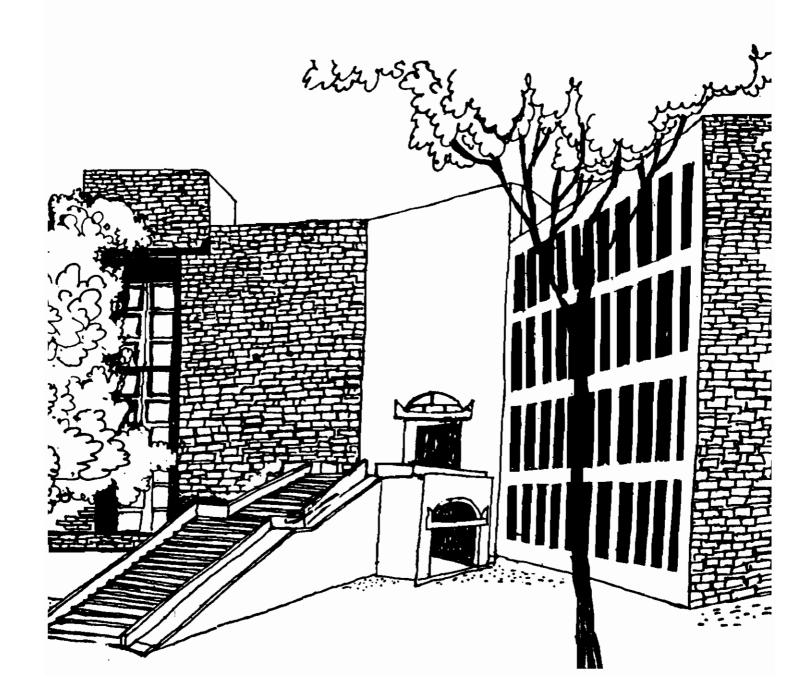


Working Paper



PROGRESS AND CHALLENGES OF HEALTH SECTOR: A BALANCE SHEET

Ву

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Progress and Challenges of Health Sector: A **Balance Sheet**

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Paper prepared for presentation at the "Seminar on India: The Balance Sheet of a Nation" held during 13-15 September 1999 at the Indian institute of Management, Ahmedabad, India.

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Progress and Challenges of Health Sector: A Balance Sheet

Abstract

Considerable progress has been made in improving the health status of the population over the last half-century. Despite this impressive progress, many challenges remain. The life expectancy is still 4 years below world average. So is under five mortality (12 per 1000 per year) higher than global average. Lot needs to be achieved in managing the communicable diseases. New disease patterns and non-communicable diseases are also emerging as major challenges. In this paper we make an attempt to explain the tardy progress in the health sector. The programme management by public sector, allocation of public resources to health sector, centre-state roles and financing of programmes, private sector role, contribution and role of NGOs, public-private partnerships in health have been discussed to paint a broad picture. The paper suggests that key challenge in the next century is the leadership challenge and reforms in the health sector require several measures. First, it requires a policy and programme emphasis that ensures access to quality primary health care for all. Second, there is a need for inclusive political dialogue and decision making which will involve community groups representing voices of the poor, local private sector and the government in operationalizing the new vision of health sector. Third, the social capital in the sector needs to be built up which will promote trust, cooperation and other norms that enable health markets to function effectively.

Progress and Challenges of Health Sector: A Balance Sheet

1. Introduction: the health status

Considerable progress has been made in improving the health status in India over the last half century. The crude death rate has reduced from about 40 per thousand at the time of independence to 9 per thousand in 1998 (SRS estimates). A significant proportion of this decline is due to reduction in mortality of under 5 age group. The infant mortality rate is estimated to have declined from around 161 to 71 per 1000 live births over the same period. Consequently, life expectancy has increased from about 31 years to 63 years. In other words, an average Indian child born today can expect to live on an average 32 years longer than at the time of independence (Health Statistics of India 1985).

Despite this impressive progress, many challenges remain. The life expectancy is still 4 years below world average. So is under five mortality (12 per 1000 per year) higher than global average. India is one of the last major countries, along with Nigeria, where polio has not yet been eradicated. The HIV incidence has been increasing, the most recent estimates suggest that there may be 4 million Indian with HIV infection today, one in 150 adults. Tuberculosis and malaria also take a high toll on health (see Annex 1 for estimates of morbidity). TB incidence in India for year 1995 is 220 compared to average incidence in all low-income countries of 160 per 100,000 people per year.

While the communicable diseases are still not under control, the extent of chronic non-communicable diseases such as heart disease, diabetes, cancer have been rising. Thus the sector faces dual challenge; that of starting to address non-communicable diseases while still attempting to control communicable diseases (e.g., incidence of diabetes and heart disease in India is double that of China - see Annex 2). Indian PHC system is yet not geared to diagnose and treat chronic degenerative diseases.

Women's health has been neglected. An extensive amount of literature has grown around the neglect of 'girl child' from birth. Although statistically women now live slightly longer

than men, It took a very long time to reverse the disadvantage in life expectancy that existed between men and women at independence. The long neglect, however, still gives an adverse ratio of females over males, 928 females for 1000 males (Census 1991). Fertility has been gradually declining, latest estimates of total fertility rate is 3.1 (World Bank 1996) compared to somewhere between 5 and 6 at the time of independence. Thus, nearly 60 percent of decline to achieve replacement rate of fertility (where a woman would have a girl child who would replace her) has occurred, an expressed goal of the Government for a long time. Maternal mortality ratio remains very high, an estimated 408 per 100,000 live births (Government of India, SRS Bulletin 1999) which is 50 to 100 times more than that in developed countries. They also suffer from a heavy burden of reproductive tract infections including sexually transmitted infections.

The situation is also marked with considerable regional variations. The health status of people in Kerala, in terms of mortality, rivals those of developed countries. Generally the large four North Indian states – Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh - comprising around 40 per cent of the total population have distinctively poor health status compared to the rest of India (they were christened as 'BIMARU' by Ashish Bose, a renouned demographer in the eighties). A analysis of their health status with the rest of India (Table 1) in late eighties placed them about 20 to 30 years behind rest of India.

Table 1 Comparison of four large states (UP, MP, Bihar and Rajasthan) with rest of India for key demographic indicators			
Indicators Compared to the rest of India			
	Years of lag	Rate of change	
Fertility	15-20 years	Slower	
Family planning (contraceptive prevalence rate)	10 years	Similar	
Infant mortality rate	15 years	Similar	
Literacy (total/female)	25 years	Slower	
Per capita domestic product	25-30 years	Slower	
Female status	Difficult to estimate (at least 25 years)	Slower	
Programme infrastructure	About 5 years	Similar	
Source: Satia J. and Jejeebhoy S. 1991.			

There is some recent evidence, however, that Rajasthan and Madhya Pradesh may have accelerated their progress. Considering the fact that the rest of India may be also about 20 years behind the world average of today, unless trends change, these states as a whole will

be about 50 years behind, that is they will achieve the comparable mortality rate in year 2050 of the world average of 2000.

2. Health care service delivery

The vision of health care delivery were set even before independence. The famous 'Bhore committee' Report (1946) outlined a system of primary health care for the country. Two types of recommendations for development of basic health care were made: a short term scheme covering 10 years and a comprehensive blue print for twenty to forty years ⁴, It set forth the principle that 'no individual should be denied adequate medial care because of inability to pay for it'.

Indeed over the last fifty years, an impressive health care infrastructure in rural areas has been built up by the government:

- More than 133,000 sub centers are established (with a norm of one per 5,000 population in plains and 3,000 population in the tribal and hilly areas, staffed by a auxiliary nurse midwife and a male multi-purpose health worker.),
- More than 21,000 Primary Health Centers (with a norm of one per 30,000 population in plains and 20000 in tribal and hilly areas staffed by a doctor, health supervisors and other supporting staff), and
- Nearly 2,500 Community Health Centers (with a norm of one per 120,000 population in plains and 80,000 in tribal and hilly areas with in-patient facilities and some specialist medical staff)).

In addition, there are Taluka level hospitals, hospitals at district levels and those attached to the Medical Colleges.

In urban areas the infrastructure varies. There are government hospital, medical colleges, Municipal hospitals, maternity homes, dispensaries, ESIS hospitals and dispensaries and many private practitioners and hospitals. The density of providers in urban areas is much higher than rural areas. Unfortunately in most urban areas there are no health workers who

Bhore committee was established in 1943 under the chairmanship of Sir Joseph Bhore. It gave its report in 1946. It recommended a very comprehensive and revolutionary health care infrastructure for the country. The report of this committee is considered a land mark document in the history of public health in India.

visit families at home as are present in rural areas. The private health services are on fee for services basis while the government and municipal services are almost free. The NGO sector also has substantial presence especially in larger cities. They provide health services at a subsidised price. Given the lack of primary health care workers and centers in most urban areas the health care system is mainly curative care oriented. The coverage of health insurance even in urban areas is very low.

Although definitive estimates are not available, private sector health infrastructure has grown very rapidly. There is an estimated 0.8 hospital-beds per 1000 people in the country, nearly a third of them were in private sector.

3. What explains tardy progress?

Despite remarkable progress mentioned earlier both in terms of improving life expectancy and government health care infrastructure, there is a wide spread consensus that the progress could have been more rapid. This judgement is based on the evidence that the progress in improving health status varies considerably between different states and that internationally some low income countries, particularly China, has achieved faster improvements in health status than India. The comparison with China provides some interesting insights.

The crude death rate in China is 7.4 per thousand compared to 9.3 per 1000 population in India. The male and female life expectancies in India are respectively 62 and 63 years. The corresponding life expectancies in China are 68 and 72 years. China had surpassed the current life expectancy of India more than twenty years ago. Infant mortality rate is also lower in china - 41 per 1000 live births as, compared to 72 per 1000 live births in India. Globally much of the mortality differentials can be explained by income level of the countries. This, however, is not the case for India and China. When predicted for income, the infant mortality rate in India is 17 per cent higher where as China's is 33 per cent lower (Table 2).

Similarly female life expectancy in India, when predicted by income, is 0.6 per cent higher as compared to China where it is 10.1 per cent higher. The mortality and morbidity pattern also differ between India and China (Table 3). 42 per cent of the mortality and 50 per cent

of the morbidity (measured by DALYs⁵) is due to communicable diseases, and maternal and prenatal conditions and nutritional deficiencies. In China these diseases account for only 17 and 18 per cent respectively. Indeed, if India could reduce the incidence of this category of disease to the level of China then much of the difference in mortality rate between India and China would disappear.

Comparis	Health on of India and Ch	Table 2 Outcomes in Relatina on Infant Mor		Life Expectancy
	Percent higher than predicted			
	Infant mortality rate		Female life expectancy	
	1962	1992	1952	1992
India		+17	-4.9	+0.6
China	-14	-33	+4.2	+10.1
Source: World	d Health Report WI	IO 1999		

Table 3					
Causes of Mortality and Burden of Diseases (DALYs) in India and China Death rate per thousand population (1998)					
Death rate per thousand population (1998)					
Death rate by cause	India	China			
Total	9.5	7.4			
Due to communicable diseases, maternal and					
prenatal conditions and nutritional	4.0	0.9			
deficiencies	•				
Due to non-communicable diseases	4.6	5.7			
Due to injuries	0.9	0.9			
Burden of diseases (DALYs, 000s)					
Total	269	209			
Due to communicable diseases, maternal and					
prenatal conditions and nutritional	135	38			
deficiencies					
Due to non-communicable diseases	88	134			
Due to injuries	45	37			

The above difference can not be explained by expenditure on health care. The total expenditure on health in China is estimated to be 3.8 per cent of GDP as compared to 5.6 per cent in India. The difference, however, is in terms of the share of public expenditure. In China, the public expenditure on health in China is estimated to be 2.1 per cent, 54 per cent of the total. Where as in India, it is only 1.2 per cent of GDP, only 22 per cent of the total.

⁵ DALYs is disability adjusted life years and is a combined measure of mortality and morbidity. The measure is calculated by aggregating the health/active years lost by premature deaths and orbidity/disability caused by each disease adjusted for time factor. It is expressed as DALYs lost due to a specific disease.

Generally, a larger proportion of public health expenditure is devoted to preventive care than private expenditure, implying that in China more money is devoted to preventive care than in India. Thus, it could be argued that China has done well in terms of prevention of communicable diseases compared to what India has done. Indeed India could have and needs to target its expenditure better. It also needs to spend more in public sector since this sector is responsible for most of the preventive activities.

In this process, China may have been aided by improvements in education, water and sanitation, and nutrition. The percent of population with access to safe water in 1993-94 in China was 83 compared to 63 percent in India. Daily per capita supply of calories in 1996 was also higher in China, at 2844 compared to 2,415. The distribution of this average caloric supply in China is also likely to be more even/equitable than in India. The major difference in health status may, however, be due to education, particularly female education. Adult female literacy rate in China in 1997 is estimated to be 74.5 per cent compared to 53.5 per cent in India.

India needs to enhance its public sector health expenditure and use it more effectively for prevention of communicable diseases, maternal and prenatal conditions and nutritional deficiencies⁶. India also needs to improve quality and efficiency of private sector health expenditure, much of which is for curative services. Thus, the health sector faces twin institutional and policy reform challenges to increase effectiveness, coverage and quality of services while enhancing resource use efficiencies. Now we discuss what these challenges mean for public and private sector.

4. Public sector health services: implementation

A voluminous literature exists on the deficiency of government's health care service delivery, largely focusing on primary health care (see Banerjee 1985, Badri 1998, Conly and Camp 1992, Mavalankar 1996 and 1998).

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⁶ Much of the above observations could also be gleaned from an analysis of regional variations in India. We have relied upon India-China comparison for ease of availability of data and comparability of size.

Programme Management

Many reasons for these deficiencies have been pointed out in the literature, such as lack of political will, inadequate financial allocations, poor management capacity, poor logistics, inadequate training and human resource development, target driven nature of monitoring etc. First, is the under-funding of the sector so that the resources needed for it to function as planned are not made available. World Bank has estimated that it will cost 12\$ per capita to provide a basic package of public health and clinical services in low-income countries. As against this India spends 2-3 \$ per capita on all of health services. Thus under-funding is substantial. (World Bank 1997). Much of the available resources are for salaries. For example, in public hospitals at various levels 60-75% of budget is spent on salaries alone (World Bank 1997). Although recently the allocations for training and other software support have been increasing, they still remain far from what is needed. Consequently, the quality of training and supervision suffer. Even though the budget is largely for salaries, due to poor human resource management practices many vacancies remain in the health institutions. Except for centrally sponsored schemes (Family welfare, ICDS, Leprosy, the remaining positions are to be funded by state budgets. Many states, because of fiscal constraints, do not fill these positions. Therefore, many staff positions remain vacant. For example, in Gujarat 50 per cent of specialists posts, 25 per cent of lab technicians and X-ray technicians posts and 25 per cent of male multi-purpose posts are vacant (Government of Gujarat 1998). Vacancies are also due to poor planning and tardy administration systems. Vacancies at key positions lead to further weakening of the management system. This has also resulted into serious under-utilisation of PHC facilities (Rao 1997)

Second, target oriented FP programme diverted the attention to sterilization resulting in gross neglect of primary health care. Lack of expenditure in key items such as drugs and supplies led to wastage of other resources and loss of credibility of the system. Improper monitoring and inappropriate labour laws as well political interference impeded accountability and decline in efficiency of the public investments in health.

Third, supply and logistics is one of the most neglected function in the health system.

Hardly any professional management is used in these crucial functions. Various vested

interests have developed in the system, which hamper the regular supply of high quality drugs and consumables in the government health system. Monetary allocations for the drugs are also very low as compared to need (Mavalankar 1998). The policies of promoting small scale industries and buy the cheapest materials and supplies run counter to the provision of high quality drugs and supplies. Most state governments do not have any effective quality control system for medicine purchase⁷.

Fourth, the observations also show that one of the key deficiency about which not much is written about is the lack of accountability in the system, which is very great and that leads to loss of efficiency and effectiveness. For example many doctors and other key staff do not stay at the place of posting and hence are not available for service provision most of the hours during the night and at times also during the day. Investments made in buildings and equipment are not providing adequate return as they are under used. Although not well documented, corruption also plays a role in poor effectiveness and efficiency of the health services in India. Informal discussion with key stakeholders in the health system indicates that the problem of lack of accountability and corruption are becoming a major issue. Extent of these problems are difficult to judge but the wide variety in which one hears of them and sees indirect evidence of it in the field is indicative of the spread of the problem. The most common problem is not being available at the place of work for the time, which is mandated. Then misuse of facilities - especially vehicles for personal use, use of medicines for private practice, sale of medicines and other supplies including IUDs, conducting illegal private practice, charging money for services which should be free (e.g. MTP, delivery). Other form of frank corruption includes paying money for transfers, payments for supply contract and purchases of drugs and equipment, employees having to pay supervisors and clerks for getting favours or their dues. Payments by businesses to circumvent health related legislations, payments to get bills paid by the government, payment to get false certificates, Payment to staff for getting services within the hospital. Such diverse forms of corruption and lack of accountability have various impacts on health - some are direct and others are indirect. The famous Glyserol tragedy in Bombay, which the Justice Lentin

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⁷ Tamil Nadu has recently set-up a logistics and supply systems through formation of Tamil Nadu Medical Supplies Corporation a semi-government organisation which has proved to be working effectively.

commission investigated, is the most illustrious example of the direct impact. But other indirect and slow impacts are equally pernicious if not more. Lack of accountability and corruption breaks down the moral authority of the supervisors to get work done from their subordinates. It also severely restricts the access to quality care and it makes the system unreliable.

It is well realized that a full complement of staff, equipment, supplies, and transport is needed for the services to function effectively. The above deficiencies, however, may mean that very small proportions of facilities are fully functional. As there is no routine monitoring of how many facilities are fully functional, such data are not available. For example in a recent review of safe motherhood programme it was found that neither the states nor the central government knew how many first referral units (FRUs) are fully functional (Mother Care 1996).

Some states have handed over the PHC system to district panchayats for last 3 decades e.g. Gujarat, Maharashtra. Some other states are now moving in that direction e.g. Madhya Pradesh and West Bengal. During the recent budget, the Government of West Bengal has also proposed to bring 341 PHCs under the supervision of Panchayat Samitis. Among other things, these Samitis would have the power to appoint the doctors on contract basis. Unfortunately there is no systematic study of assessing the positive and negative aspects of this process of decentralization in the health sector. Our brief review of experience in Gujarat indicates that there is not much evidence that this decentralization had significant positive impact on health services. On the contrary many health managers feel that it had negative impact on the health services (Mavlankar and Patel 1998). It is clear that lot of preparation and capacity building should be done at panchayat level before decentralisation can be really successful and effective.

Health sector reforms are often sited as a way to address many of the above problems. The objectives of the reform include (a) improving health, even in resource-poor settings, (b) mobilizing resources to improve health status, and ensuring that these resources are allocated efficiently and used effectively, (c) improving the quality and client focus of both public and private sector services, and (d) ensuring that subsidies benefit the poor and vulnerable groups. These reforms typically include greater decentralization, greater private

involvement, cost recovery, and better resource allocation. While it has laudable objectives, the health sector reforms require better_planning and implementation capability. Indeed health reforms can not be a substitute for inadequate implementation and weak governance; good implementation and governance are fundamental to success.

Centre-state roles and financing of programmes

The centrally sponsored programmes remained one key policy initiative of the Government of India to support the health sector programmes directly, even though health is a state subject in India. The family planning programme was the first programme to be supported as a part of this policy initiative in 1952. Under this policy initiative the Centre provides direct (part or full) support to the states in meeting both recurring and non-recurring expenditure of selected programmes. The implementation of the programme is the responsibility of the state. It was envisaged that the centralised focus would protect funding, provide proper direction and thrust to specific health problems of national importance and their management and implementation issues could be handled more effectively. However this has not happened.

Most of the programmes under this policy initiative have received significant financial support from external agencies, both in form of loans and grants. Often this has triggered the need to have separate management structures, giving them a character which is essentially vertical in its approach. Several policies and procedures followed under these programmes have been influenced by the requirements of the external agencies. Differences in management approaches in implementing programmes across health sector are direct outcome of the way the programmes have been financed. There has been no uniform approach in addressing the issues arising out of interactions with a number of diverse external agencies.

The experience suggests that there is very little coordination between these programmes and what is happening under other initiatives of the state in the health sector. Mechanisms of information sharing and coordination, pivotal from sector management viewpoint, are almost non-existent at both macro and micro level.

Through various policy instruments the Centre has emphasised its role as major provider of services. There has been less clarity on the roles and responsibilities of the centre as financial intermediary for mobilising resources (including interface with external agencies) and ensuring end use of resources. This has had number of implications. The view of the Centre as provider of services (different from financial intermediary of the programme) has primarily influenced the development of systems, implementation structures and various policy measures in implementing the programmes. The role of the Centre and the policy instruments used over the period has had adverse impact on the state's ability and attitude to implement and manage the programmes. Difficulties experienced in implementing the programmes have been handled in an ad hoc manner and without having any policy frame. Emanating from this, by-passing the state treasury has become one important character of these programmes in recent times. This is reflected through various policy instruments such as provision of kind resources (drugs and other supplies) directly by the Centre to the implementing agencies in the districts. The state is by-passed and lacks adequate information base on resources available to meet health sector requirements. The district administration generally does not have information on total resource availability, making difficult to implement and assess the programme performance. Another example of bypassing mechanism is funds allocation through state level and district level societies. These societies have been set-up without providing adequate infrastructure and lack financial management and reporting systems to ensure end use of resources.

These interventions have had adverse influence on various implementation aspects such as development of implementation guidelines and performance evaluation systems. Handing of most of these initiatives has remained top-driven. Inadequate monitoring mechanisms for performance evaluation is an obvious outcome of these policies because it would have meant Centre developing mechanisms to evaluate its own performance. Criteria for allocating resources in compartmentalised and earmarked manner are mostly input driven and lack process element. Thin resource base is spread so scarcely to various requirements that most of the time nothing is achievable in the process. Most of components of the programme remain under-financed. Salaries crowd-out the other uses such as maintenance of facilities and equipment, mobility of personnel and medicine.

Financial management function of these programmes remains unattended. Funds flow uncertainty from external agencies, dwindling government budgetary support, processes and mechanisms followed in the government to transfer resources results into serious delays. For example, during a recent study on financing flows in Family Welfare programme it was found that the government took 262 days to remit the Reproductive and Child Health (RCH1) project funds from GoI to a backward district in West Bengal (Bhat 1999b). The delays (treasury and systemic delays) occur at various levels and because of several reasons. *Inter alia*, the major contributory factors causing delay is lack of sound financial and accounting system required to handle the modern day complexities of funds management in any organisation.

Increasing arrears reflecting deferment of committed and essential expenditures are some of the major undesirable outcomes of the policy initiatives in the past. This policy initiative has resulted into perpetual dependence of State on Centre for funds, has made implementing agencies less concerned because of less stake of the State governments in overall management of the programme, has virtually displaced all funding which could otherwise had been made available from other sources.

The entire fragmented structure of the different components of the programme remains less integrated with the overall strategy and structure of the health bureaucracy in the country. The reporting relationships in the health bureaucracy lack clarity adding to the complexity of managing the programmes. For example, the bifurcation of health and family welfare as well as technical and non-technical wings in the ministries adds considerable amount of confusion in defining these relationships and responsibilities between State and district level agencies and relationship of State vis-à-vis with the Centre. These have considerable implications for programme management. The centre-sponsored programmes remain less and inadequately integrated with the overall structure of health departments in the state.

The most undesirable consequence of this has been failure in ensuring that administrative levels in the State do assume risk of non-implementation of various programme components. No one in the health sector assumes the risk of non-availability of key resources. Non-availability of key inputs goes unnoticed and unattended. This happens because responsibilities of implementation are not clearly spelled out. The treasury rules

and other systemic problems further seriously affect the availability of finances and other resources, adversely affecting the motivation of the personnel in implementing the programmes.

The financial management dimension of these programmes has become important to ensure the better performance of programmes. Recent attempts to understand financing issues of health sector programmes in general have brought out number of important institutional issues, which need the attention of policy makers. The mechanisms and processes used in transferring financial and other resource flows to implementing agencies do have significant implications for determining the ability of health sector programme managers to use the funds and determine how resources will be used to meet the people's health needs. The recent experiences in programme implementation have highlighted delays and other institutional problems as major obstacles in ensuring the availability of funds (e.g., TB and RCH programmes). There are four main types of initiatives required to strengthen the system and these are: (a) clarity on mechanisms of funds transfer and remittances of funds; (b) ensuring availability of funds and other resources; (c) well laid down policy guidelines on financial management including appropriate system of accounting and reporting of ways and means position to line department heads; (d) ensuring end use of resources as per the programme objectives.

5. Private sector: quality and efficiency

The private sector has assumed significant importance in India's health care delivery system.

Through a wide network of health care facilities, this sector caters to the needs of both urban and rural populations and has expanded widely to meet increasing demands.

Growth of the private sector

The significance of private health care sector in India can be summarised as follows:

total health expenditure in India is estimated to be about 5.6% of GDP of which private health care expenditure is 75% or about 4.4% of GDP. About 1/3rd of this expenditure is on secondary and tertiary in-patient care, and the rest meeting the curative needs at primary level (World Bank, 1995). Insurance coverage mechanisms are negligible and most of this expenditure is out-of-pocket;

- the private health care expenditure in India has grown at the rate of 12.5% per annum since 1960-61. For each one percent increase in per capita income the private health care expenditure has increased by 1.47% (Bhat, 1996);
- about 57 per cent of hospitals and 32 per cent of hospital-beds are in the private sector. The share of private sector investment in total health infrastructure e.g., hospitals, investment in medical equipment and technology etc. is also quite significant;
- at present about 80 per cent of 390,000 qualified allopathic doctors registered with medical councils in India are working in the private sector (Jassani 1989; Bhat 1996).
 There are over 650,000 providers from other systems of Indian medicines practicing medicine (Planning Commission 1998) and most of them are in private practice; and
- utilisation studies show that 1/3rd of in-patient cases and 3/4th of out-patients utilise the private health care facilities (Duggal and Amin, 1989; Yesudian, 1990; Visaria and Gumber 1994).

From the view point of health expenditure, number of qualified doctors working in health sector and delivery of curative care at primary level, the present private/public mix of health care is highly skewed in favour of the private sector. The growth of this sector has been quite significant during the recent times. There are several reasons for this. The budgetary support of government has not kept pace with the growing needs of health care of population. Moreover, the growth of the private health sector has also been triggered by a number of factors, including a new economic policy regime in India, the rapid influx of medical technology, and a rising middle income class. As the private sector in India is not adequately regulated, all type of providers are present - qualified, semi-qualified and unqualified. This means that the service quality and standards are very variable.

Efficiency in resource use and quality of care

It is well recognised that the market failure affecting both the demand and supply sides of the market for health services will have significant implications for cost and quality of health care. Given the undesirable consequences of private sector growth in health, there has been virtual absence of various mechanisms, both within the government and outside the government, to influence the growth of this sector in desirable direction. The studies indicate that private health care significantly affects both the cost and quality of available health care services in India (Uplekar 1989a 1989b; Duggal 1989, Vishwanathan and Rohde 1990; Yesudian 1990). The cases of superfluous and high cost of services rendered by private physicians and hospitals have also been reported (Uplekar 1989b; Duggal 1989).

Recently the issue of consumer protection has also been addressed and effectiveness of legislation in this area has been discussed (Bhat 1996). Significantly, despite the problems resulting from the growth of the private sector, little is known about these markets and viewpoints of various stakeholders.

As mentioned earlier, more than 2/3rd of the resources are spent in private health sector, much of it for curative care. The growth of the private sector has been very rapid, without much regulation. In the private sector there have been inefficiencies - especially in the hospital sector because of too many small (8-30 bed) nursing homes or hospitals (Bhat 1993). They are under used and have higher overheads. They can not employ qualified support staff, as the turnover of patients is low. The employment of trained and qualified personnel to ensure good quality of care is considered one important requirement for health care facilities. There is general impression among private providers that the growth in paramedical staff and their training has not kept pace with the increase in number of health facilities. There is widespread shortage of paramedical staff experienced by private providers in India. The doctors, therefore, hire untrained persons to man their health care facilities. Except in few states (e.g., Delhi, Maharashtra, Tamil Nadu and West Bengal through clinical establishment and nursing home regulations) there are no regulatory mechanisms in place to ensure that properly trained personnel man health facilities. The providers in recent survey (Bhat 1999c) have ranked availability and cost of hiring as most important problem associated with manpower. All this leads to lower quality of services and therefore high cost.

A recent survey (Bhat 1999c) shows that 50% of private doctors occasionally refer the patients to other specialists and in one-third of cases, this referral is quite frequent. In case of investigations, 56% doctors refer patients frequently or most often to diagnostic facilities. In case of referral to other specialists, the doctor concerned attending patient, generally refers the patient to a particular specialists. Private solo practice is also becoming inefficient from the point of the patient as more and more investigations are being prescribed and as a result the patient has to move from one doctor to other. Because of lack of concept of rational therapeutics, essential drugs, and health economics the typical doctor in India is prescribing more and more expensive newer drugs and treatments without

understanding its cost vs. benefit trade-offs. Thus making the treatment more inefficient. With the growth of private practice and interaction of complex set of supply-side and demand-side factors, many undesirable practices have grown. In an attempt to understand the complex behaviour of private providers, Yesudian (1994) through opinion based study observes that medical malpractice and medical negligence seem to be rampant in the private sector. Over-prescription of drugs was also ranked first major prevalent medical practice by respondents (Bhat 1999c). This was followed by the fee-splitting practices, an undesirable outcome of solo-practice. Inadequate measures for respondents also ranked disposal of waste as high as fee splitting practice. These were followed by over-prescription of diagnostics

Legislation related to health care

The central and state governments in India have promulgated several pieces of legislation to safeguard the health of population (see Annx 3). In general, there is significant awareness about the main objective of Consumer Protection Act (Bhat 1999c). One important aspect about Consumer Protection Act (CPA) is that it is applicable all over India and it does not fall within the category of state level health legislation. The high level of awareness among practicing doctors in Ahmedabad about the CPA indicates that it is an important piece of legislation affecting private practice in India. In comparison, a majority of respondents indicated low awareness about the purposes of various other legislation. Inclusion of medical services under the CPA has lead to some unforeseen situations. The positive side is that now doctors are also becoming more conscious of their obligations to the patients and hopefully this will lead to better quality of services. The flip side is that there is a danger of medical practice becoming defensive and hence more expensive as has happened in USA. CPA is an reactive approach to improving health services. What is needed is an proactive system such as Joint Commission of Accreditation of Health Organizations as in the USA. The other issue is implementation of existing regulations. Based on case studies done on regulations in India (Bhat, 1996), the effectiveness of these regulations and policies has always remained a problem for the following reasons:

• The implementation and enforcement of rules and regulations have been weak.

- Since health is a state subject in India, there is no policy frame to have a common set of regulations for private health care sector.
- There has been considerable amount of resistance from various constituents of the
 private health care sector (particularly private providers) to accept in principle the
 applicability of certain regulation to their profession (recent examples are regulation of
 nursing homes in Gujarat and Bihar and at national level Consumer Protection Act
 regulation).
- Many regulations have not been updated and, therefore, have lost their relevance.
- The state does not consider concerns related to private sector growth as a high priority on the policy agenda. There are no institutional mechanisms within the government to address private sector issues.

The evidence on regulations is also replete with suggestions that regulations alone can not be effective. It has to be supported by well-laid down institutional mechanisms, which ensure effective implementation and strengths the role of various agencies. These agencies should be empowered to disseminate information and should have capacity to create peer pressure. The involvement of medical professional bodies and various agencies is quite critical in this area.

The response of the medical profession to develop rules, norms and various mechanisms for self-regulation has not been adequate. The medical councils and medical associations though think these issues most relevant have not been able to evolve mechanisms to address many of these concerns. The medical ethics code is grossly ignored. Medical professional bodies have to educate their peers to curb many of the undesirable practices. No legislation can control these clandestine deals. Lack of information, appropriate standards and proper administrative structure of implementing existing regulations and rules further add to the list of health reform agenda. The high number of negligence cases and other unspecified quality problems suggest the lack of effective continuing medical education programme (CMEP). For this, the government and professional bodies need to evolve effective processes and institutional mechanisms. It is important that the CMEP mechanisms are linked with the licensing and renewal of registration of medical practitioners to make them effective. In future with health insurance and third party payment coming in this problem will become more exaggerated if no preventive steps are taken

6. Equity in health

Do poor suffer more from ill health? It is clear that the poor live in conditions and in environment that are more prone to disease. They have less nutrition and hence are also more susceptible to diseases. Given the lack of Public health measures as clean water, sanitation, hygienic food etc, the poor become further vulnerable. Poor are also exposed to work environments that are more disease inducing than the rich. Poor are also easily exposed to behavioural factors that cause disease. Thus it is clear that poor suffer more from diseases. Secondly the weakness of the public health system has more impact on the poor as they do not have the choice to go to the private sector. Poor also live physically more away from the health system and they have more social and other barriers in using the services. The service also treats the poor as second class citizens and neglects their needs. The poor face double burden of more incidence of ill health and less access to health services.

It is often argued that even poor pay for health care. However, many have documented the traumatic nature of sickness for poor families. Poor spend a higher proportion of their income on heath as compared to the rich (16-19% as compared to 6%). Thus poor health situation and services has a very regressive impact on the incomes of the poor. Paying for health care in case of illness is one of the major causes of indebtedness of the poor. There is evidence of pauperization because of health problems and premature death of the breadwinner in the family. Diseases like leprosy and TB are well known in their impact on economic situation of the family. AIDS in future will have such impact on the families and the society.

7. Role of NGOs and charity institutions

NGO movement has been strong in India. In the health sector they have been playing role of provider of care and innovator of new ways of delivering services. Of late they have also played a role of advocate for health policy change - for example in bringing about Target Free Approach in FP. Unfortunately their role as watchdog on performance of health services has been weak. Some times NGOs have been working as service providers under contract with government. Overall impact of NGOs on health services and on the private sector has been only moderate at best.

Health has been historically an area where NGOs and charity organizations have worked. There are many good institutions and programmes run by such organizations that provide good quality services to the poor. Unfortunately their reach in India has been limited due to vastness of the country. Thus by and large most of the public health services are provided by the government. Secondly the distribution of NGOs is biased towards cities and better off areas except certain religious NGOs that go specifically to difficult areas. Thirdly the even the health NGOs have not come out of the welfare and curative mode of thinking and have not taken up prevention and public health programmes on the large scale.

NGOs' role in service delivery has been laudable in the areas where they have been working. Some NGOs have built very good hospital services - for example CMC Vellore and Arvind Eye Hospital in Madurai. They have also been at the forefront of medical education. Others have developed good community health programmes - e.g. Bhansali Trust, SEWA-Rural, CINI, while still others have done excellent field research - e.g. SEARCH, Ghadchiroli, KEM Hospital Pune. Unfortunately good NGOs having large scale of operation have been few and far between. It has also happened that due to easy availability of money to NGO sector many have come up who have doubtful quality and some times suspect motives.

The future role of NGOs in health should remain multi-fold. In our opinion they should continue to focus on innovation and demonstration of how services can be improved and how new services can be introduced; which then can be replicated by the government in wider area. They should continue to provide services in certain areas such as eye-care, leprosy and TB where they have been providing services in a more humane way and more cost effectively than government. They can also provide services in geographical areas where government services have not been able to reach - for example tribal, hilly and desert areas. The third and perhaps the most important role should be to advocate for better health services for the community and to be a watchdog on government and private provision of health services. This can also blend into the role of providing leadership and co-creating a vision for health of the nation. NGOs should also do the follow up to ensure that this vision which they have helped to co-create is fulfilled.

8. Key challenges for the next century

It can be safely predicted that with increasing literacy, improving income and possible improvements in health care service delivery, the gradual improvement in health status, as measured by mortality levels, is likely to continue. It is also likely that the health status in the large north Indian states would improve and perhaps the differences in health status would narrow over time.

As argued above, the health sector, however, faces three major challenges: adequate prevention, enhancing equity in access to health care and health status, and getting more value for money. Unfortunately there are no significant initiatives in this regard. There is no visible movement to improve implementation in public sector, or target public sector expenditure to the poor, or restructure private sector to remedy deficiencies of health care market through health insurance and appropriate regulation. There is also no evidence that professional leadership in the filed of medicine is addressing these issues.

The agenda for health reform is long, far-reaching and tortuous, arguing for rethink on the role of public health sector and for restructuring of the private sector.

Role of the public sector

The public sector has to bear the overall responsibility of improving health of the community as health is considered a "merit good". Some specific interventions in health are also like "public goods" with high positive externalities - e.g. TB control. Ensuring health can lead to conditions in which rapid economic growth is possible; which will lead to poverty reduction. Here we interpret health as inclusive of family planning and population stabilization measures. Role of health sector is to ensure provision of an able work force, which can increase productivity and ensure economic growth. "Health for All" as defined by WHO means that level of health which permits the individuals to live an economically and socially productive life. Given such justification, role of public sector in health is clear and unavoidable. The main question remains is where the government should produce health care by employing public servants or it should ensure health care by paying for it, legislating and setting standards and letting the private sector, NGO and corporate sector produce health care.

We feel that governments role should be reconsidered from producing health care to ensuring high quality cost effective and rational health care accessible to all the citizens especially the poor. This will need substantial reorganization of the health sector. Many government health services including hospitals will have to be made autonomous, some institutions can be given out on management contracts. Others will have to be closed down if there is inadequate use of services. At the same time the private sector will need to be regulated to provide quality and value for money. The NGO sector will also need to be encouraged and reformed to provide the most cost effective treatment (e.g. DOTS strategy for TB rather than sanitarium type care). Corporate, private and government health care providers will also have to be under the quality control system including clinic audit to ensure that it does not take undue advantage of the information asymmetry in the health care market.

With in the public sector accountability for performance needs to be ensured. The performance standards should be set which cover all the aspects of health care (preventive, curative) they are supposed to provide, not just family planning and immunization. Setting up systems to measure performance is needed. Employees' interest should not affect the people's interest (e.g. the government allowing doctors and ANMs staying away from place of posting which compromises service availability and quality). But at the same time employees should also get a fair deal in terms of working conditions, living conditions and scope for future growth. There are many shortcomings in the public health system such as poor logistics, skills, management etc; and all of them have to be addressed to improve performance.

Quality improvement and focus on client needs should be the central focus of the public health service improvement programme. Countries in Southeast Asia such as Malaysia have demonstrated that modern management techniques such as TQM can be applied to the public health sector to improve services. Quality improvement needs some more resources but some of them could be internally generated by reduced misdirected and unproductive investments.

Health of the people also vitally depends on other sectors such as water supply, sanitation, nutrition, education, women's development, rural development, urban development etc.

Health department has to play a proactive role in interfacing with there departments of the government and with these sectors in the society to ensure that health promoting conditions are generated, maintained and promoted in the society. Only focusing on the health care system will not ensure health of the people. For this to happen the health department in the center and in the states need much more political priority and technical direction.

Public-private partnerships in health

With the shrinking budgetary support and growing fiscal problems (Tulsidhar 1993), most of the state governments are finding difficulty in expanding their public facilities to cater to the growing health care needs of their population. In terms of resource allocation, the most affected areas have been secondary and tertiary care. The difficulties experienced in providing medical services specifically in these areas have compelled many state governments to explore alternative options. Having experienced significant growth in private sector at curative primary and high-tech secondary care, some of the state governments are exploring the options of promoting the public-private partnerships in the health sector. Most of these options are being explored in the areas of curative and tertiary care, and also provision of medical services in remote places.

The focus of previous public-private partnerships to protect poor has produced less significant results (Bhat 1999a). Targeting the poor is difficult process. In order to strengthen the public-private partnerships and in general the role of private sector, it is important to identify areas of intervention to make it more responsive towards public goals and to minimise the unintended consequences of private sector growth. The lack of monitoring mechanisms and absence of appropriate regulatory instruments raise doubts on the effectiveness of public-private partnership approaches. The recent study on public-private partnership initiatives of three state governments (Delhi, Punjab and Rajasthan) suggests inadequacy of process and institutional mechanisms to handle the public-private partnerships. Implementing the private initiatives would involve considerable amount of co-ordination across different departments of the government. The experiences suggest that mechanisms to handle the complex interfaces across the departments such as making amendments in certain statutes and co-ordination with various implementing agencies were not considered before the start of the process. The involvement of various stakeholders was

àct considered important in this process. The public litigation has been direct outcome of these factors. The inadequacy of appropriate mechanisms to monitor the performance of the proposed partnerships has been another concern. This is direct outcome of not having clarity on public goals of these initiatives.

The private initiative to attract capital has been based on the policy instrument of providing input subsidy to the private provider. The policy makers consider subsidising inputs with conditions to provide a certain percentage free care to poor patients as an appropriate mechanism to attract private investment in health. The evidence suggests that these have not worked. Are there other options? Is subsidising the inputs of private provider the only option? For example, the evidence on pricing of services in joint sector hospitals (a form of partnership between public and private) does not suggest subsidising inputs of private provider have produced effective results.

The development of private initiatives in health will need significant institutional development work. Developing capacities to handle these initiatives require financial analysis capabilities, monitoring and evaluations systems and capabilities to analyse various options. One of the major concerns about the private initiatives would be the policy perspective of the government. There is no view on what should be the private-public mix of health care. Policy frame on public policy towards private sector is yet to be developed. There is less clarity on the amount of subsidies and incentives being channeled to the private health sector. The appropriateness of existing mechanisms to channel these needs discussion. Other policy concerns relate to development of mechanisms to protect the funding to government facilities while promoting private initiatives.

There is a potential problem of private initiatives leading to unequal standards of clinical care across public and private sectors. Some of the recent initiatives in joint sector have created two different standards of health care delivery systems; providing different quality of care to different clientele. This problem would further aggravate as a result of less allocation of government resources to public facilities. In the process ultimately poor will suffer. The private sector would displace the resources with the public sector, attracting qualified personnel from pubic to private (e.g., recent resignations of many qualified

doctors in teaching and medical research institutions) further aggravating the problem in public sector. The implications of these on public goals of health policy are less understood.

Given the experiences in private initiatives, organisation mechanisms have assumed significant importance in implementation. The recent experiences suggest that governments are vulnerable in proposing and handling these initiatives themselves. Given that implementation requires considerable amount of expertise and time and monitoring of these initiatives is critical, creation of separate organisation (outside the ministry) could be considered to perform these functions effectively. It is important that other aspects as discussed above are adequately addressed in the process.

9. The leadership challenge

The above reforms in the health sector require several measures. First, it requires a policy and programme emphasis that ensures access to quality primary health care for all. This would require, as mentioned earlier, considerable management development and additional financing as well as more health leaders and change agents who will help do the above. Second, there is a need for inclusive political dialogue and decision making which will involve community groups representing voices of the poor, local private sector and the government in operationalizing the new vision of health sector. Third, the social capital in the sector needs to be built up which will promote trust, cooperation and other norms that enable health markets to function effectively. Anecdotal evidence suggests that this social capital is being eroded in the health sector.

The health sector in India is characterized by a paradox. On the one hand, highly sophisticated care is available in the country and on the other hand a large number of people are denied access to primary health care. How did India reach this nature of sector development. One may speculate that unlike China, India allocated its resources to both for developing primary health care sector as well as developing an elite group of technologically sophisticated institutions. As was envisaged by the Bhore committee in 1946, a few highly qualified advanced institutions should be set up to 'inspire high ideals for the profession and promote community outlook'. It was hoped that availability of such

institutions would provide leadership and support in terms of technical, human and financial resources to the primary health sector.

Although there is no specific research on the role of elite institutions, one can observe that there is hardly any relationship between elite institutions and peripheral institutions serving the rural poor. Their ability to establish norms and values of the health profession is also not clear. The elite institutions need to meet their original societal expectations of inspiring high ideals for the profession and promoting community outlook. The reform in the health sector is only possible if there is visionary leadership which can take proactive steps to provide access to quality primary health care, promote inclusive political dialogue and decision making and enhance social capital in the health sector. On balance, how well the leadership challenge is met by the elite institutions will determine the health of the people in the coming decades.

Annex 1 INCIDENCE AND PREVALENCE OF VARIOUS DISEASES IN INDIA					
Disease		Incidence 1990		ence 1990	
		Rate(per 100000)			
Diarrhoeal Diseases	787898	92747	13863	1632	
Iron deficiency	427894	50369			
Dental caries	223168	26270	8560	1008	
Lower respiratory infections	73113	8606	2003	236	
Iodine Deficiency-Goitre G0	61816	7277		-	
Protein-energy malnutrition	22362	2632	-	-	
Unipolar major depression	16655	1961	10308	1213	
Gonorrhoea-	6716	1528	310	70.6	
Malaria	6668	785	55	6.5	
Abortion	4292	505	-	-	
Gonorrhoea-cervicitis	3429	404	174	20.4	
Protein-energy malnutrition	3114	367	104973	12357	
Chlamydia-cervicitis	2951	347	149	17.6	
Cataracts	2872	338.1	5093	599.5	
Asthma	2818	332	13133	1546	
Syphilis	2688	316	137	16.1	
Maternal Haemorrhage	2665	314	•	-	
Maternal Sepsis	2665	314	•	-	
Road traffic accidents	2443	288		-	
Alcohol use - alcohol	1945	228.9	3155	371.4	
Tuberculosis	1656	195	3772	444	
Obstructed Labour	1600	188	-	-	
Ischaemic heart disease	1584	186	91	10.8	
Diabetes mellitus	1433	168.7	18085	2128.9	
Self inflicted injuries	696	81.6	-		
Cerebrovascular disease	604	71.1	2731	321	
Tetanus	340	40	13	1.5	
Mouth and oropharynx	315	37	1346	158.4	
Hepatitis B & C	266	31	44	5.2	
Leprosy	266	3,1-3	1166	137	
Dengue	203	23.9	15	1.8	
Vitamin A deficiency	199	23	6758	795	
HIV	179	21	262	30.9	
Birth asphyxia & trauma	153	18	5535	652	
Low birth weight	150	18	5427	639	
Rheumatic heart disease	89	10.4	435	51.2	
Breast cancer	84	10.4	324	38.1	
Diphtheria	42	5	2	0.2	
Corpus uteri cancer	12	1.4	52	6.1	

Source: Cristopher J.L.Murray and Alan D. Lopez: "Global Health Statistics" Global Burden Global Burden of Disease and Injury Series, Published by The Harvard School of Public Health on behalf of the WHO and the World Bank, 1996.

	Annex 2				
Sr.No	Country	Diabetes Mellitus (prevalance)	Acute Myocardial infarction (Incidence)	(per 100,000) Mouth and Oropharynx cancers (Incidence)	
1	Established Market Economies	289.3	278	15.2	
2	Formerly Socialist Economies of Europe	240,6	419	19.5	
3	INDIA	168.7	186	37.0	
4	CHINA	69.8	98	13,5	
5	Other Asia and Islands	150.0	98	36.1	
6	Sub Saharan Africa	65.6	60	16.9	
7	Latin America and the Carribean	187.4	114	9.8	
8	Middle Eastern Crescent	198.7	166	12.9	
9	World	161.6	165	20.8	

Source: Global Health Statistics, Christopher J.L. Murray and Alan D'Lopez, The Harvard School of Public Health on behalf of the World Health Organization and the World Bank, 1996.

Annex 3		
Typology of regulations		
Aspects of private practice	Legislations/Declarations/Standards	
Manufacturing, sale, quality and prescription of Pharmaceuticals/Drugs related	Pharmacy Act, Drugs and Cosmetics Act, Dangerous Drugs Act, Drugs and Magic Remedies Act, Drugs Control Act, Drugs Price Order, Poisons Act, Medical and Toilet Preparation Act, Narcotic Drugs and Psychotropic Substances Act	
Medical and clinical practice related (license to practice, basic code of conduct, negligence and consumer complaints and practice in specific areas)	Criminal Law, Civil Law, Consumer Protection Act, Indian Medical Council Act, Human Organ Transplant Act, Medical Termination of Pregnancy, Sex Determination, Declaration of Geneva	
Facilities (including physical facilities, registration, inspection and renewal of facilities, technology, manpower) related	Clinical establishment (nursing home) legislation (only in few states), Nurses, Midwives and Health Visitors Act (only in few states), Public Nuisance Act, Minimum Wage Act, Bureau of Indian Standards	

References

- Badri N. Saxena, Quality of Family Welfare Services under National Programme: An Overview of ICMR Studies. ICMR: New Delhi, April 2-3, 1998.
- 2. Banerji, Debabar. Health and Family Planning Services in India: An Epidemiological, Sociocultural and Political Analysis and a Perspective. Lok Prakash: New Delhi. 1985.
- 3. Bhat, Ramesh. 1999. Public-private partnerships in the health sector: issues and prospects, Working Paper No. 99-05-06, Indian Institute of Management, Ahmedabad, May 1999.
- Bhat, Ramesh. 1999. Strengthening the systems and mechanisms of funds-flow in health sector in India, Health Sector Group Report submitted to the Health Sector Group, DFID, New Delhi, March 1999.
- 5. Bhat, Ramesh. 1999. "Characteristics of private medical practice in India: a provider perspective," *Health Policy and Planning*, Vol. 14-1, March 1999, pp. 26-37.
- 6. Bhat, Ramesh. 1996. "Regulation of the Private Health Sector in India." *International Journal of Health Planning and Management*, Vol. 11: 253-274.
- 7. Bhat, Ramesh. 1993 "The private/public mix of health care in India," *Health Policy and Planning*, 8(1): 43-56.
- 8. Duggal, Ravi and Suchetha Amin. 1989. Cost of Health Care: A Household Survey in an Indian District. The Foundation for Research in Community Health, Bombay.
- Government of India, SRS Bulletin, Sample Registration System. Registrar General India, New Delhi. April 1999.
- 10. Government of Gujarat. An Overview of Health and Family Welfare Programmes in Gujarat, Health and Family Welfare Department Gandhinagar, Sep. 1998.
- 11. Health Statistics of India 1985, Central Bureau of Health Intelligence, DGHS, Ministry of Health and Family Welfare, Government of India New Delhi
- 12. Jesani, A. and S. Anantharam. 1989. "Private Sector and Privatisation in the Health Care Services." Bombay: Foundation for Research in Community Health.
- 13. Mavalankar DV. Management constrains for operationalization of Reproductive Health Programme Interventions in PHC system in India. (Unpublished) 1998.
- 14. Mavalankar DV and Patel VM. 1998. Primary Health Care under Panchayat Raj in Gujarat: Perceptions of Health Service Staff. 'Social Change' edited by R. Balakrishnan of Council for Social Development, New Delhi, March 1998: Vol.28 No.1.
- Mavalankar DV. 1999. How many Rupees worth of medicine does one need? Comparison of medicine budgets in PHCs and what government spends on medicines for its employees. IIM: WP No.99-01-03, January 1999.
- Mavalankar DV. 1996. Can PHC System in India Deliver Emergency Obstetric Care?: A
 management perspective on Child Survival and Safe Motherhood Programmw. Social Change,
 Sep-Dec. 1996, Vol.26, Nos.3-4.

- 17. MotherCare, 1996. Child survival and Safe Motherhood Porgramme Review and Assessment: Lessons Learned and Recommendations. MotherCare, John Snow Inc. Sep.30-Oct.29, 1996.
- 18. Planning Commission, "Approach paper to the Ninth FiveYear Plan," 1997-98, pp 87.
- Satia J. and Jejeebhoy S. 1991. Demographic Challenge of Four Large Northern States. Oxford University Press, 1991.
- 20. Shanti R. Conly, and Sharon L. Camp. India's Family Planning Challenge: From Rhetoric to Action. Country Study Series No.2, The Population Crisis Committee: Washington DC. 1992.
- 21. Rao, K. Sujatha. 1997. "Financing of Primary Health Care in Andhra Pradesh," Report prepared for World Health Organisation.
- 22. Tulasidhar, V.B. 1993. "Expenditure Compression and Health Sector Outlays." *Economic and Political Weekly*, November 6.
- 23. Uplekar, Mukund. 1989a. "Implications of Prescribing Patterns in Private Doctors in the Treatment of Pulmonary Tuberculosis in Bombay, India." Research Paper No. 41. Takemi Program in International Health: Harvard School of Public Health.
- Uplekar, Mukund. 1989b. "Private Doctors and Public Health: The Case of Leprosy in Bombay." Research Paper No. 40. Takemi Program in International Health: Harvard School of Public Health.
- 25. Visaria, P. and A. Gumber. 1994. "Utilisation of and Expenditure on Health Care in India: 1986-87." Gujarat Institute of Development Research, Gota, Gujarat.
- Vishwanathan, H. and J. E. Rohde. 1990. Diarrhoea in Rural India: A Nation-wide Study of Mothers and Practitioners. New Delhi: Vision Books.
- 27. World Bank, 1995. "India: Policies and Finance Strategies for Strengthening Primary Health Care Services." Report No. 13042-IN, Population and Human Resource Division, South Asia Country Department II, The World Bank, Washington D.C.
- 28. World Bank, India: New Directions in Health Sector Development at the State Level: An Operational Perspective. (Report No.15753-IN), Feb. 11, 1997.
- 29. World Bank, World Development Indicators, Washington DC. 1998.
- 30. World Health Report WHO 1999.
- 31. Yesudian, C. A. K. 1990. "Utilization Pattern of Health Services and its Implications for Urban Health Policy." Takemi Program in International Health, Harvard School of Public Health (draft).
- 32. Yesudian, C.A.K. 1994. "The Nature of Private Sector Health Services in Bombay." Health Policy and Planning, 9(1).

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