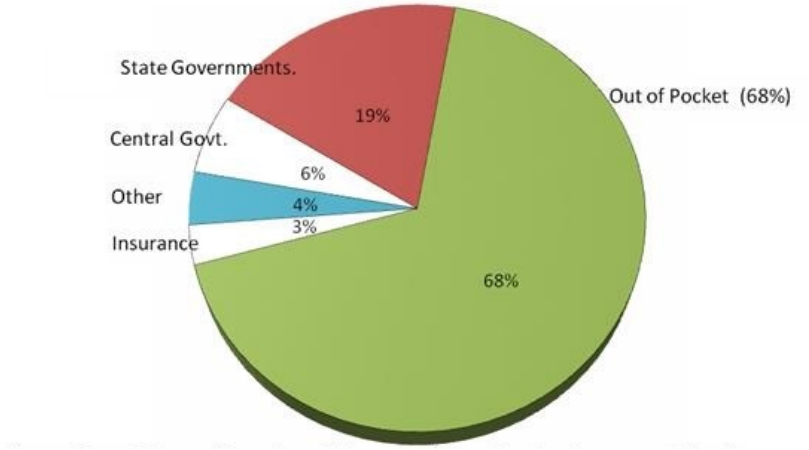


Table 3: Out-of-Pocket expenditure: Private Sector

Type of service	Rural	Urban	Total
Out patient-care	69 %	62 %	66 %
In-patient care	21 %	27 %	24 %
RCH services (*)	5 %	6 %	5 %
Other services (**)	5 %	5 %	5 %
Total	100 %	100 %	100 %

Source: [Mahal, et al 2010]
(*) Anti natal, intra-natal, post natal and abortion services
(**) Includes Immunization, Family Planning etc.

An analysis of expenditure by function (Table 4) reveals that curative care accounts for almost 78 % of the total expenditure.

Table 4: Health Expenditure by function

Function	Billion Rs	%
Curative Care	1042.87	77.96 %
RCH an FW	107.97	8.01 %
Control of communicable diseases	18.01	1.35 %
Control of Non Communicable diseases	2.42	0.18 %
Other public health activities	6.54	0.49 %
Medical Edu and Research	30.14	2.25 %
Health admin and Insurance	43.32	3.24 %
Others	86.49	6.47 %
Total	1337.76	100 %

[Source: GoI, Sept 2009]

The very low expenditure on preventive care and promotion of good health behaviour explain the reasons for the poor performance of our public healthcare system. About 200 mothers and 5000 children under the age of five years die every day in India [Ramani, 2010]. Almost 2/3rd of the maternal and child deaths are preventable with timely interventions. Besides maternal and child mortalities TB accounts for an additional 1000 deaths per day. India will certainly miss the MDG on maternal and child health. The government of India should divert more funds for preventive care and promotion of healthy behaviour given that the Planning Commission of

India is committed to increase public share of the healthcare expenditure from the current level of 1 % GDP to 3 % GDP by the end of the 12th Five Year Plan.

The discussions so far have highlighted the need to scale up financial resources in the India health sector, and to increase the government's share in the total health expenditure with a larger allocation to prevention and promotion activities. Next, we turn our attention to analyse the non-financial barriers which constrain the delivery of healthcare services.

NON-FINANCIAL OBSTACLES IN SERVICE DELIVERY

One of the recommendations in the WHO report [Jeffery Sachs, et al 2001] is the need to tackle the non-financial obstacles that have limited the capacity to deliver health services. The management of our healthcare system has to be made more effective and efficient. This calls for evidence based planning and monitoring the utilization of resources in the delivery of healthcare services in order to (i) attain optimum utilization of the health infrastructure, (ii) achieve maximum productivity from healthcare workers, (iii) avoid shortages of medicines, drugs and vaccines, and (iv) maintain minimum downtime of medical equipment and devices.

Health Infrastructure

Infrastructure forms a critical part of health service delivery in any country. Availability, access, affordability, and equity of quality services highly depend on the distribution, functionality and quality of infrastructure. India's record of investing in public health infrastructure has not been very satisfactory

Public Health Infrastructure

The District Health System (also known as Rural Health System) got considerably strengthened when the Government of India launched the National Rural Health Mission (NRHM) in April 2005 to carry out the necessary architectural corrections in the basic healthcare delivery system [GoI, 2005]. The Rural health system consists of approximately 150,000 Sub-health Centres (SC), 24,000 Primary Health Centres (PHC), and 4600 Community Health centres (CHC), and still has a shortfall of 30 % health facilities as per government norms. The real worrying question is not the shortfall in health facilities, but the number of health facilities which are functional. The functionality of a health facility is determined by the availability of all services, namely, consultation, investigation, and medication at any given point in time. An estimated 65 % shortages of doctors (GoI, Sept 2009]) in the rural health system explains the poor functionality of the public healthcare facilities. Poor functionality of public healthcare facilities is the major reason for the private sector to dominate healthcare service delivery even in rural areas (see Table 3 above). Besides the SCs, PHCs, and the CHCs, the public health system has an estimated 13,000 secondary and tertiary care hospitals.

The Urban Health System in India continues to remain neglected, even though the current urban population in India is estimated at 350-400 million. Urban health caught the attention of the national health planners for the first time in the 10th Five Year Plan 2002-2007. A proposal to set up a National Urban Health Mission (NUHM) is still pending with the Government of India [GoI, 2012]. Unfortunately, no recent statistics are available from the government on the number of urban health facilities in India.

Private Health Infrastructure

The private health sector in India is not regulated and so there is no reliable source to provide information on private health care facilities. Private health care facilities include dispensaries, clinics, nursing homes and hospitals, big and small. It is estimated that the private sector has

about 2/3rd the number of hospitals, owns about 1/3rds of the total number of hospital beds, and accounts for 75 % of healthcare workforce3. The private sector in India has a dominant presence in all the sub-markets- medical education and training, medical technology and diagnostics, pharmaceutical manufacture and sale, hospital construction and ancillary services, and finally the provisioning of medical care. Of concern is the quality of services provided at the rural periphery by a large number of unqualified healthcare staff. Its relationship to health outcomes at the population level has never been established. The private sector's predominance in the health sector has led to inequities in access to healthcare; hospitalization among the well-off is six times higher than that of the poor [GoI, 2010].

As per the World Health Statistics report [WHO, 2011], India has approximately 700,000 beds in the country implying a ratio of only 0.6 beds per 1000 population, as against the world average of 3.6 beds per 1000 population. India therefore needs an additional 3 million beds to reach the world average. It will take a few decades to achieve the world average for the number of hospital beds per 1000 population.

Human Resources in Health

Health service delivery is highly labour intensive and therefore health workforce is the most critical component of the health sector in any country. Table 4 provides a comparison of HR staff levels in the Indian health sector with the global scenario.

Table 4: HR staff In Indian health Sector

Healthcare workforce	**Global statistics**	**India statistics**	
	Number	Number	Density per 1000 population
Physicians	9,171,877	660,801	0.6
Nursing and Midwifery personnel	19,379,771	1,430,555	1.3
Dentistry	1,932,650	78,096	0.07
Pharmaceutical	2,587, 043	578,179	0.52
Community health workforce	1,369,772	50,715	0.05
Total	**34,441,113**	**2,798,346**	

Source: WHO, 2011

It can be seen that the Indian health sector has approximately 2.8 million workers compared to 34.5 million healthcare workers worldwide. Indian health sector has thus 8 % of the global workforce to meet the healthcare needs of 17 % of the global population.

As per the WHO statistics [WHO, 2011], India has 0.6 physicians per 1000 population, against the world average of 1.7 physicians per 1000 population. The number of nursing and midwifery staff in India is estimated to be 1.2 nurses per 1000 population, against the world average of 3.3 per 1000 population. The India healthcare system therefore requires an additional 1 Million physicians, 2 million nurses so as to meet the world average. It would take decades to meet the above requirements, since India produces only 45,000 doctors [MCI website], and 180,000 nurses per year [INC website].

[3] Healthcare workforce is not merely the number of doctors and nurses; it includes all health service providers and administrators from remotest sub centres to large hospitals, both public and private.

Availability of Medicines and drugs

Availability of medicines, drugs and vaccines in the healthcare facilities at all times is an important indicator of health system performance. As per the India facility survey [IIPS, 2005], the availability of medicines and equipment in working condition is as low as 40 %. The District Level Health Survey, DLHS-3 survey [IIPS, 2009] reported shortage of essential medicines in PHCs and CHCs for about 5- 10 days in a month. The National Family Health Survey, NFHS-3 survey [GoI, 2007] pointed out that only 54 % of our children are completely immunized. A recent study [IIMA, December 2011] showed that one of the major reasons for low levels of complete immunization is the poor transport arrangements and cold storage facilities for vaccines in villages. The logistics management of transportation, storage and distribution of medicines and vaccines requires considerable strengthening.

Maintenance Of Medical Equipment And Devices

As per the report of the National Commission on Macroeconomics and Health [GoI, August 2005], capital expenditure accounts for only 5 % of the total expenditure in the public health sector. This has serious implications on the quality of service delivery. The downtime of medical equipment and devices in public healthcare facilities is alarmingly high [IIPS 2009], partly due to poor monitoring and control measures, and partly due to procedural delays. Too frequent and long downtime of USG (Ultra Sono-graphy) machines would force the pregnant women to seek USG services from elsewhere incurring high costs, and thereby defeating the very policy goal of the government to provide timely maternal care services at affordable costs to the poor. It has been well documented in the literature that 60-70 percent of medical decisions are based on the investigation reports [IIMA, November 2011. It is therefore imperative to maintain the medical equipment and devices properly so as to deliver good healthcare services.

INTER-SECTORIAL AND INTER-MINISTERIAL COORDINATION

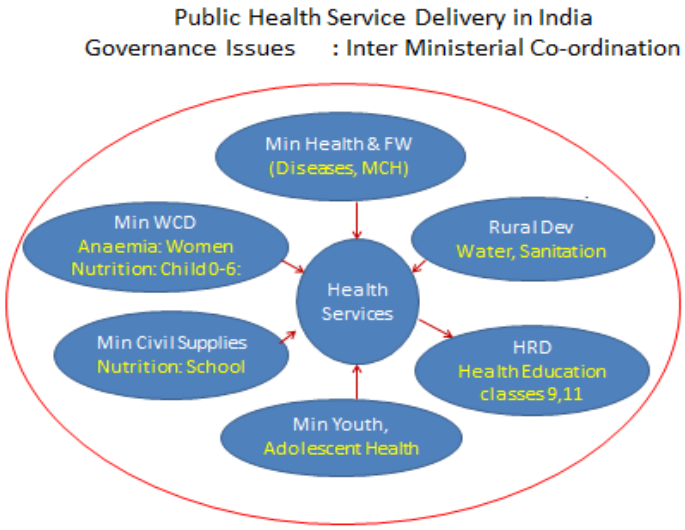
The Indian health sector works closely with several sectors which include pharmaceuticals, medical equipment and devices, information technology, medical insurance, medical tourism etc. The Pharmaceutical Industry in India (under the Ministry of Chemicals and Fertilizers), is the world's fourth largest in terms of volume. Pharmaceuticals play an important role in our healthcare delivery system since curative care accounts for almost 80 % of our total healthcare spending. Investment in medical technology needs to be considerably increased to improve the quality of service delivery, as brought out clearly in the report of the National Commission on Macroeconomics on Health [GoI, Aug 2005]. Information technology in healthcare is gaining wider acceptance now to enhance the clinical and administrative workflow of service delivery. Medical insurance coverage has to be expanded to address concerns on the equity of healthcare service delivery.

It is important to realise that healthcare indicators on mortality and morbidity are influenced by several factors such as age at marriage, anaemic status of pregnant women, malnutrition in children, quality of drinking water and so on. As per the NFHS-3 survey [GoI, 2007] and DLHS-3 survey [IIPS, 2009], about 50 percent of girls in India get married before the legal age of 18 years, 20 percent of mothers are adolescents, 60 percent of pregnant women are anaemic, 54 % of children are fully immunized against vaccine preventable diseases, and 50 percent of our children are underweight. Adolescent anaemic mothers are vulnerable to maternal mortality and morbidity. Malnutrition among children is high among those children born to adolescent anaemic mothers. As per the report of the National Commission of Microeconomics and Health [NCMH, 2005], poor hygiene and sanitation accounts for 9 percent of all deaths and an estimated 27.4 million years of life lost per year in India.

In order to address the above issues, MHFW coordinates its activities with several other ministries (as MHFW focuses only on disease prevention and cure). The Ministry of Women and Child Development (MWCD) looks after the nutritional needs of children (under the age of five years) through its ICDS program (Integrated Child Development Scheme) and of the adolescent girls under its Kishori Shakthi Yojana. The Ministry of Human Resources and Development (MHRD) is in charge of the Mid-Day Meal scheme, the National Programme of Nutritional Supplement to Primary Education to children in classes I to V in government and government aided schools. MHRD also looks after the school Health Education and Life-skills Programs (HELP) in classes IX and XI. Issues related to adolescent health are with the Ministry of Youth, Culture, and Sports. The Ministry of Drinking Water and Sanitation is responsible for the overall coordination of programs of drinking water and sanitation in the country. As per WHO estimates, unsafe water supply, sanitation, and hygiene accounts for as high as 88 percent of the burden of diseases and is mostly concentrated on children in developing countries [WHO website].

The Ministry of Health and Family Welfare (MHFW), which is the nodal ministry for healthcare delivery, thus faces enormous challenges in inter-sectorial and inter-ministerial coordination in order to address issues on all aspects of health, as can be seen from Figure 5.

Figure 5: Public Health Service Delivery in India



CONCLUSION

From the above discussions it is clear that the India health sector is at cross roads today and needs serious reforms. After establishing NRHM in 2005, there has been no major reform in the India health Sector. NRHM was conceptualized in response to perceived systemic flaws in our health system, namely, lack of a holistic approach, absence of linkages with collateral health departments, gross shortage of infrastructure, inadequate skilled human resources, and so on. In spite of additional resources made available to the states under NRHM, Maternal Mortality Rate (MMR) continues to be high around 178/100,000 live births. India would therefore miss the MDG target for MMR at 100/100,000 live births by 2015, even though we may be close to achieving the MDG for Infant Mortality Rate. The Planning Commission of India proposed to increase the Government share of total healthcare expenditure from 1 % of GDP to 2-3 % of GDP by the end of the 11th Five Year Plan (2007-2012), but the government share continues to remain at 1 % GDP. The government's poor share in the total healthcare expenditure has led to

rapid growth of the unregulated private sector for healthcare service delivery in India. The dominant role of the private healthcare sector raises serious questions on the equity and accountability of service delivery. A regulated private health sector is also necessary for any meaningful Public Private Partnership (PPP) so that the public and private sectors could complement each other's strengths and weaknesses for improving our healthcare system performance. It would be necessary for the government of India to divert more funds for preventive care and promotion of healthy behaviour given that the Planning Commission of India is committed to increase public share of the healthcare expenditure from the current level of 1 % GDP to 3 % GDP by the end of the 12th Five Year Plan (2012-17). Even if we achieve this target of government expenditure on health by the end of the 12th Five Year plan, India still lags behind the OECD countries on health system performance and expenditure on health. The OECD countries spend around 10-12 % of GDP on total healthcare expenditure, and the government's share on total health expenditure averages around 70 % . It therefore seems to reason that the government's share in the total healthcare expenditure is an important determinant for health system performance; this is an area for future research.

While NRHM has had some success, the fate of NUHM still hangs in the balance. The proposal to include NUHM under the NRHM umbrella proves the inability of our government to admit the basic differences in health care issues of the urban population from the rural population. Neglect of urban health planning has resulted in many urban health indicators being worse than rural health indicators. Government has to take up urban health planning on a war footing.

Lack of management capacity to transform the available financial resources into better service delivery is evident from the unutilized NRHM budget by the states. Functionality of the existing public health infrastructure has to be improved so as to make basic healthcare services available at all times. India requires an additional 1 Million physicians, 1.8 Million nurses and 3 Million hospital beds to reach the world average of 1.7 physicians, 3.3 nurses and 3.6 beds per 1000 population. At the current rate of 45,000 doctors and 2 million nurses produced every year, it would take another 20-25 years for India to achieve the world average for the number of physicians and nurses per 1000 population. The logistics management system to transport, store and supply medicines and vaccines to health facilities in rural areas should be strengthened so as to avoid shortages of essential medicines and vaccines. The government should invest more on medical and information technology to improve the quality of care. Health System planning has to be strengthened in order to manage the health system resources effectively and efficiently.

The governance of the Indian healthcare sector should facilitate inter-sectorial and inter-ministerial coordination between the Ministry of Health and all other ministries participating in delivering health related services such as nutrition, health education and so on.

Managerial challenges have to address the urgent need to scale up the financial resources to the health sector and tackle the non-financial barriers coming in the way of healthcare delivery. Building health systems that are responsive to client needs requires politically difficult and administratively demanding choices.

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