HEALTH, FAMILY WELFARE AND NUTRITION

2.2.1 Improvement in the health status of a population is recognised as instrumental for increasing productivity and economic growth, as well as an end in itself. The health system in India is a mix of the public and private sectors, with the NGO/civil society sector playing a small but important role. The Tenth Five Year Plan (2002-07) envisages devolving responsibilities and funds for health care to panchayati raj institutions (PRIs), reorganising and restructuring public healthcare systems, mainstreaming Indian Systems of Medicine (ISM), and strengthening interventions for the management of communicable and non-communicable diseases. Three of the eleven monitorable targets of the Tenth Five Year Plan focus on health. India is on course in respect of the decadal growth rate of population, close to eradicating leprosy and polio, and health outcomes are slowly improving. However, it is evident that the Tenth Plan targets and goals on maternal and infant mortality will be missed. Malnourishment is an issue, and the proportion of chronically under-nourished children and anaemic women remain high. Devolution of responsibilities and funds to the panchayati raj institutions (PRIs) has not happened. Containing and reversing the spread of HIV/AIDS is a huge challenge. The management of tuberculosis is progressing well, while cancer and malaria remain significantly under-funded, although the management of malaria is being revitalised. Several new initiatives in the health, family welfare and AYUSH sectors between 2002 and 2005 are highlighted.

THE HEALTH TRANSITION

2.2.2 The Tenth Plan recognised a health transition. It is becoming clear that India is in the midst of a health care transition across four dimensions:

- *Demographic*: With declining mortality and fertility, we find that in 2020 as compared to 2002, the percentage of total population in the age group 15-64 years will increase from 59 per cent to 67 per cent, and that above 64 years, from 7 to 9 per cent. The percentage of population below 15 years of age will drop from 35 to 28 percent. *This window of "demographic opportunity" in India (major increases in the working age group population), will last for a quarter century. Among the increasing older population, many may be widows, without family support. This demographic shift has implications for the way in which health care is delivered and accessed.*
- *Epidemiological*: We are encountering a *"double burden of disease"*. A high proportion of the population continue to die from preventable infections like diarrhoea, pneumonia, under-nutrition, childbirth related complications, TB, malaria, and HIV/AIDS. Simultaneously, the growing incidence of non-communicable, chronic conditions of ill-health like cardio-vascular disease, diabetes and cancer attributed to changing life-styles, is stretching the capacity of the health care system, since it must continually attend to the "unfinished agenda".
- *Social*: There is on the one hand, a *rising demand for high quality health care*, including a preference for multi-speciality hospitals even if these entail higher costs. On the other hand, there is an unwillingness (even across metropolitan cities and in progressive states), to discard myths and misconceptions, for example, those contributing to adverse sex selection; and finally,
- *Managerial*: We need to develop health financing systems (inclusive of risk pooling), that will address the shift in disease burden, the increase in health costs, and inefficiencies across health care management.

PERFORMANCE REVIEW

2.2.3 A major concern in this performance review of the health sector is how best to reach out to the bottom 300-400 million people who perceive health services as unavailable and inaccessible. We note that achievement towards the health related goals and targets among the Millennium Development Goals (MDGs) is not on track (Annexure 2.2.1). We begin with health expenditure and attempt to understand the health spend, review progress made in achieving the monitorable targets of the Tenth Plan, addressing the disease control programmes and nutrition, and we examine what is ailing the health sector. On the basis of all of the above, the Mid Term Appraisal makes several specific recommendations to improve the management of health care, and finally, lists the way forward.

UNDERSTANDING HEALTH EXPENDITURE

Low public expenditures on health in the decade 1994-2004

2.2.4 The resources allocated towards the health sector over the past decade indicate that the *public expenditures on health* (through the central and state governments), as a percentage of total government expenditure, *have actually declined* from 3.12 per cent in 1992-93 to 2.99 per cent in 2003-04. Similarly, the combined expenditure on health as a percentage of GDP has also marginally declined from 1.01 per cent of Gross Domestic Product (GDP) in 1992-93 to 0.99 per cent in 2003-04. A small increase in central government expenditures between 1994 and 2004 is accompanied by a reduction in health expenditure by state governments. All of this is captured in Table 2.2.1.

Table 2.2.1
Public expenditures on health, disaggregated

Year	As % of Total Government Expenditure			As % of GDP		
	States	Centre	Total	States	Centre	Total
1992-93	4.96	1.31	3.12	0.79	0.22	1.01
1993-94	5.16	1.49	3.28	0.81	0.25	1.05
1994-95	4.85	1.62	3.26	0.77	0.25	1.01
1995-96	4.98	1.78	3.39	0.75	0.26	1.00
1996-97	4.85	1.50	3.21	0.72	0.21	0.93
1997-98	4.94	1.55	3.32	0.74	0.21	0.95
1998-99	4.98	1.58	3.33	0.76	0.23	0.99
1999-2000	4.80	1.75	3.34	0.78	0.26	1.04
2000-01	4.65	1.87	3.33	0.77	0.28	1.05
2001-02	4.41	1.99	3.25	0.73	0.30	1.03
2002-03	4.27	1.67	3.06	0.77	0.26	1.03
2003-04	4.12	1.69	2.99	0.73	0.26	0.99

Source:National Accounts Statistics, 2004, Table Sl.1, p196-197
Expenditures by state governments extracted from Reserve Bank of India, Handbook of Statistics on State Government Finances, 2004
Total expenditures by central government obtained from Indian Public Finance Statistics, 2002-03, and 2003-04, pp12-14, and pp17-19.
Expenditures on Health, obtained from Ministry of Health & FW

Low per capita public expenditures on health, 1994-2004, in real and nominal terms

2.2.5 The real and nominal expenditures on health from 1994-2004 are captured in Table 2.2.2. In nominal terms, the per capita expenditure increased from Rs.89 in 1993-94 to Rs.214/ in 2003-04 (US $ 5), which in real terms is Rs.122/ (US $ 3).

2.2.6 The growth of public health expenditures in nominal and real terms through the central and state governments is in Figure 2.2.1.

State level per capita expenditures

2.2.7 For a clearer understanding of the distribution of health spend, the state level per capita expenditures (2003-04), are estimated in Table 2.2.3. Health care is financed primarily by state governments (Table 2.2.1), and state allocations on health are usually affected by any fiscal stress they encounter. The extent and quality of health care provision varies widely across states and reflects primarily, the stage of the health transition in the state, their health sector priorities and their current and past investments in health.

Health Spending in India and Comparator Countries

2.2.8 The combined central and state health spend is low in comparison with many other developing countries (Table 2.2.4, Column 4), as a percentage of the GDP, but compares even more unfavourably on a per capita basis (Table 2.2.4, Column 5). There is another aspect, though. While the public expenditure on health is low in India, private expenditure is relatively high (Table 2.2.4, Column 6). Health spending in India and comparator countries is captured in Table 2.2.4.

Plan Outlays and Expenditure

2.2.9 A statement on plan outlays and expenditures in the health sector by the central

Table 2.2.2
Total and Per Capita expenditures, in real and nominal terms, 1994-2004

Year	NOMINAL		REAL	
	Health expenditure (Rs. in crore)	Per capita expenditure	Health expenditure (Rs. in crore)	Per capita expenditure
1993-94	7938.36	89.00	7,938.36	89.00
1994-95	8935.54	98.19	7921.58	87.0
1995-96	10412.83	112.21	8521.14	91.82
1996-97	11299.35	119.44	8876.16	93.83
1997-98	12978.06	134.63	9772.64	101.38
1998-99	15325.27	155.90	10884.42	110.73
1999-00	17535.56	175.18	12068.52	120.56
2000-01	18806.67	184.5	12078.79	118.54
2001-02	19026.18	183.47	11795.52	113.75
2002-03	21334.19	202.22	12790.28	121.23
2003-04	23028.30	214.62	13091.70	122.01

Source: National Commission on Macro Economics and Health

Table 2.2.3
State level per capita health expenditure 2003-04

(In Rupees)

States	Per Capita Public Expenditure 2001-02	Per Capita Public Expenditure 2003-04**
Andhra Pradesh	179.45	208.22
Assam	135.14	156.80
Bihar	66.13	76.73
Delhi	417.98	484.98
Gujarat	143.82	166.87
Haryana	152.25	176.66
Karnataka	205.45	238.38
Kerala	237.45	275.51
Madhya Pradesh	84.77	98.36
Maharashtra	189.39	219.75
Orissa	122.15	141.73
Punjab	253.83	294.52
Rajasthan	176.45	204.73
Tamil Nadu	195.44	226.77
Uttar Pradesh	78.80	91.43
West Bengal	176.26	204.51
All India	184.97	214.62

** *State-wise figures on per capita expenditure for 2003-04 have been extrapolated from the state level per capita expenditure, 2001-02 (RBI) read together with the all-India per capita expenditure for 2003-04*

government during the Ninth and Tenth Plans is at Annexure 2.2.2. State Plan outlays and expenditures during the Ninth and Tenth Plans is tabulated at Annexure 2.2.3.

Analysing the health expenditure

2.2.10 During the first three years of the Tenth Plan, we note that the three Departments of the Ministry of Health and Family Welfare have respectively utilized plan outlays up to 87.64 per cent (Health), 88.63 per cent (Family Welfare) and 82.89 per cent (AYUSH). Higher utilisation of funds is called for by central government hospitals, towards development of nursing services, training of health providers, social marketing of contraceptives, area projects for districts and urban slums, strengthening of pharmacopoeial laboratories, development of institutions (across Indian Systems of Medicine) and publication of manuscripts.

2.2.11 Over the same period, we record the distribution of central plan funds between centrally sponsored and central sector schemes, by Ministry of Health & Family Welfare (Figure 2.2.2). The relative share of centrally sponsored and central sector schemes is indicative of the extent to which any sector is engaged in decentralized, state-centric activities. We find that centrally sponsored schemes engaged 98 per cent of the plan funds in family welfare, 70 per cent in AYUSH and 54 per cent only in the Department of Health. There is need for significantly higher decentralization across the Health and AYUSH sectors

Table 2.2.4
Health Spending in India and Comparator Countries

Country	GDP per capita US $ (2001)	GDP per capita (as % of GDP growth) 2001-02	Health Expenditure		
			Public exp. as per cent of GDP (centre + states) 2000	Private exp. as per cent of GDP 2000	Total health exp. (per capita) US $ 1997-2000
India	460	2.8	0.9	4.0	23
Brazil	3070	0.3	3.4	4.9	267
Thailand	1940	4.5	2.1	1.6	71
Sri Lanka	840*	1.7	1.8	1.8	31
China	890	7.2	1.9	3.4	45
Pakistan	420	1.9	0.9	3.2	18
Malaysia	3330	2.1	1.5	1.0	101

Source: World Development Report 2004
* Sri Lanka: This is the Gross National Income

2.2.12 A report of the Confederation of Indian Industry-McKinsey, 2002 estimates current private expenditure on health care at 3.2 per cent of the GDP or Rs.72,000 crores, and predicts that it will double to Rs.156,000 crores by 2012. In the event that the market for health insurance develops, this figure could be much higher. Over 68 per cent of the 15,393 hospitals (cited by Ministry of Health & Family Welfare), and 37 per cent of the hospital/clinic based beds are contributed by the private sector. It is clear now that for a variety of reasons, private spend will continue to dominate the expenditures on healthcare. Changes in the socio-economic mix within population (higher incomes available to larger numbers) will increase the ability to pay for rising costs of treatment, as also for the volumes of treatments required. The epidemiological transition will promote a decrease in acute infections and a corresponding shift in demand to expensive, lifestyle diseases with higher need for inpatient hospitalisation for cancer, cardio-vascular disease and accidents/injuries. This will inevitably

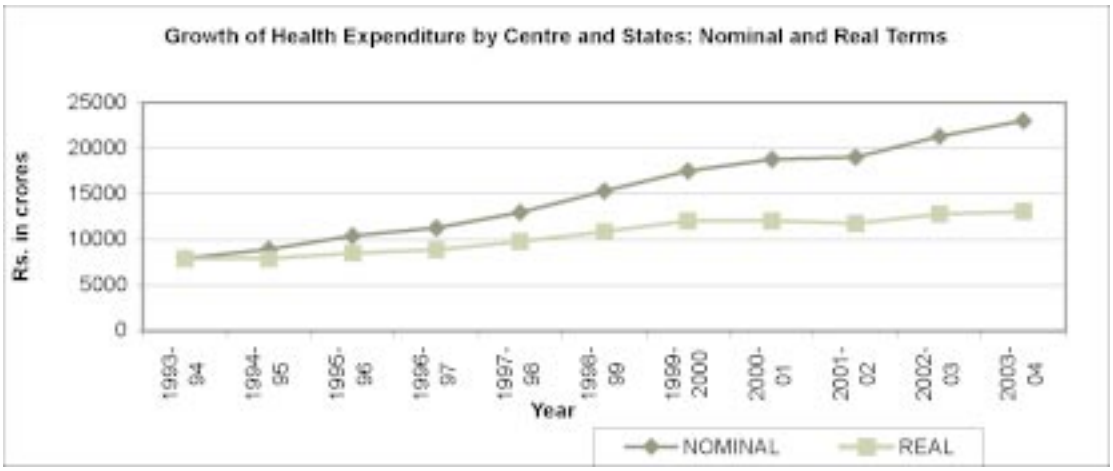


Figure 2.2.1. Source: National Commission on Macro Economics and Health

Distrbution of Central Plan funds between CSS and CS

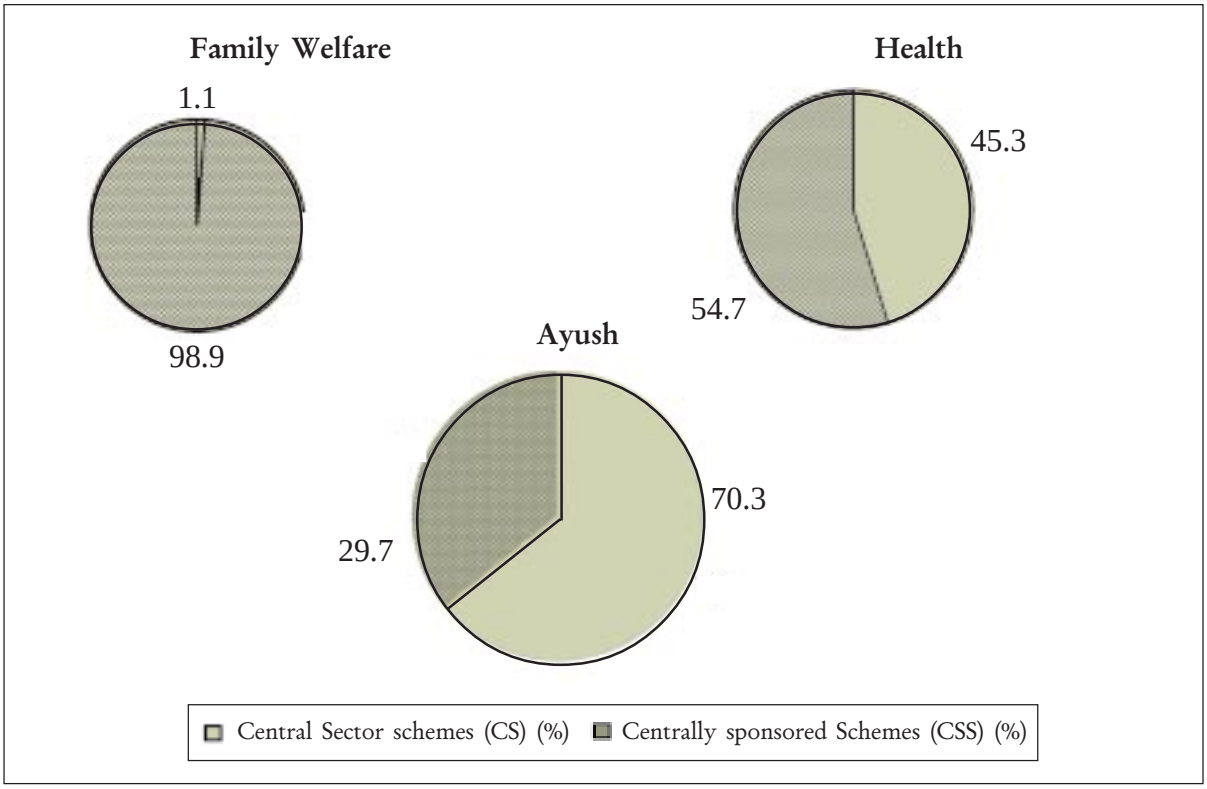


Figure 2.2.2

trigger a rising demand for high quality secondary and tertiary care. To meet this rising demand, heavy investments will become necessary over the next five to ten years in health infrastructure, building hospitals and developing human resources through training and continuing medical education.

Recommendations on Health Expenditure

A. Enhance Outlays for Health Care

India has set ambitious goals for the health sector in the Tenth Plan. These require a massive scaling up of investment in health, across the primary sector (towards reorganising health delivery, supporting community based initiatives, bringing in skilled birth attendants and setting up community hospitals at CHC levels), as well as across the tertiary sector (particularly towards medical colleges, hospitals and human resource development). Low levels of investment in public health coupled with inefficient utilisation, has bred an unregulated private sector (often the de facto provider of health care services), and a dysfunctional public health system. The National Common Minimum Programme adopted by the United Progressive Alliance in 2004 aims at increasing public expenditures on health from 0.9 per cent up to 2-3 per cent of GDP. The central government BE 2005-06 for health and family welfare provides 20 per cent higher central plan outlays over the previous year, 2004-05. These are steps in the right direction. However, for any sustainable improvement in coverage, quality of care and health outcomes, the per capita expenditure on health care needs to be raised significantly within a short period of time. Some suggestions are:

i. On humanitarian grounds and as an exception for health, treat external grant money with zero debt liability, as an additionality to the domestic budget. In other words, do not constrain access to and utilisation of external grant money, by the budgetary ceiling on external aid. For life-saving public

health causes like HIV /AIDS, TB, Malaria, and maternal and child health, the Ministry of Health needs to pro-actively access external grant money outside of the budgetary process. This will immediately augment resources for the health sector.

ii. Introduce a "*Sarwa Swasthya Abhiyan*" (Health for All), driven by the central government, along the same lines as the flagship "*Sarwa Shiksha Abhiyan*" (Education for All) programme that has been underway since 2001. Avail of the IDA credit from the World Bank which is the single largest flow of low cost development assistance to developing countries. Ministry of Health accesses IDA credit for the national disease control programmes, and for reproductive and child health. The Sarwa Shiksha Abhiyan is enhancing the outreach and quality of primary education for all. There is a strong case to replicate this in the health sector.

b. Motivate state governments to allocate higher outlays for health care

While the central government makes every effort to augment resources for health, state governments should be persuaded to assign at least 7 per cent of state expenditures towards health care. Uttar Pradesh has already begun in 2005-06 to assign nearly 6.5 per cent towards health care. However, merely increasing financial resources will have little impact unless health systems are energised to function. Increases in resources must be accompanied by more appropriate targeting of resources received through central plan support. For any sustainable improvements in health outcomes, the per capita spend on outreach, coverage, and quality of care must be enhanced. The objective of every state should be to increase competition among providers, create options for consumers and ensure oversight through elected local bodies and panchayats. Health outcomes are not affected only by direct expenditures on health. Accordingly, state governments need to also focus on integrating public health programmes with public interventions across known determinants of health outcomes, for example, drinking water, sanitation, nutrition, primary education, roads and connectivity. State governments should be persuaded to allocate more resources for these sectors through better fiscal management and reprioritisation.

c. Target resources to community and household levels through PRIs

There is a realization that somewhere along the line we have overlooked community-based, pro-poor, mutual solidarity kind of initiatives towards health care, which usually have a direct bearing on improving health outcomes. Traditionally, health care was embedded in societal reciprocities. These are assets often invisible to the planner and the professional. Innovative models need to be developed at community levels, covering technology outreach, social mobilization, provision of basic services, self-help schemes and micro-credit facilities. These area-based community development projects could provide platforms for convergence of programme elements to optimise their impact. This is in keeping with decentralising functional authority and resources for health care to elected Panchayati Raj Institutions. *Target resources to the elected Panchayati Raj Institutions (PRIs) and through them, to community and household levels. This will empower the communitisation of health care as already successfully being implemented in Nagaland.*

MONITORABLE TENTH PLAN TARGETS

2.2.13 Of the eleven monitorable targets of the Tenth Plan, three relate to the health sector. Each of these is reviewed below:

(i) Reduce the decadal rate of population growth between 2001 and 2011 to 16.2 per cent;

(ii) Reduce Maternal Mortality Ratio (MMR) to 2 per 1000 live births by 2007 and 1 per 1000 live births by 2012; and

(iii) Reduce Infant Mortality (IMR) to 45 per 1000 live births by 2007, and 28 per 1000 births by 2012

2.2.14 Population growth in India peaked in 1981 and has since been on the decline. The current (Census 2001) decadal growth rate of population is 21.34 per cent, largely on account of the momentum built from high levels of fertility in the past. Prior to the 1970s, women on average, gave birth to more than six children in their lifetime (commonly known as the Total Fertility Rate [TFR]). This has now reduced, on average, to three children during a lifetime. A reduction of only one more birth per woman is required, to ensure population stabilisation. The National Population Policy, 2000 and the Tenth Five Year Plan (2002-07) reiterate voluntary and informed consent as the ground rule for fertility regulation and population stabilization.

2.2.15 The good news is that, India is right on course in respect of the first of the three Tenth Plan monitorable targets pertaining to the health sector. The projected decadal population growth rate is 16.1 per cent for 2001-11 (Census Commissioner, India) and 12.3 per cent for 2011-21.

2.2.16 Efforts made and progress achieved in population stabilisation can be appraised realistically only in the context of striking regional differences. In the year 2000, the eight Empowered Action Group (EAG) states (Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Jharkhand, Uttaranchal, Chhatisgarh and Orissa) had an estimated combined Total Fertility Rate (TFR) of 4.1. Under the current rate of decline, it would take another 26 years for these states to reach replacement level fertility (2.1) in these eight states. Without accelerating fertility decline in the EAG states, India cannot hope to achieve replacement fertility. Table 2.2.6 indicates that Bihar has had a mean fall in TFR of only 0.23 in the last 10 years.UP is somewhat better with a mean fall of 0.84 in TFR, over the same period. On the basis of strong performance across the southern states, Maharashtra and Punjab, India is in a position to aspire for a TFR of 2.7 (a state weighted average) by 2010. Population projections indicate that the TFR in India will reach 2.1 (replacement value) only by 2021. The state level estimates of expected TFR in 2010 are indicated in Table 2.2.6.

2.2.17 What then is constraining progress across several states towards more rapid population stabilisation? Crucial impediments are the unacceptably high infant mortality rate and high maternal mortality ratios, discussed subsequently, and inadequate female literacy. There is also the unmet need for contraceptives (highest in states with weak public health systems), and for high quality health services, in functioning public health facilities closer to where these are most needed. In 2002, two new contraceptives introduced free of cost through the national programme, were the intra-uterine device Copper T 380A and the

Table 2.2.5
Population of India : Growth Rates

Year	Population (in millions)	Decadal growth (per cent)	Annual exponential growth rate (per cent)
Census 1971	548.20	24.8(%)	(+) 2.20 (%)
Census 1981	683.30	24.66(%)	(+) 2.22 (%)
Census 1991	846.40	23.85(%)	(+) 2.14 (%)
Census 2001	1028.60	21.34(%)	**(+) 1.93 (%)

Source: Registrar General of India

Table 2.2.6
Total fertility rate (TFR) and projected number of years to reach replacement levels : Major states of India

State	TFR 2002 SRS	Mean fall during Last 10 years	Years required to achieve TFR of 2.1	Expected TFR in 2010
Andhra Pradesh	2.2	0.60	2	1.8
Assam	3.0	0.61	15	2.5
Bihar *	4.3	0.23	98	4.1
Gujarat	2.8	0.41	17	2.5
Haryana	3.1	0.80	12	2.5
Himachal Pradesh	2.1	0.82	0	1.8
Karnataka	2.4	0.57	5	1.8
Kerala	1.8	0.00	0	1.8
Madhya Pradesh *	3.8	0.44	39	3.4
Maharashtra	2.3	0.74	3	1.8
Orissa *	2.6	0.80	6	2.0
Punjab	2.3	0.80	2	1.8
Rajasthan *	3.9	0.65	28	3.4
Tamil Nadu	2.0	0.13	0	1.8
Uttar Pradesh *	4.4	0.84	27	3.7
West Bengal	2.3	0.82	2	1.8
All India	3.0	0.64	14	2.5 **(2.7)
Mean for EAG	4.1	0.59	33	3.6

*EAG states ** State-weighted average.
Source : Prof. Mari Bhat, Institute of Economic Growth, Delhi, 2005

emergency contraceptive pill. The intra-uterine device (IUD) Copper T 380A provides protection for over 10 years. *In Tamilnadu, the village health nurses have been fully trained and equipped to routinely administer this contraceptive. Other states could follow this route to accelerate state level achievement in population stabilisation*.

2.2.18 In the Tenth Plan an amount of Rs.250 crores has been allotted for "EAG Schemes". The National Population Stabilisation Fund and the National Commission on Population (NCP) were shifted from the Planning Commission to the Ministry of Health & Family Welfare in 2003 and 2005, respectively. The Empowered Action Group in the Ministry of Health, addressing the special needs of eight high fertility states, is now better equipped and energized to implement a state specific agenda to address unmet needs towards accelerating population stabilization.

2.2.19 There is one aspect that merits urgent attention. India has an extremely adverse sex ratio of 933 females for every 1000 males. Census 2001 draws attention to the unfortunate drop in the sex ratio from 945 girls / 1000 boys in 1991 to 933 in 2001.

2.2.20 The ground reality is even more alarming. In Punjab, Haryana, Himachal and UP, the sex ratio is less than 900, and in 10 of the 17 districts of Punjab, it is less than 800. Cities like Delhi, Ahemedabad, Kanpur, and Jaipur have a sex ratio of less than 900. An undeniable son preference combined with the increasing incidence of widespread sex selection prior to conception is further distorting the already adverse sex ratio. Accordingly, the Pre-Natal Diagnostic Techniques Act 1994 was amended in 2003 to bring within its purview all actions relating to sex selection prior to conception, to restrict the sale of imaging and ultra-sound machines only to clinics registered under the Act, and to strengthen enforcement with more stringent penalties for violation. This legislation should contribute towards more balanced population stabilization.

Table 2.2.7
Sex Ratios in India

Year	Population (in million)	Sex Ratio (females per 1000 males)
1901	238.4	972
1911	252.1	964
1921	251.3	955
1931	279	950
1941	318.7	945
1951	361.1	946
1961	439.2	941
1971	548.2	930
1981	683.3	934
1991	846.4	927
2001	1028.6	933

Source: Registrar General of India

Reduce Maternal Mortality Ratio (MMR) to 2 per 1000 live births by 2007, and 1 per 1000 live births by 2012

2.2.21 India has an unacceptably high maternal mortality ratio of 4-5 per 1000 live births (SRS, 1998). Maternal mortality is not merely a health disadvantage, but also a reflection of social and gender injustice. The low social and economic status of girls and women limits their access to education, appropriate nutrition, as well as health and family planning services. All of this directly impacts pregnancy outcomes. The overriding causes of the high maternal mortality ratio across India are *the absence of a skilled birth attendant at delivery, poor access to emergency obstetric care in case of a complication and no reliable referral system (with easy mobility), to ensure that women who experience complications can reach life-saving emergency obstetric care in time*. Any skilled birth attendant, however proficient she may be, also needs the back up of a functioning health system and cannot succeed without drugs, equipment and infrastructure. Minimal infra-structure for appropriate pregnancy outcomes like access to safe blood, functioning operation theatres (with electricity and running water), anaesthetists, and skilled birth attendants is simply not available on the scale required. Neither the Auxiliary Nurse Midwife nor the Trained Birth Attendant (TBA) qualifies as a (WHO defined) skilled birth attendant. The emphasis on village based trained birth attendants across the country, has not yielded optimal results, on account of lower standards of training and skill sets. It is relevant at this point to examine the

Table 2.2.8
Skilled Birth attendants and Maternal Mortality in South Asia (2000)

Country	% pregnancies attended to, by skilled birth attendants	Maternal Mortality Ratio (per 1000)
India	39	4-5
Maldives	72	1-2
Sri Lanka	98	0.5

Source: United Nations for Population Fund Activities (UNFPA)

route adopted in some developing countries known to have intervened aggressively to successfully reduce maternal mortality to below 1 per 1000 live births.

2.2.22 We highlight the success stories of Sri Lanka and China and there is a comparison in Table 2.2.9.

Sri Lanka

Sri Lanka, a low income country, achieved a 50 per cent decline in MMR from 1947-50 and further 50 per cent reductions thereafter every 8-13 years. Sri Lanka demonstrated that official recognition of professional midwifery is a crucial step towards reducing maternal mortality and further, that this is also the least cost solution. Through a clear and consistent strategy, by the mid 1950s, Sri Lanka had established systems to train and supervise midwives, to regulate midwifery practices and to introduce accountability. Over the years, their systems for training of nurses have only improved. Public health midwives (PHMs) are assigned (upon completion of 18 months training), to a Health Unit (equivalent of the health sub-centre in India). PHMs provide skilled attendance during home deliveries and have become the cornerstone of maternal health care across Sri Lanka. The health unit consists of a trained nurse to whom the PHM must report, and supervisory staff proficient in basic obstetrics, with efficient access to referral systems for complicated cases. A strong Health Management Information System (HMIS) has institutionalised the maternal death review (audit), in respect of each maternal death, to correct quality of care issues. Government earlier supported an ambulance service (sometimes with telephone facility), to transport the sick from their homes and this included pregnant women, and currently, government provides funding support for engaging private transportation. The strong tradition of nursing in Sri Lanka has also served to de-medicalise routine health care for women and children, except where doctors are indispensable.

China

From an MMR near 1500 per 100,000 live births in 1950, China reported reductions in MMR down to between 100-200 in 1980 and to 56 per 100,000 live births in 2002. Previously, the barefoot doctors taught themselves or received brief irregular training. Since 1982, government regulations require every barefoot doctor aspiring to become a village doctor (VD) to be specifically examined on his knowledge about safe delivery and identification of risk factors and complications (that could occur prior to and during childbirth). Those who pass the examination, earn a VD certificate and those who do not pass, remain trained birth attendants (TBAs). The VD is trained to handle normal deliveries, recognise problems and stabilize the patient should the need arise, prior to onward referrals. The health infra-structure to population ratio supports a fairly high level of contact, with one VD per population of 1000-1400 and one TBA per population of 2000. The nearest equivalent in India is one AYUSH practitioner for every 700-800 population, but without the relevant training or skill sets. The regimen for maternal care in China is also somewhat more intensive. There are typically five pre-natal care checks

Table 2.2.9
Comparisons India, China and Sri Lanka

Year	Country	Maternal Mortality Ratio per 100,000 live births	Female Literacy (age 15 and above)
HDR, 2004, UNFPA	China	56	78.7
Census 2001	India	407	47.8
			38.9 (rural)
			69.7 (urban)
UNFPA, April, 2004	Sri Lanka	46	89.3

(as opposed to three in India), and three post natal visits to the home of the pregnant woman (the first within 24 hours of delivery). Utilisation of these services is reported as above 85 per cent for uncomplicated cases, and 100 per cent for complicated cases. Referral support is close and accessible to Chinese women. *There is one facility for basic essential obstetric care (bEOC) for every 30,000 population (corresponding to the primary health centre in India. The difference is that bEOC facilities are not available at PHCs in all states across India).* Between 1990 and 1999, the Emergency Referring System for maternity care in China, is reported to have had a survival rate for emergency maternity cases averaging 96 per cent. A new cadre of modern village doctors is being put through a three year long, regular training on obstetrics and gynaecology. *China has one comprehensive essential obstetric care (cEOC) facility per 100,000 people (corresponding to the community health centre in India, which this Mid Term Appraisal recommends should be developed into a community hospital with facilities for cEOC). In China, every year, governors of provinces must publicly provide information on the maternal mortality ratio of their province.*

2.2.23 China has been far more successful in achieving basic health care for its people through an enormous cadre of health personnel for preventive and curative health services from the village to the district hospital. Doctors trained in medical colleges are located only in the district hospitals. The village health clinics and PHCs are managed by village doctors (earlier known as "barefoot doctors") through a series of contractual arrangements, after completion of training, for periods ranging from one to three years, in preventive and curative medicine of both the traditional Chinese and the western systems of medicine. This learning and skill set is upgraded through frequent apprenticeship and in-service training. The Chinese public health outreach system has gained a reputation for:

- de-medicalising the handling of health problems while adopting a preventive, promotive and rehabilitative approach to health; and
- integrating the availability and practice of traditional Chinese medicine with the western systems of medicine (allopathy).

2.2.24 The results are evident from a comparison of selected health indicators in Table 2.2.10.

2.2.25 Since a child birth at home costs less than that at a private facility / hospital or even at a public health facility, it would appear rational behaviour on the part of the household to opt for home deliveries. This makes it incumbent upon the central and state governments to quickly put in place two interventions. First, we need skilled birth attendants who would ensure appropriate pregnancy outcomes, whether at home or in an institution. Second, all pregnant women from BPL households and low income groups need to be covered by social insurance schemes to facilitate access to reliable maternal care. The Mid Term Appraisal recommends a maternal health insurance scheme.

Table 2.2.10
Selected health indicators: India and China

	India	China
Life Expectancy (In years) Male / Female	63.2 64.6 (F)	68.9 73.3 (F)
Infant Mortality Rate	63	37
Maternal Mortality Rate	407	56
Births per 1000 women (age 15-19)	45	5
Contraceptive prevalence (in %)	48	84

Source: State of World Population, 2004. UNFPA

2.2.26 The National Family Health Survey, 1992-93 (NFHS-I) and 1998-99 (NFHS-II) read together with the Rapid Household Surveys (RHS) for 1998-99 and 2002-03 (captured in Table 2.2.11) show improvements in the outreach of maternal health services. Ante-natal care and institutional deliveries are increasing. Since approximately 15 per cent of maternal deaths are attributed to unsafe abortions resulting from termination of pregnancy by unqualified and untrained providers, the law has stepped in. Appropriate amendments to the Medical Termination of Pregnancy (MTP) Rules, 2003, have now expanded access to safe abortion in several ways. Additionally, during 2004-05, in a shift in programmme implementation, the auxiliary nurse midwife at the health sub centre has been authorized to administer the prophylactic drug misoprostol and the oxytocin injection to address complications and stabilise the pregnancy. It is anticipated that the National Rural Health Mission will further improve outreach and skill sets particularly for essential obstetric, and for new-born care.

Reduce Infant Mortality Rate (IMR) to 45 per 1000 live births by 2007 and 28 per 1000 births by 2012

2.2.27 India is faced with an unparalleled child survival and health challenge. India contributes 2.4 million of the global burden (10.8 million) of under-5 child deaths (the highest for any nation in the world). This problem is further complicated by the new born health challenge, more formidable than in any other country. India has the highest number of births and neonatal (first 28 days of birth) deaths in the world. Neonatal mortality (at 40 per 1000 live births[SRS 2002]), constitutes 63 per cent of infant mortality and over 50 per cent of under-5 child mortality. In 2002, infant mortality has been recorded at 63 per 1000 live births. The Tenth Plan target of bringing the Infant Mortality Rate (IMR) to 45 per 1000 live births by 2007, and 28 per 1000 live births by 2012

Table 2.2.11
Outreach of Services for Reproductive and Child Health Care

(In percent)

Indicator	NFHS-I (1992-93)	NFHS-II (1998-99)	Rapid Household Survey (DLHS)*	
			1998-99	2002-03
1. Ante-natal care				
(i) Any visit	62.3	65.4	63.3	74.0
(ii) Full	44.0	44.0	26.6	-
2. Deliveries				
(i) Institutional	26.0	33.6	34.0	39.8
(ii) Safe delivery	34.2	42.3	40.4	54.0

*The District Level Household Survey data (2002-03) is now available for all districts surveyed

Table 2.2.12
India's contribution to the global burden of births and neonatal deaths (2000)

	Burden	Proportion of global burden	Rank in world
Live Births	26 million	20%	1
Neonatal deaths	1.1 million	30%	1

Source : United Nations Fund for Population Activities (UNFPA)

cannot be achieved without simultaneously achieving the enabling goal of bringing the neonatal mortality rate (NMR), to below 19 per 1000 live births by 2010. However, this does not appear to be a focus in programme design.

2.2.28 Over three-fourths of neonatal deaths occur among infants who are born low birth weight (weighing less than 2500g. at birth). In India, one-third of all neonates are low birth weight, once again among the highest in the world. The principal causes of neonatal deaths are neonatal disorders (bacterial infections [52 per cent], asphyxia [20 per cent], prematurity [15 per cent], and neonatal tetanus), pneumonia, diarrhoea and measles. The first few days and weeks of life are the most risky, as borne out in a recent study by the Indian Council of Medical Research (2003).

Table 2.2. 13
The first five years of life : NMR and IMR

Age completed	Under-5 child deaths (cumulative)
Day 1	20 per cent
Day 3	25 per cent
Day 7	37 per cent
Day 28	50 per cent
1 year	75 per cent
5 years	100 per cent

Source: Extrapolated from data, ICMR study (2003)

2.2.29 The IMR has been declining steadily and we have achieved reductions from 146 per 1000 live births in 1951 to 63 per 1000 live births in 2002. Over these years, the real cause of concern was that the rate of decline in IMR slowed considerably after 1993. Prior to 1993, the average decrease in IMR was around 3 points per year, but from 1993 onwards, the decline in IMR recorded has been of the order of only 1.5 points per year. More recently, between 1998-2002, the average rate of decline has picked up and is closer to 2.25 points per year.

2.2.30 Similarly, between 1972 and 1992, the neo-natal mortality rate (NMR) declined by almost 30 per cent, but after that, continued to hover above 44 per 1000 live births till 2000. The SRS 2002 points to a slight decline, with NMR reported as 40. The striking diversity in infant mortality outcomes across states is indicated in Table 2.2.16. The IMR outcomes in Kerala demonstrate that even the lowest income quintile segments receive equitable access to quality health care.

2.2.31 There is a clear correlation across states, between the proportion of non-institutional deliveries and neonatal and infant mortality rates. Kerala has the lowest NMR, with 95.7 per cent institutional delivery rate, and the corresponding figure for Tamilnadu is 79 per cent. However, in Bihar and Uttar Pradesh the institutional deliveries are less than 25 per cent and in Madhya Pradesh and Orissa they are around 30 per cent, with predictably high rates of IMR between 80 and 87 per 1000 live births.

2.2.32 The neonatal, infant and under-5 mortality rates (not to mention the maternal mortality ratios), bring to the forefront some of the primary causes of slow population stabilisation. If babies born do not survive, it is not surprising that there is slow respite in the numbers of newborns. Among other interventions, we need to quickly improve health system response and quality, starting from pregnancy to after delivery, increase skilled birth attendance at childbirth with adequate supplies, equipment and access to referral facilities and simultaneously improve access to essential new born care and management of new born complications. *As more newborns survive, population stabilisation will become achievable and indeed this is precisely the route that has succeeded in Goa and Kerala, followed by the states of Tamilnadu and Karnataka.* Addressing and succeeding in controlling neo-natal and infant mortality demonstrates a certain quality of excellence in the health delivery system with all linkages in position and functioning harmoniously. Nurses play a crucial role in neonatal care across the primary, secondary and tertiary levels. Improving nursing skills in neonatal care is a priority and a challenge.

2.2.33 In the second phase of RCH programme (2005-10), Government will

Table 2.2.14
Infant and Child Mortality in India

I. Mortality Rate	
Under five child mortality rate	73 per 1000 live births (SRS 2000)
Infant mortality rate (under 1 year)	63 per 1000 live births (SRS 2002)
Neonatal mortality rate (within 28 days of birth)	40 per 1000 live births (SRS 2002)
II Tenth Five-Year Plan Goals	
Infant Mortality Rate (by 2007)	45
Infant Mortality Rate (by 2012)	28
III Burden each year (approx.)	
Live births	26 million
Child deaths (under-5)	2.4 million
Infant deaths	1.7 million
Neonatal deaths (< four weeks old)	1.1 million
IV Nutrition related statistics	
Low birth weight (LBW) infants	30 per cent
Proportion of under-5 children:	
Under weight	47 per cent
Stunted	45 per cent

Source : Ministry of Health & Family Welfare

Table 2.2.15
Tracking Infant Mortality and Neonatal Mortality : IMR and NMR 1972-2002

Year	IMR	NMR	NMR as proportion of IMR
1972	139	72	51%
1982	105	67	64%
1992	79	50	63%
1993	74	47	63%
1994	74	48	65%
1995	74	48	65%
1996	72	47	65%
1997	71	46	65%
1998	70	45	63%
1999	70	45	64%
2000	68	44	65%
2001	66		
2002	63	40 (SRS)	

Source: Reproductive and Child Health, Phase II Document 2.
Ministry of Health & Family Welfare

Table 2.2.16
Infant and Neo Natal Mortality Rates (per 1,000 live births)

Year	Kerala	Bihar	Madhya Pradesh	Uttar Pradesh	Orissa
2000 (IMR)	14	62	87	83	95
2002 (IMR)	10	61	85	80	87
2002 (NMR)	7	37	57	47	53
2002 (ID / SBA*)	95.7 %	20.2%	29.1%	22.2%	30.5%

Source: Ministry of Health and Family Welfare
ID: Institutional deliveries
SBA: Skilled birth attendant

implement more rigorously the integrated management of childhood illnesses (IMCI) in 125 districts across the country. The focus will be on essential newborn care (home and facility based), standard case management of diarrhoea and pneumonia, micro-nutrient supplementation, exclusive breast feeding with appropriate complementary feeding, increased dissemination of ORS and strengthened immunization.

NATIONAL DISEASE CONTROL PROGRAMMES

2.2.34 Ministry of Health & Family Welfare implements six national disease control programmes with dedicated monitoring and management systems, which have contributed towards improving rates of decline. State and district level societies were set up to improve decentralized monitoring. At least 45 per cent of the central government plan allocation to the Health Department (exclusive of Family Welfare), is spent towards the six national disease control programmes. Now that the two Departments of Health and Family Welfare have been merged, with budgets having collapsed, the central and state governments need to ensure that this integration promotes synergies in process and outcomes, for example, between HIV with adolescent and maternal health.

HIV/AIDS

2.2.35 Far from levelling off, the rates of HIV infection in India are on the rise (although the rates of growth may be plateauing), and there is a growing "feminisation" in the spread of HIV. Overcoming AIDS has been a critical concern. AIDS has the characteristics of both a short term emergency and a long term development crisis. It requires a response that must remain energetic and vigilant. Yet this is a problem with a solution. We have learnt about what works. Successful approaches are evolving – locally, nationally and globally. HIV/AIDS is possibly the most complex public health challenge facing India today. There is no time to lose and no room for complacency. Since millions of people are at risk, we need to look at all feasible modalities to curtail the spread of HIV.

2.2.36 The economic impact of AIDS is large. HIV/AIDS is disproportionately affecting poor and vulnerable groups who are less well informed about HIV, concentrated among young working adults with significant household level impacts (loss of bread winner), and corresponding loss of skills with rapid attrition in the labour force, leading to direct impacts on productivity. Success stories from South East Asia (Thailand) about containing and even reversing the spread of HIV/AIDS after the disease had reached epidemic proportions, are encouraging. The silence and denial surrounding HIV/AIDS was eliminated through the aggressive, universalized promotion of condoms, widespread decentralization of service delivery, convergence of information with treatment, widespread provisioning of safe blood, and integrating counseling within hospitals, clinical and non-clinical settings to improve the management of stigma. We review the response in India so far.

2.2.37 In December 2003, there were an estimated 5.1 million HIV infections and the National AIDS Control Organisation recently reported an additional 28,000 HIV infections. The estimated number of HIV infections in December 2004 is 5.134 million. Many of those infected will unfortunately progress to AIDS and will need care, treatment and long term support. The current status (morbidity and mortality) on HIV/AIDS in India, is in Table 2.2.17.

2.2.38 From 1992-2002, the National AIDS Control Programme focussed primarily on awareness generation for HIV prevention, sentinel surveillance of HIV and screening of blood. During the Tenth Plan period under review (2002-05), the National AIDS Control Organisation :

- Introduced anti-retroviral (ARV) treatment for HIV/AIDS free of cost, through the public sector, for all eligible AIDS patients (as per WHO definition), a step initiated by few large developing countries outside of Cuba, Brazil and South Africa. Treatment commenced in April 2004 and this initiative is being rapidly expanded, with improved coverage and outreach. The introduction of treatment for AIDS in India has also strengthened public-private partnerships towards the management and control of HIV/AIDS. ARV treatment offers a critical opportunity to strengthen prevention efforts, since more and more people learn about their HIV status.
- Mandated the revelation of HIV status to the result seeking donor (not attempted previously in India), the accreditation of blood banks, as well as the storage of safe blood at First Referral Units (which necessitated an amendment in the Drugs and Cosmetics Act, 1940)
- Mobilised, during 2002-04, grant money (US $ 250 m.) for HIV/AIDS in India, from the Global Fund to Fight AIDS, TB and Malaria (GFATM), for preventing HIV transmission from parent-to-child, managing the HIV-TB co-infection and for introducing anti-retroviral treatment of AIDS, through the public sector. Significantly higher resources for HIV/AIDS were negotiated with the Department for International Development (DFID), the United States Agency for International Development (USAID), the Gates Foundation, Clinton Foundation, and the Richard Gere Foundation. The Gates Foundation is implementing state level programmes on HIV prevention and the Clinton Foundation is facilitating low-cost procurement of equipment for testing and screening.
- Generated strong political support at the First National Convention of the Parliamentary Forum on AIDS (2003), for additional HIV programmes, including a large school-based adolescent education programme and a national campaign to raise awareness about sexually transmitted diseases and treatment. The elected representatives from across three tiers of the parliamentary democracy pledged support for preventing and controlling

Table No. 2.2.17
Current Status (morbidity and mortality) on HIV/AIDS

Indicator	1997	2002	2004
Estimated Number of HIV infections	1.75 m. (1994)	4.58 m. (2002)	5.134 m. (2004)
Cumulative numbers of AIDS cases reported	5204	55,557	96,978
Cumulative number of AIDS deaths	1770	4632	7322

Source: National AIDS Control Organisation (NACO), Ministry of Health and Family Welfare

HIV/AIDS in their respective constituencies.

- Strengthened the multi-sectoral agenda for HIV prevention, support, and care through partnerships with Ministries of Health, Education, Youth Affairs and Sports, Defence, Steel, Women and Child Development, Labour, Urban Development and Railways. A Group of Ministers headed by the Cabinet Minister for Human Resource Development is engaged in mainstreaming HIV/AIDS through ongoing programmes of different social sector Ministries and Departments.
- Fostered a unique partnership between NACO, the BBC World Services Trust and Prasar Bharati and disseminated the messaging on HIV prevention, in infotainment format, during prime time over the electronic media. A detective serial, a virtual reality show and a wide range of interesting video spots (broadcast, as well, during cricket matches), accessed households across India, with "be careful, and prevent HIV/AIDS" messages. In 2003, NACO was awarded the Commonwealth Broadcasting Association Award for this effort.
- Increased installation of HIV related services, sometimes by over 200 per cent. Between 2002 and 2004, NACO steadily expanded a pilot project of 11 clinics into nearly 300 ante natal clinics to make this the largest national ante-natal HIV screening programme in the world (*cited in Lancet, October 2004*). Other services for HIV prevention, care and support like voluntary counseling and testing centers, clinics for sexually transmitted infections, 10 Model Blood Banks (in partnership with WHO and CDC Atlanta), targeted interventions and condom procurement were all extended in coverage and outreach on a scale not attempted previously. Table 2.2.18 indicates the expansion achieved:
- Supported the commencement (in February 2005), of the first human clinical trial in India on the AIDS vaccine for the HIV sub-type C, at the National AIDS Research Institute, Pune.

2.2.39 The National AIDS Control Programme needs to do much more in order to reverse the spread of HIV. Here are a few suggestions :

- Assign the sentinel surveillance of HIV to professional groups under the overall

Table 2.2.18
Increasing availability of HIV related services

National AIDS Control Programme	1997	2002	2004
Schools covered under the School AIDS Education Programme	NIL	20%	60%
Voluntary Counselling and Testing Sites	NIL	225	639
Prevention of Parent to Child Transmission (PPTCT) sites	NIL	11	282
HIV sentinel surveillance sites	55	320	670
Clinics for sexually transmitted infections	372	504	735
Targeted Interventions	NIL	225	933
Treatment centers for Anti-Retroviral Therapy	NIL	NIL	21
No of Blood Banks modernized under NACP	815	1020	1020+ 10 Model Blood Banks

Source: National AIDS Control Organisation (NACO), Ministry of Health and Family Welfare

supervision of the Indian Council of Medical Research (ICMR) and the Integrated Disease Surveillance Programme. Support HIV sentinel sites across clinical and non-clinical settings in the public, private and NGO sectors so that the diverse feedback from independent sites will more fully reflect ground reality across both highly vulnerable states and high prevalence states.

- Integrate the management of HIV/AIDS with primary health care and the Reproductive and Child Health (RCH) Programme. NACO has no structures below state levels except for civil society collaborations which, however outstanding, cannot substitute for systemic outreach. The HIV/AIDS programme omitted to synergise with the RCH programme since the inception of NACO in 1992. Some initiatives towards this synergy commenced during Year One of the Tenth Plan. All services for HIV prevention have remained largely confined to medical colleges. The RCH programme runs interventions for reproductive tract infections and the HIV/AIDS programme runs clinics for sexually transmitted infections, with no reference from one to the other. Ante-natal checks are the mainstay of the RCH programme, but the screening for HIV is not necessarily incorporated into the regimen except for the recent synergy across 300 ante natal clinics cited above. Women and children with HIV need special attention in terms of nutrition, care and long term support, besides treatment when eligible (WHO Stage 3 of the disease). The mid-term appraisal indicates that the National AIDS Control Programme in India continues to be highly centralised and cannot reach district and sub-district levels unless it is integrated into primary health care, as happened many years ago with tuberculosis, malaria and leprosy and also develops synergies with the reproductive and child health programme. The stand-alone, dedicated character of the programme, that was once its strength, can become a barrier to higher dissemination and utilisation of the significantly enhanced services for HIV prevention, care, support and treatment.
- Engage civil society, the private sector, local bodies, elected representatives, celebrities, sports icons and film stars in more strategically using information to bring about behaviour change. If the bottle of pepsi and coca cola can reach the most remote hamlet and become the preferred beverage, surely this has lessons for the outreach, messaging, and behaviour change in respect of use of the condom. For 22 years, from 1969-1992, India used the networks of 6-8 blue chip companies (Hindustan Levers, Brooke Bond, Tata Oil, Union Carbide, and others) to disburse packets of condoms along with packets of Brooke Bond tea for instance, across the deserts of Rajasthan, to prevent the unwanted pregnancy. We now need to utilise diverse channels to disseminate the appropriate health message and product. These channels could include the postal network, the village kiosk, e-choupal, every retail outlet, barber, cobbler, dhobi, paanwala. We need to repeat the previously tested and successful collaboration with the private sector, particularly, through networks of fast moving consumer goods. Most importantly, make it the responsibility of every district magistrate to aggressively push the use of the condom for triple protection: to prevent HIV, to prevent the unwanted pregnancy and to prevent sexually transmitted disease. This route of universalised, aggressive promotion of the condom has worked for Thailand, and many other countries. [The relevant portions of this paragraph are reiterated in the recommendations on the National Rural Health Mission, to draw attention to the significance of this suggestion].

- Provide comprehensive and regular health screening to sex workers, inclusive of facility for safe abortions where necessary, and if sought, and make these health checks mandatory. The increase in clinics for sexually transmitted diseases during the Ninth and Tenth Plans signals a more widespread acceptance of the HIV prevention programme. However, these clinic-based interventions invariably overlook the target population. Since sex will continue to be bought and sold, and innocent wives and unborn children will continually remain at grave risk, government should commence covering sex workers with health checks, through grass-root NGOs, and importantly, without affecting the rights and dignity of the sex worker.
- Bring the management of interventions for prevention, care and support of HIV/AIDS within the purview of elected Panchayati Raj Institutions, for improved supervision and higher accountability.
- Injecting drug users are contributing to the world's fastest spread of HIV infection. Within India, besides the north-east, injecting drug use is rapidly increasing in a number of metropolitan cities. Develop a clear and consistent policy framework with detailed guidelines on the use of injecting equipment for vaccinations and routine injections across primary, secondary and tertiary health settings. Discontinue the use of syringes not mandated by the Health and Family Welfare Programme.
- Develop a policy framework and a range of programme interventions to address children affected with AIDS, currently not specially included in the National AIDS Control Programme.
- Focus on migration and mobility. Extend the National AIDS Control Programme across states with high vulnerability to HIV/AIDS (for example, states with high out-migration and in-migration). Cooperation across borders is also called for, as is happening within ASEAN countries and in a joint sub-regional HIV prevention and AIDS care programme along the Abidjan-Lagos Migration Corridor which links Nigeria, Benin, Togo, Ghana and Cote D'Ivoire.
- Reach out to prison populations. Russia is attempting to develop a model programme which includes prevention education for prisoners and staff, providing bleach in prisons to sterilize injecting equipment, free access to condoms and substitution treatment for drug users. The February 2004 Dublin Declaration on HIV/AIDS in Prisons in Europe and Central Asia reflects the principle that treatment and care for prisoners should be equivalent to that available outside the prison settings.
- Aim to place 25,000 AIDS patients on Anti-Retroviral Treatment (ART) through the public sector, by March 2006. ART can extend the lives of people living with HIV by years (through reductions in viral load within the body). However, treatment must be part of an integrated package of interventions that includes prevention, care and support activities, all of which complement and support each other.
- Mobilise self help groups and other community based organizations to catalyse awareness generation and behaviour change communication particularly among adolescent youth and migrant workers, about the threat and repercussions of HIV/AIDS, encourage the regular use of voluntary counseling and testing centers, with aggressive condom promotion.
- Expedite the legislation on HIV/AIDS, which has been finalized after over 18 months of deliberation.
- Encourage R & D for producing indigenous drugs, inclusive of those derived from traditional medicine.

- Pay special attention to R&D on expanding the range of prevention options for women, for instance, on microbicides, inclusive of accelerating clinical trials on microbicides. Develop and implement regulations that will make mandatory the HIV screening of donor insemination.
- We need to research more cost – effective options for testing and screening for HIV (for instance, a saliva test is cited as possibility). Research on improved management and treatment of HIV/STDs would also expand the range of prevention options for women, in particular.

Tuberculosis

2.2.40 The Revised National Tuberculosis Control Programme (RNTCP) in India has been rated as the world's fastest growing TB Management programme, with an overall performance of cure/treatment completion rates consistently above 85 per cent. The RNTCP covers a population of over 950 million with the DOTS protocol (Directly Observed Treatment Scheme), and aims to cover the entire country by end-2005. Every year over 1.8 million people in India contract TB, and 400,000 succumb to it. Currently, over 4 million patients are being treated. Medicines for TB are available free of cost at primary health centres, and also decentralised through village level drug distribution centres, and neighbourhood village level DOT providers.

2.2.41 The National TB Control programme has mobilized resources for TB through awards from the Global Fund to Fight AIDS, TB and Malaria of US $ 60 million and from USAID, DFID and the Danish International Development Agency (DANIDA).

2.2.42 Tuberculosis impacts heavily on HIV morbidity and mortality because HIV is the most potent risk factor for reactivation of latent TB infection. Since 2002, government has been implementing a joint action plan to counter the growing incidence of the HIV-TB co-infection, initially in the six high HIV prevalence states of Maharashtra, Tamil Nadu, Andhra Pradesh, Karnataka, Manipur and Nagaland. Services for HIV infected TB patients are provided under one roof through critical linkages between the Voluntary Counseling and Testing Centre (VCTC) supported by the HIV/AIDS programme and Microscopy Centres (MCs) supported by RNTCP, joint IEC (Information, Education and Communication) activities and infection control measures. This joint action plan to address the HIV-TB coinfection was extended to eight additional states (Delhi, Himachal Pradesh, West Bengal, Punjab, Rajasthan, Gujarat, Kerala and Orissa), and further scale up, across the country, will follow.

2.2.43 However, the emergence of multi-drug resistance to TB could increase the magnitude and severity of TB epidemic. The BCG vaccine prevents the development of severe manifestation of TB (tubercular meningitis) in children. However, the BCG vaccine does not provide protection against the onset of TB in adults. Government and industry need to collaborate towards developing a newer vaccine, together with more sophisticated diagnostics and drugs.

Malaria

2.2.44 A National Vector Borne Disease Control Programme (NVBDCP) was initiated in 2003-04 with the convergence of three ongoing programmes on malaria, kala-azar and

Table 2.2.19
Tuberculosis : Coverage and Mortality

	1998	2000	Dec' 04	Increase/ decrease
Estimated no. of deaths due to TB	500,000	500,000	400,000	20% decrease
Population covered under RNTCP	18 million	287 million	942 million	288% increase

Source: Ministry of Health & Family Welfare

filaria. Programmes on Japanese encephalitis and dengue were also included to facilitate integrated and more effective response mechanisms. Kala-azar is endemic in 33 districts of Bihar, 10 districts of West Bengal, 3 districts of Jharkhand and 2 districts of Uttar Pradesh. India carries 50 per cent of the world's burden and 90 per cent of kala-azar occurs among the poor in Bihar. There is an attempt to eliminate kala-azar by 2010 (an objective cited in the National Health Policy, 2002). Administration of the anti-malaria programme was fully integrated into the general health delivery system, many years ago. However, this programme continues on a 50 per cent cost sharing basis between the central and state governments, and with the advent of HIV/AIDS, spending on malaria has been crowded out. Ministry of Health & Family Welfare is now revitalising the management of vector borne diseases.

2.2.45 From 2003 onwards, the north-eastern states, 19 urban areas and 100 districts with high incidence of Malaria, across eight states (Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Orissa and Rajasthan), have been identified for 100 per cent central government assistance. Each year, over 100 million people are screened and 1.8 million diagnosed and treated for malaria.

2.2.46 Technologies for curtailing the breeding of mosquitos need wider dissemination and application. Training needs strengthening at all levels, for early recognition, diagnosis and management of malaria, inclusive of cerebral malaria. The programme needs to focus on much greater decentralisation in order to allow local solutions to gain sustainability.

Filaria

2.2.47 Lymphatic filariasis is endemic in 20 states and union territories, and strategies to control the vector include anti-larval operations, detection and management of morbidity. Each year, a single dose mass drug administration is implemented in endemic districts. During 2004-05, this programme was implemented in 202 endemic districts and nearly 190 million people have been administered the dose. There has also been a decline in clinical cases to 2 per cent in endemic areas.

Leprosy

2.2.48 India accounted for 65 per cent of the global burden of leprosy. A well-planned strategy through the National Leprosy Eradication Programme with effective implementation has reduced the prevalence rate of leprosy from 24/10,000 in March 1992 to 2.06/10,000 in November 2004. Free diagnosis and treatment services for leprosy are now available in all primary health centres, government hospitals and dispensaries on all working days, and this ensures consistently higher outreach. Effective convergence of information on and treatment of leprosy has succeeded in eliminating stigma at community levels, as well as, among the general public. The National AIDS Control Programme could benefit from a similar strategy.

2.2.49 Leprosy has been eliminated in twenty states and is close to elimination in another six states. Eradication of leprosy in India by December 2005 is well within reach. States nearing elimination should receive continued support for up to two to three years. Government needs to focus on high endemic districts and blocks.

Table 2.2.20
Deaths and Malaria

Indicator	Starting Year Value	Ending Year Value	Variation
Malaria (deaths per lakh population)	0.13 (1994)	0.10 (2003)	23% decline

Source: Ministry of Health & Family Welfare

Blindness

2.2.50 India has nearly 15 per cent of the world's visually handicapped. About 12 million people are fully blind, and over 20 million suffer from different forms of visual impairment, rendering them virtually ineffective. At least 62 per cent of blindness in India is attributed to cataract. The other significant causes are corneal diseases, refractive errors, glaucoma, diabetes and vitreo-retinal disorders.

2.2.51 India is committed to the global initiative on the Right to Sight, launched in October 2001 which aims at controlling cataract and tackling other causes of blindness. Addressing these causes of blindness is included in the Plan of Action for the Tenth Plan. State Blindness Control Societies are being assisted with an increase in commodity assistance together with grants-in-aid for diverse eye ailments. Facilities in this programme have been extended up to block levels, with the increased involvement of panchayats.

2.2.52 The following actions are recommended:

- Enlarge the scope of the National Programme for Control of Blindness from a primary focus on cataract to more comprehensive eye care.
- Replicate successful eye care delivery systems and institutions throughout the country to increase outreach and coverage of the programme to rural areas. Private initiatives like the LV Prasad Eye Institute, Hyderabad, the Shankar Natralaya, Chennai, and the Sri Chitra Tirunal Medical Centre, Thiruvananthapuram should be incentivised for replication to many more sites. There may be several other equally good initiatives which should be similarly encouraged.
- Improve the quality of intra-occular lens (IOLs) produced indigenously, since the projected annual requirement of IOLs across India is at least, over 2 million.
- Examine some better known, cost-effective therapies for inclusion in the programme, such as the extra-capsular cataract surgery with IOL, which restores vision up to 6/9.
- At community levels, ensure the intake of Vitamin A and increase the screening of eye care for school children, adolescents and for the elderly.
- Utilise, if found feasible, the Drishti eye laser equipment developed by the Defence Research and Development Organisation (DRDO).

Cancer

2.2.53 Cancer has become a significant public health challenge. India is one of the few countries that has a National Cancer Control Programme (NCCP), launched in 1975-76. There are, at any given time, over 25 lakh cancer patients in the country, and up to 10 lakh new cancer cases each year. The focus of the NCCP has been threefold : on health education that will motivate primary prevention (for example, emphasising the dangers of smoking), on early detection and diagnosis of the most common cancers to facilitate secondary prevention, and on strengthening existing institutions to facilitate comprehensive cancer therapy including palliative care.

Table 2.2.21
Cataract surgeries to control blindness

Blindness	1994	2002-03	2003-04	% increase (1994-04)
No. of cataract surgeries	19.14 lakh	38.57 lakh	42.0 lakh	119
Percentage of IOL surgeries	3 %	77 %	83 %	2667

Source: Ministry of Health & Family Welfare

2.2.54 Twenty-two Regional Cancer Centres (RCCs) have been recognised, of which six are in the NGO sector. Seventeen centers are now eligible for a one-time assistance of up to Rs.3 crore (in place of Rs.2 crore given earlier), for infrastructure development. New RCCs will be supported in uncovered areas/states, with a one-time grant of Rs.5 crore. Existing government medical colleges and other hospitals/institutions are now eligible for a grant of Rs.3 crore to set up and equip an oncology wing. Money will be released directly to the institution concerned.

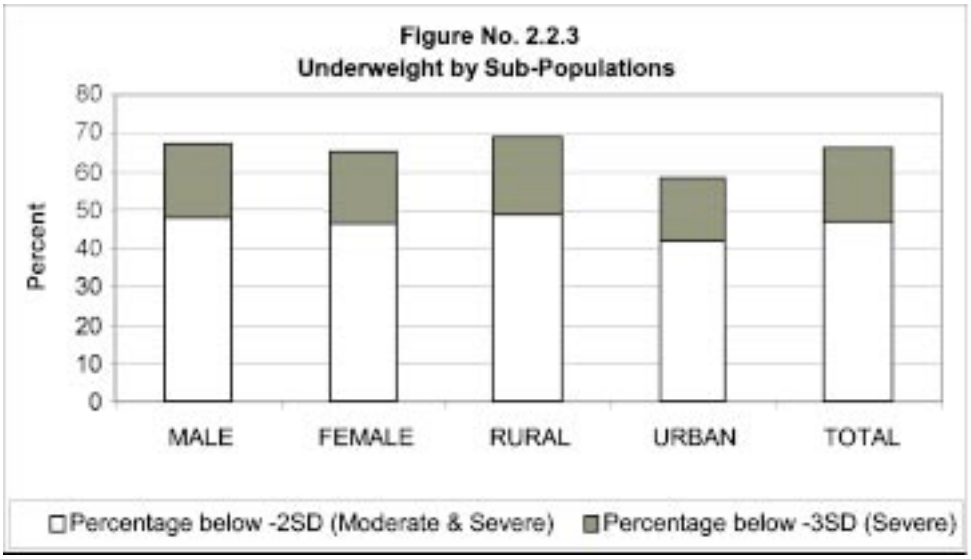
2.2.55 The district cancer control programme is eligible for assistance of Rs.90 lakh over five years, an increase over the Rs.55 lakh given earlier, to be disbursed through nodal agencies like the RCC (in lieu of the state government), in a graded manner: Rs.22 lakh in Year One (as against the previous Rs.15 lakh) and Rs.17 lakh in the subsequent four years (as against Rs.10 lakh earlier). NGOs with three years field experience(in the field of cancer) will be eligible for a grant of Rs.8000 per camp for IEC activities. While higher outlays for the management of cancer are welcome, somehow the outreach through the public heatlh system needs scaling up.

2.2.56 India was a forerunner in signing the WHO Framework Convention on Tobacco Control (FCTC) in September 2003, ratified in February 2004. The provisions of the FCTC have since been incorporated into domestic law, which came into effect in December 2004. Over 50 per cent of cancer in India is attributed to tobacco. The four critical provisions contained in this legislation, for example, prohibiting smoking in public places, advertising of all forms of tobacco products, sale of tobacco products to minors and within 100 metres of educational institutions, should all go a long way in curtailing the use of tobacco related products.

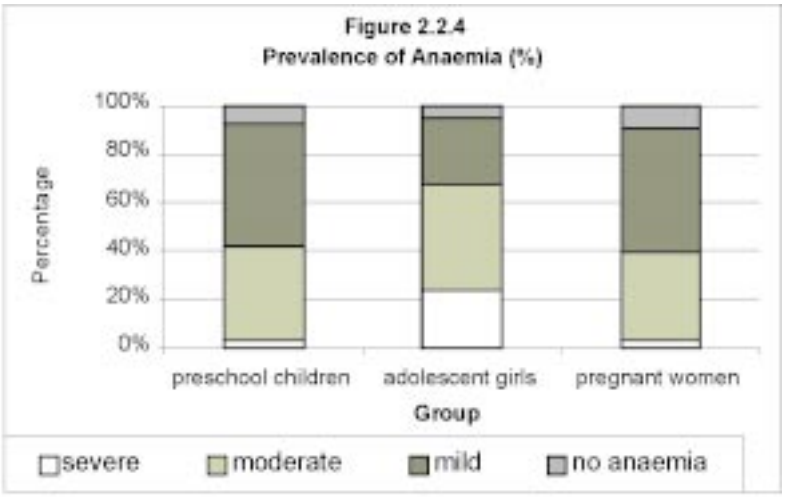
Nutrition

2.2.57 The Tenth Plan strategy for prevention, early detection, management and a 50 per cent reduction of moderate and severe anaemia needs to be fully operationalised. The District Level Rapid Household Survey [DLHS] (2002-2005), has for the first time provided district level estimates on the magnitude of "hidden hunger" or micro-nutrient malnutrition. Severe malnutrition has decreased significantly in India, and severe nutritional deficiencies have almost disappeared. However, levels of malnutrition amongst children is high, manifested through moderate and severe under-weight. The DLHS indicates the underweight by sub-population among 0 to 6 age groups, in Figure 2.2.3. Over 66 per cent of children, below 6 years of age, are moderately under nourished and the problem is more severe in rural areas. There is a steep increase in under-nutrition among

Figure No. 2.2.3
Underweight by Sub-Populations



Source: DLHS 2002-03



Source: Household Survey 2002-03

infants between 6-18 months, attributed largely to faulty infant feeding and caring practices. Awareness generation and behavioural change communication preferably through interpersonal counseling by the ANM and Anganwadi worker are critical for achieving the Tenth Plan goal of raising the level of exclusive breast-feeding from 55.2 per cent (1998-99,NFHS-II) to 80 per cent by 2007, followed by introduction of complementary feeding at six months. Close coordination between the RCH and the ICDS programmes is critical for achieving these objectives.

2.2.58 The District Level Rapid Household Survey [DLHS] (2002-2005), provides estimates on the magnitude of under-nutrition in preschool children and shows that the prevalence of anaemia is over 90 per cent in preschool children, adolescent girls and pregnant women. This needs early attention.

2.2.59 The National AIDS Control Organization (NACO) has signed an MOU with the World Food Programme to conduct a detailed situation analysis for jointly formulating appropriate nutrition related interventions, that will strengthen people living with HIV. The current status of nutrition related intervention programmes are in Table No. 2.2.22

2.2.60 There has been a fall in households consuming iodised salt (> 15 ppm of iodine) from 49 per cent to 37 per cent (between 1999 and 2003). There are urban-rural, inter-state and inter-district variations in each of these problems and they all call for a multi-sectoral approach instead of being strait-jacketed into a health based approach. The district level surveys have reiterated the need for decentralized district and sub-district planning, implementation and monitoring of nutrition related interventions.

2.2.61 Some examples of state led initiatives are :

i) The Tamilnadu Salt Corporation is producing double fortified salt (with iron and iodine) commercially, and this is being provided through the "State Noon Meal Scheme". This could be introduced and extended through the school midday meal scheme across the country.

ii) In Gujarat, ready to eat food (in the ICDS programme), fortified with vitamin A, iron and folic acid, is leading to significantly lower levels of night blindness and anaemia among children, pregnant and nursing mothers.

iii) In Haryana, Punjab and Chandigarh at the processing stage itself, wheat flour is being fortified with iron and folic acid and Andhra Pradesh, Uttar Pradesh and Gujarat are keen to pursue this route. Low cost candies, duly fortified,

Table 2.2.22

Nutrient	Major nutritional problems	Current interventions
Under nutrition	Children below 5 years : 47 %	ICDS food supplements (all ICDS blocks)
		PMGY take home food (all ICDS blocks)
		Food grains to undernourished pregnant women and adolescent girls (51 districts)
		Coverage under these programmes including detection and management of under-nutrition is inadequate. Address macro-nutrient deficiency through enriching wheat flour with soya
Anaemia	Anaemia in children under 5 years: >90% (DLHS-2004) Anaemia in pregnant women: 90% (DLHS-2004) Anaemia is responsible for one fifth of maternal deaths	Very few children receive iron and folic acid (IFA). Coverage under the anaemia prophylaxis programme for pregnant women is less than 30% Detection and appropriate treatment of anaemia in pregnancy needs strengthening. Mandatory utilization of fortified foods and cereals in all public sector supplementary nutrition programmes would accelerate improvements in nutrition status. Some states have made a beginning.
Iodine	Estimated households using adequately iodised salts (15 ppm): **37%**	The ban on use of non-iodised salt needs to be enforced and utilization of iodised salt be made mandatory. Ministry of Health has made rigorous efforts to ensure the setting up of Iodine Deficiency Disorder (IDD) Control cells in 29 states and 7 union territories, and is continuing to pursue relentlessly the goal of eliminating iodine disorder deficiencies (IDD), by 2010. No state in the country is free from IDD and 254 districts out of 312 districts surveyed have more than 10 per cent prevalence, making the country an endemic region for IDD.
Vitamin A	Vitamin A deficiency (VAD) has declined. However, India continues to be an endemic region for vitamin A deficiency, with prevalence higher than the WHO cut off level of 0.5 per cent . The prevalence of night blindness has reduced to 1.3 per cent during 1997-2000 which again is higher than the World Health Organization's cut off level of 1 per cent for night blindness.	Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh have less than 25% coverage for Vitamin A. In UP and MP, an additional intervention during April and October every year reaches out to children, with Vitamin A.
Over nutrition	Over nutrition in children and adults is increasing, recorded at over 10% among women in the NFHS 1998-99	There is need to promote appropriate lifestyles and dietary intakes for the prevention and management of obesity.

have been distributed across West Bengal, Bihar, Andhra Pradesh and Gujarat through ICDS interventions.

2.2.62 Dialogue is essential with the food and pharmaceutical manufacturing sector to ensure that food products are enriched with essential micronutrients and macronutrients, based on accepted nutritional standards and parameters. Planning Commission has, during 2005, set up a Nutrition and Food Watch Committee to take stock of food security and nutrition outcomes across India.

New Initiatives in the Tenth Plan

2.2.63 Ministry of Health & Family Welfare has introduced several new initiatives during the Tenth Plan period. Some of these are:

i) The Reproductive and Child Health Programme, Phase II (2005-10), aims to promote institutional deliveries by upgrading fifty per cent of the primary health centres to provide 24 hour basic essential obstetric and neo natal care; to enhance access to emergency obstetric care by operationalising 2000 First Referral Units (FRUs) at community health centre levels; to train ANMs/ LHVs/ staff nurses as skilled birth attendants to who could address the management of complicated pregnancies, prior to referrals; to provide flexibility to states to strengthen referral systems; and to implement the Janani Suraksha Yojana which will encourage BPL households to seek institutional deliveries.

ii) Support for six tertiary-level institutions on the lines of the All India Institute of Medical Sciences (AIIMS) in Delhi in the six backward states of Bihar, Madhya Pradesh, Orissa, Rajasthan, Chhattisgarh and Uttaranchal, and a one-time assistance for upgradation (upto the level of AIIMS), to one prominent medical institute in Uttar Pradesh, Tamil Nadu, Jammu and Kashmir, Jharkhand, West Bengal and Andhra Pradesh. The Shri Venkateshwara Institute of Medical Sciences (SVIMS), Tirupathi will also be upgraded in similar manner, with the Tirumala Tirupathi Devasthanam (TTD) bearing 50 per cent of the expenditure involved.

iii) An Integrated Disease Surveillance Project, will develop capacity across states and union territories for early identification and detection of warning signals in respect of outbreaks in communicable diseases (including cholera, typhoid, polio, measles, malaria, tuberculosis and HIV/AIDS). This will include use of information technology in data transmission, training in disease surveillance and development of rapid response mechanisms.

iv) A National Mental Health Programme to strengthen 37 government mental health institutes and the psychiatric wings of 75 medical colleges, and to pursue education, research and training.

v) A Capacity Building Project, to strengthen food and drug laboratories, train analysts and inspectors, develop computerised networks across the industry, promote food safety in the street food sector and raise consumer awareness. These enhanced capacities will additionally help in administering the Integrated Food Law.

vi) Strengthening hospitals and clinical facilities along national highways to deal with trauma and accident victims.

vii) Expanding outreach of AYUSH. An Ayurveda wing in the Army Base Hospital, Delhi Cantonment and in the Armed Forces Medical College, Pune have commenced functioning. Collaboration with the Sports Authority of India is on the anvil, for mainstreaming yoga into the regular curriculum, to improve the stamina and efficiency of sports-persons.

viii) Thirty one State Medicinal Plant Boards have been set up, overseen by the National Medicinal Plant Board, with dissemination of cultivation practices relating to medicinal plants.

ix) The Traditional Knowledge Digital Library (TKDL) digitalises ancient traditional knowledge relating to Ayurveda, Siddha, Unani and Yoga (not previously attempted), has been completed.

x) A National Institute of Siddha in Chennai started functioning with postgraduate education in six specialities.

xi) A National Institute of Unani Medicine, Bangalore, was operationalised with postgraduate education in four specialities.

xii) The Department of AYUSH has completed preparatory work to establish a Regional Institute of Ayurveda and Homeopathy, at Pasighat, Arunachal Pradesh. The state government has already allotted 50 acres of land, free of cost, for this institute to bring in under-graduate teaching facilities in ayurveda and homeopathy exclusively for students of the north-eastern region, including Sikkim. This will promote appropriate development and utilisation of the rich bio-diversity and medicinal plants across the region. This initiative will utilise the non-lapsable 10 per cent Plan funds earmarked for the north-eastern states.

xiii) During 2005-06, two new national programmes are proposed to be launched: a National Programme on Diabetes and Cardiovascular Diseases and another National Programme on Hearing and Speech Impairment.

What ails the health sector?

Primary health care is of poor quality, unavailable and inaccessible

2.2.64 The infrastructure dedicated to rural primary health care is captured in Table 2.2.23.

2.2.65 There are exceptions, but by and large, the quality of care across the rural public health infra-structure is abysmal and marked by high levels of absenteeism, poor availability of skilled medical and para-medical professionals, callous attitudes, unavailable medicines and inadequate supervision and monitoring. The fact is that when people at the grassroots, first seek diagnosis and treatment

Table 2.2.23
Infrastructure for primary health care

Year	Health Sub-Centres*	Primary Health Centres**	Community Health Centres***	Dispensaries (Indian Systems of Medicine)
1967	17521	4793	214	14803 (1980)
1992	131369	20407	2188	23,611
2001	137311	22842	3043	23,442
April 2005	142655	23109	3222	22,735 (reduction in nos. of homeopathy dispensaries)

Source: Ministry of Health and Family Welfare
* For every 5000 population in the plains and for every 3000 population in the hills
** For every 30,000 population in the plains and for 20,000 population in the hills.
*** For every 1,20,000 population

for an illness, an estimated 70-85 per cent among them, visit a private sector provider (PSP) for their health care needs. Private providers are fragmented along diverse delivery models, not always present in the most under-served states, largely unregulated, and the mushrooming of sub-standard facilities is dominated by unqualified practitioners. All of this yields enormous variation in the quality of diagnosis and treatment. Nevertheless, these PSPs have become the dominant care providers. The poor continue to avail of the costlier services provided by the private practitioner, even when they have access to subsidised or free public health care, due to reasons of distance (for significant segments of the population), but more importantly, on account of the unpredictable availability and very low quality of health care services provided by the rural public primary health sector. Private sector providers are perceived as nearer to the homestead, available at convenient hours, more considerate and usually more responsive with some ready, palliative medicine.

2.2.66 Government has been unable to generate public confidence in the public primary health system. It is true however, that reducing fertility and increasing immunization have been some notable public health achievements through this extensive network of public health facilities. Also, government efforts have been severely constrained by limited public funding, and its overall inability to assure staffing, essential supplies, maintenance, connectivity, supervision and monitoring to ensure adequate performance and appropriate health outcomes. Since there are no national regulations for provider standards and treatment protocols at specified levels of health care (across the public and private sectors), potential outcomes include over-diagnosis, over-medication, and maltreatment.

2.2.67 Following a rationalization of responsibility, during the Tenth Plan, between the centre and state governments, the central government now provides salary support for the auxiliary nurse midwife (ANM) across all health sub-centres. However, it is for state governments to manage implementation and ensure that she resides at her place of work. A major share of responsibility towards rural health infrastructure to keep the three tier primary health system functional, devolves upon state governments. In meeting their responsibilities, state governments very often omitted to provide essential operational staff and equipment at primary care levels, like the male multi-purpose worker (MPW) at health sub-centres (leading to an all India vacancy position in 2003, of over 67,000 MPWs). There are problems with facilities, services and delivery across rural public primary health care. Essential equipment and instruments are not functioning, or missing in most clinics, for example, thermometers and sterilisers, are in an abysmal state of maintenance, with minimal or no funds assigned towards keeping these fully functional. Although the low performing states (with high IMR and poor pregnancy outcomes), may in fact divert higher expenditures towards primary health care, the outcomes continue to remain poor, possibly on account of endemic shortages and system failures. The continuing shortfalls within the public primary health infrastructure are indicated in Tables 2.2.24 and 2.2.25.

Table 2.2.24
Shortages in Primary Health Infrastructure

	Shortfall as per 1991 population	Shortfall as per 2001 population
Health sub-centres	4822	21,983
Primary health centers	1374	4436
Community health centers	2474	3332

Source: Ministry of Health & Family Welfare

Table 2.2.25
Shortages in Manpower in the Primary Health System

	Shortfalls, 2004
Multipurpose Worker (Female) / ANM	11191
Health Worker (Male) Multipurpose Worker (Male)	67261
Health Assistant (Female)/LHV	3198
Health Assistant (Male)	5137
Doctors at PHCs	880
Surgeons	1121
Obstetricians and Gynaecologists	1074
Physicians	1457
Paediatricians	1607
Total Specialists	5335
Radiographers	1017
Pharmacists	1869
Laboratory Technicians	6344
Nurse/Midwives	12722

Source: Ministry of Health & Family Welfare

2.2.68 A World Bank funded benefit incidence analysis (BIA) (AjayMahal and others, 2000) examined the appropriate use of preventive and curative health services by the poor in India and reported that the poorest 20 per cent of the population captured about 10 per cent of the total net public subsidy, and that the richest income quintile benefitted three time more than the poorest. In an alternative approach to assessing distributional performance of the health sector, on the basis of utilisation rates above and below the poverty line, the BIA results show that the population below the poverty line (36 per cent at the time of analysis), realised about 24 per cent of the subsidy for public financing of curative services. The inpatient beds in the PHCs are significantly under-utilised, and the limited utilisation that exists is not particularly pro-poor in the population being served. *There may be a case for lowering investment in inpatient beds at PHC levels*. Public hospitals are much more accessible to urban populations, which explains the higher level of inequality in subsidy benefits for rural populations. *Since hospitalisation is a major contributor to subsidy benefits, increasing utilisation at rural public hospitals would enable government subsidies to be more pro-poor, particularly since 61 per cent of the poorest are found to favour public hospitals for inpatient care*. When we turn to outpatient care, we find that 82 per cent of all visits are to the private sector provider. This has been found true across income groups, urban and rural populations, gender, caste / tribe affiliation and above and below the poverty line. The role of the public sector is stronger for preventive services with 60 per cent of antenatal visits and 90 per cent of immunisation doses delivered by the public sector. However, both the investment and expenditures on demand side interventions (prevention of morbidity and promotion of health seeking behaviour), are accorded low priority at both central and state levels.

2.2.69 The combination of limited outreach and sub-optimal delivery has led to poor health outcomes in key parameters like infant and maternal mortality. Primary health care should be made directly accountable to local elected bodies and Panchayati Raj Institutions (PRIs) with appropriate devolution of administrative and financial powers. More equitable health outcomes are possible only if we make services work for poor people, create competition among providers and create options for consumers. *Can we not institutionalise linkages so that rural public health facilities are energised through franchised networks of diverse health providers, across the public, civil society and the private sectors?*

Combining the role of payor and provider within government may have diminishing returns

2.2.70 For the most part, government combines the roles of payor and provider of health care service delivery, particularly for the most vulnerable groups. However, if basic services continue to elude poor people, this may be attributed to a misalignment of incentives between providers and outcomes.

No private market left to itself can provide appropriate services to poor people, because it will tend to serve clients with purchasing power, for a fairly narrow set of services. For these reasons, government continues to assume responsibility for basic services, especially for poor people.

2.2.71 We need to energise health systems at primary health care levels, for improving health outcomes. Public sector service providers face weak incentives to deliver services effectively (for example, there is no penalty for absentee doctors in primary health centres). The day-to-day pressures of management often compromise attention to outcomes on the ground. Is there a case for redefining the current role of government, as both provider and financier of services? If we make a clear separation between the role of the policymaker and the provider organization, this will align incentives (for the provider), with the health outcomes that policymakers want for citizens. The policymaker (parliament, central government, state legislature, state government) is accountable to the citizen. The provider organisation is responsible for delivering services. When the roles are vested in one and the same entity, accountability is limited and bureaucracies can become insular, and also tend to overlook shortcomings. When the policymaker takes on a role distinct from the provider, it is easier to say "While the problems are numerous and we can talk about them, just tell me the progress achieved in rates of immunisation".

2.2.72 The service delivery chain can be unbundled into three sets of actors: patients in clinics (as clients) who interact with doctors, nurses and pharmacists; the provider (doctors, nurses, pharmacists, chemists), and the policy maker. However, since the health service is being provided not through a direct transaction but through the government taking responsibility, we have the *"long route" of accountability* because the clients as citizens influence policy makers, who must, in turn influence providers. When relationships along this long route break down, service delivery fails (absentee doctors, equipment lying in disuse, missing drugs and medicines), and health outcomes are poor. Given these weaknesses in the long route of accountability, service outcomes can be improved by *strengthening the short route*, and *increasing the client's power over the provider*. Providers must agree to deliver a service, in return for being rewarded or penalized, and MOUs or contracts should be appropriately strengthened. Collaboration and partnership with civil society and the private sector is a specific recommendation of this Mid Term Appraisal. In several developed countries, the state was initially an independent outside monitor and regulator of private sector activities. The state has largely retained that independence as a monitor even though the same activities were assimilated in the public sector. In the National Health Service of the UK, government is the payor for health services, while the delivery of health care is implemented through a mix of private and public providers.

2.2.73 Typically, governments intervene to control communicable diseases, protect poor people from impoverishing health expenditures and disseminate information about home-based health care, immunisation, nutrition and HIV prevention practices. The central government and state government health systems provide services for each of these different activities. If the provider is to be distinct and separate from the policymaker, several options become available. For example, information about handwashing, exclusive breast-feeding, nutrition, HIV prevention can be delivered by eligible community based civil society groups, because service delivery for these items works best when reinforced by the community. Outreach services such as immunisation could be contracted out, but will be publicly financed. This suggestion is being made particularly, with reference to the Universal Immunisation Programme (UIP), India. This happens to be among the largest immunization programmes in the world in terms of number of beneficiaries, quantities of vaccine used, number of immunisation sessions organised and the geographical spread and diversity of areas covered. However, the outcomes are not commensurate with the scale of implementation. It is true that a Mid-Term Immunization Strengthening Plan has been drawn up by Ministry of Health and Family

Welfare, and prominent strategies include introduction of auto-disable (AD) syringes from 2005 onwards, vaccine delivery to immunisation sites in villages, sub-centres and urban areas, mobilisation of children by the accredited social health activist, and mobility support to the district immunization officer for supervision and monitoring. However, the Rapid Household Survey, conducted in 1998-99 and repeated in 2002-03 indicates a significant fall in full immunisations across the country from 54.2 per cent in 1998-99 to 48.2 per cent in 2002-03 (Table 2.2.26). Viewed against the crying need to save neonates and infants from dying, this decline in standards and outreach of routine immunisation is unacceptable.

Table 2.2.26
Full Immunisation under Universal Immunisation programme
(per cent)

	2002-03	1998-99
Uttar Pradesh	29.8	43.7
Andhra Pradesh	61.6	74.5
Assam	27.6	46.7
Haryana	57.9	66.0
Madhya Pradesh	34.0	48.4

Source: Rapid Household Survey (RHS, 2003)

Shortages of doctors, hospital beds and medical colleges

2.2.74 There is an acute shortage of specialist faculty in both government and private medical colleges. In response to the disease transition, we need to quickly scale up availability of additional and appropriate specialisation. The Medical Council of India and the state medical councils have been unable to ensure uniform standards of medical education. Fortunately, the complementary role of the public and private sectors in medical education has facilitated a significantly higher intake of young adults in medical colleges, for training as medical professionals. Of the 231 medical colleges, 126 are in the government sector. The combined capacity of both public sector and private sector medical colleges is 25,000 student admissions per year (18,000 seats in South India as against 7,000 in North India).

2.2.75 India needs to begin providing for a much larger number of medical colleges, with a corresponding significant increase in the number of faculty and physicians, to fully address the demand for training new recruits, teaching, augmenting inpatient hospital care and outpatient ambulatory care. The current health work force listed by Ministry of Health & Family Welfare is captured in Table 2.2.28.

2.2.76 The present doctor to population ratio at 1:1722 (for allopathic doctors) is not encouraging and the ratio of hospital beds to population at 1: 1370 is also adverse to the end user. Viewing India with comparator countries, in Table 2.2.29, we note that India has the lowest number of hospital beds per 1000 population.

2.2.77 In the circumstances, given the competing claims for inadequate financial resources at both central and state levels, it is unlikely that government alone can take care

Table 2.2.27
Infrastructure for professional training (medical and para-medical)

Institutions	Public Sector	Private Sector	Total
Medical Colleges	126	105	231
Dental Colleges	34	158	189
ISM & H Colleges	95	336	431
General Nursing Mid-wife training Schools	213	441	654

Source: Ministry of Health & Family Welfare

Table 2.2.28
Doctor, Nurses and Hospitals across India

Indicator and Measure	Numbers
Registered Doctors*	
Allopathic(2004)	6,39,729
AYUSH (2003) (Ayurveda, Yoga, Unani, Siddha and Homeopathy)	6,94,712
Numbers of doctors (Allopath+Ayush, public and private sectors)	13,34,441
Population per doctor(Allopathic)	1722
Population per doctor (all systems)(2004)	809**
Registered Nurses*	
Number of nurses (2003)	8,39,862
Population per nurse	1223
Registered Doctors:Nurse Ratio(2004)	1 : 1.4
Hospitals	
(government + private)	
Allopathy(2002)	15,393
AYUSH(2003)	3100
Total hospitals (Allopathy+AYUSH)	18,493
Population per hospital(Allopathy+AYUSH) (2004)	55,567
Hospital Beds	
(government +private)	
Allopathy(2002)	6,83,545
AYUSH (2003)	66,366
Total Beds (Allopathy+Ayush))	7,49,911
Population per hospital bed (Allopathy+AYUSH) (2004)	1370

Source: Health Information of India 2004, Central Bureau of Health Intelligence (CBHI), Ministry of HFW
Note: Government(including local bodies)
* Registered with Medical Council of India(Allopathy), Councils concerning AYUSH and Nursing.
** This statistic is encouraging. However, on account of fragmented management and non-sharing of appropriate skills and training with the practitioners of Indian systems of medicine, we have not facilitated their full participation in implementing national health and family welfare programmes.

of the needs for medical education to serve a population of 1.6 billion in 2050. We would need to leverage significant private investment in medical education to create higher capacity across the medical, nursing and the para-medical professions. Any collaboration would need to be implemented through a transparent and accountable system and this needs in depth examination, possibly by the Knowledge Commission.

2.2.78 Another aspect is that the distribution of medical colleges is skewed. The shortages of trained manpower in under-served states can

Table 2.2.29
Physicians and Hospital Beds

Name of Country	Physicians per 1000 population	Hospitals beds per 1000 population
India	1.3*	0.73*
China	1.7	2.4
Thailand	0.4	2.0
Malaysia	0.7	2.0
Brazil	1.3	3.1

World Development Report, 2004
* The figures for India have been estimated on the basis of the data provided by Ministry of Health in Table 2.2.27.

be fully addressed only through setting up medical colleges in these states (UP, Assam, Orissa, Rajasthan, MP, Chhattisgarh and Calcutta). Some medical colleges have poor utilisation of services, on account of sub-optimal location, vis a vis demand for services. An essentiality certificate from a joint representative committee comprising of the professional medical association, and government could be made mandatory, prior to setting up a new medical college, so as to plan for appropriate and optimal outreach. Better dispersion of medical colleges across needy states, and more rigorous regulation of standards in medical education needs early attention. The public and the private sectors need to jointly set up stringent entry norms for registration of medical practitioners every five years, with renewal being contingent upon attendance and completion of the requisite courses in Continuing Medical Education Programmes.

2.2.79 India is rapidly becoming a destination for students from across the world, seeking low cost medical education. The Knowledge Commission could examine some method of enabling non-resident and foreign students to compete for seats in government and private medical colleges through competitive examinations. The incoming revenues from these non-resident Indians and foreign students could then be deployed to cross-subsidise Indian students from economically weaker sections (EWS) to undertake medical education, and towards providing additional beds in teaching hospitals to support the minimal requirements for teaching. This will also enhance capacities for inpatient hospital care, to keep pace with increasing demand.

Absence of standards in both private and public provisioning of health care

2.2.80 Without a doubt, India needs a Public Health Development Authority to take on the innumerable tasks that will streamline oversight and regulation in provisioning of health care, to prescribe standards in both private and public provisioning of health care and to ensure the observance of minimal standards by all providers. This Mid Term Appraisal makes a specific recommendation in this respect.

Institutionalise collaboration for Research and Development

2.2.81 Typically, government has been unable to assign more than 1.5 per cent of Annual Plan allocations towards bio-medical research and development. There needs to be much greater partnership between medical education (the teaching faculty), R&D, and the pharmaceutical industry. Retention of specialist and other faculty across medical colleges could become contingent upon research contribution. The pharmaceutical industry may find it more cost effective to farm out R&D to medical colleges of repute, and this would in turn incentivise faculty in these medical colleges. As an illustration, a remarkable set of candidate

antimalarial drugs have been developed, using an age old Chinese herbal medicine, through a partnership between academia (international scientists) and major pharmaceutical companies. India should also tap substantial international funding for bio-medical research. The Knowledge Commission could examine modalities and mechanisms for institutionalising collaborations for Research & Development.

RECOMMENDATIONS OF THE MID TERM APPRAISAL

2.2.82 Against this background, the Mid-Term Appraisal suggests a way forward with some out-of-the-box interventions and initiatives, which take into account the various objectives spelt out in the National Common Minimum Programme (NCMP), especially the concern about the need to "pay attention to the poorer sections in the matter of health care". In this, the final Section of this Mid Term Review on the health sector, the following is suggested :

A. Implement a National Rural Health Mission

B. Implement a National Mission on Sanitation and Public Health

C. Provide access to maternity health insurance and community risk pooling

D. Systematise insurance at secondary health care levels through reform of the CGHS

E. Institutionalise public private partnerships in health care

F. Set up a Public Health Development Authority

G. Set up a National Authority for Drugs and Therapeutics

H. Deliver health information, education and products through the Indian postal network

I. The Way Forward

Implement a National Rural Health Mission

2.2.83 Government has launched, a seven year (2005-12), National Rural Health Mission (NRHM) and this is an opportunity to implement innovative convergences that will create competition among providers and enhance choices for consumers. The duration of the NRHM also coincides with the goal setting in respect of two monitorable targets of the Tenth Plan, on achieving by 2012, reductions in maternal mortality to 1 per 1000 live births and reductions in infant mortality to 28 per 1000 live births. In the circumstances, these Tenth Plan targets should be a primary focus of the NRHM, among several other important objectives. We recommend that the NRHM is mindful about incorporating the following initiatives:

1. Build upon the experience gained in Kerala, Tamilnadu, Sri Lanka and China to ensure the services of a skilled birth attendant at childbirth, both for home deliveries and in institutional settings. There have been earlier proposals in the Ministry of Health and Family Welfare to set up a cadre of skilled mid-wives. Government needs to quickly, within three months, bring out a paper on how skilled midwives will become the rule rather than the exception. Since home deliveries will remain the norm across many areas, government must provide skilled birth attendant where these are most needed. This alone will directly accelerate reductions in maternal and neonatal / infant mortality.
2. Implement the Tamil Nadu strategy through which close to 58 per cent of the health sub-centres are functioning round the clock. They are all equipped with appropriately trained and skilled personnel, together with the most commonly used medications like the ORS packets, bandages for first aid, paracetomols and many other items. Register every health sub-centre as a Rogi Kalyan Samiti and there is adequate precedent in Madhya Pradesh and other slater.
3. Appoint public health professionals to head primary health centres, where doctors are unwilling to work full-time. Public health professionals are trained to comprehend the backward

and forward linkages between prevention and mitigation of illness. Over 75 per cent of morbidity needs enlightened management, with interventions for prevention and mitigation. If public health professionals are not available in sufficient numbers, alternately, PHCs could be headed by a fully trained nurse clinician. Tamilnadu often posts three staff nurses in PHCs in lieu of one doctor. Register every PHC as a Rogi Kalyan Samiti.

4. Set up a 30-50 bedded community hospital for every 100,000 population, with a full complement of trained doctors and nurses at the apex of the primary health care system. Each community hospital should provide comprehensive emergency obstetric care together with an AYUSH unit and also include disease management, with a functioning referral system to higher facilities. These community hospitals may be registered as Rogi Kalyan Samitis.

5. Engage the excellent community based initiatives particularly across Maharashtra and many other states (with demonstrated, amazing success in lowering neonatal, infant and maternal mortality), to train the Accredited Social Health activist (ASHA). Department of Women and Child may like to examine if the AWW also needs refresher training, and both Ministries could collaborate in this respect. The key follow up here is the quality of orientation and training provided to the community health activist.

6. The community health activist must develop institutional linkages with the Aanganwadi Worker (AWW), the ANM, the nearest self help group (SHG), and the registered medical practitioner. This will serve to link households with authorised health care providers and will bring in some measure of accountability within the primary health care delivery system.

7. Modify the population-centric norms which continue to drive the provisioning of health infrastructure and replace these with a set of habitation based and community needs driven norms so that the planning and provisioning of health infrastructure and service delivery, is ab initio, more responsive to ground reality. This will ensure, for instance, that two ANMs (in lieu of one), would cater to a population of 5,000 in the plains and 3,000 in the hill areas. In Year One of the NRHM, such strengthening could commence in 30 per cent of the health sub-centres and appropriate funding committed.

8. Transfer supervision and oversight for primary health care to local elected governments, with appropriate administrative and financial delegation. This has no cost implications. During 2003-04, state panchayati raj ministers made 150 recommendations, urging, inter alia, that the devolution of functions, functionaries and finances should be routed through legislative framework or through executive orders of government. Ministry of Panchayati Raj has asked states and union territories to complete the mapping for different tiers of the panchayati raj institutions over the next three months, through district planning committees. At the local level, authority and resources need to come together to make the healthcare delivery effective. Panchayats and municipalities could have a significant role in the management of outcomes.

9. Communitise health related tasks to the extent feasible, as has been successfully attempted in Nagaland. The maintenance and management of health facilities is entrusted to the village community and very quickly, staff attendance improves, staff salaries are disbursed on time, medicines are available, and the health services provided respond to current needs of the community. This also enables

people to participate directly in ensuring "health for all".

10. Implement construction of additional health sub-centres with residential quarters for two ANMs through the Employment Guarantee Scheme. Alternately, state governments could avail loans from NABARD (Rural Infrastructure Development Fund) at low interest rates to rapidly complete construction of a large number of health facilities, as successfully demonstrated in Karnataka. In lieu of the State Public Works Departments typically constructing these buildings at higher expense for lower quality, resources could also be raised from HUDCO on terms and conditions applicable to low cost housing. Construction could also be entrusted to housing federations, with community involvement.

11. Include upfront, the prevention and control of HIV/ AIDS on the agenda of the National Rural Health Mission through the innumerable interventions suggested in the Mid Term Apprisal.

12. Dovetail the School Health Programme in all states with the NRHM through local bodies, to ensure that growing children are direct beneficiaries of appropriate health related interventions

13. Focus on disseminating health related information, education and communication through community computer and internet kiosks, as these are emerging as the preferred medium for bringing the benefits of information and communication technologies to rural communities. The National E-Governance Action Plan of Government of India places great emphasis on these kiosks as the main vehicle of delivering e-government services in rural areas. The NRHM may support bringing these kiosk services closer to habitations of vulnerable groups, and ensure appropriate and localised content as opposed to standardised content available on the web. Ministry of Health could also explore the feasibility of having one number dedicated for emergency health help across the nation, as is common in many countries, which could be accessed through the kiosks at village e - choupals.

14. Make mandatory for every public and private health facility, as a condition of the licence / grant of recognition by statutory authorities, free access for all BPL and low income groups, to a core package of basic health services consisting of public goods such as: immunisation, nutrition supplementation, family planning, maternity health checks, counseling and testing for HIV, TB and malaria, as well as dissemination of information, education and communication about, safe water, sanitation and hand wash. Treatment protocols issued by government should be binding on all public and private facilities. This mandatory requirement should be enforced by the central and state governments, and will serve to bring centre-stage, as well as strengthen, corporate social responsibility.

15. Utilise diverse channels (the postal network, the village kiosk, e-choupal, every retail outlet, barber, cobbler, dhobi and paanwala) alongwith networks of innumerable fast moving consumer goods to disseminate health related information and health products. In addition, make it the responsibility of every district magistrate to aggressively push the use of the condom for triple protection: to prevent the unwanted pregnancy, to prevent HIV and to prevent sexually transmitted disease. The public private collaborations used for this purpose in the past need to be repeated (cited in the suggestions listed for HIV/AIDS).

16. Increase investment and budgets for rigorous training at all levels, because the NRHM will need the back up of well-trained professionals and a functioning health system. The district health authorities must ensure that each

authorised health provider identified in the mapping exercise, has participated in the training prescribed and is complying with prescribed standards of health service delivery.

2.2.84 Integrate these initiatives with the NRHM during the remaining two years of the Tenth Plan to gain valuable experience, before the NRHM is more widely implemented.

Implement a National Mission on Sanitation and Public Health

2.2.85 The public health rating of a country is determined as much by its ability to treat disease and minimise high mortality, as also by its ability to prevent the onset of disease. Water-borne diseases like diarrhoea, typhoid, cholera and infectious hepatitis account for 80 per cent of India's health problems and can be addressed through a combination of health and non-health interventions, appropriately sequenced. Safe drinking water and sanitation are critical determinants which directly contribute nearly 50 per cent in reducing the burden of disease. Significant progress has been achieved in extending the availability of potable drinking water to rural and remote areas. By March 2004, 95 per cent of rural habitations had been fully covered with potable drinking water supply, 4.6 per cent are partially covered and 0.4 per cent not covered.

2.2.86 Many communicable diseases can be prevented by appropriate sanitation systems but access to sanitation facilities continues to be grossly inadequate. Proper drainage of dirty water, disposal of garbage, sewage, human and industrial wastes are pre-requisites for preventive health care. Census 2001 conveys that of the 200 million dwelling units across India, only some 40 million dwelling units have a toilet (sanitation facility) inside the house. Only 61 per cent households in urban

Box 2.2.1
Success stories relating to sanitation

On the occasion of the Nirmal Gram Puraskar Awards, 2005, President A P J Abdul Kalam cited several success stories of community and state efforts to address the unmet need for sanitation :

- Women living within a panchayat area in Cuddalore district, Tamil Nadu, acquired plumbing and masonry skills for constructing household toilets and began providing this skill on an entrepreneurial basis to neighbouring villages.
- In Kharodi village of Punjab, a non-resident Indian (NRI) from Canada has, with the help of the state government, laid an underground sewerage system with a stabilisation tank and activated sludge system. This has enabled the whole village to have toilets in individual households, schools, hospitals and public places.
- Under the Total Sanitation Programme, panchayat authorities and NGOs in the Gandhi Nagar Town panchayat in Vellore district, Tamil Nadu, have been able to segregate waste into organic and inorganic components. Self Help Groups (SHGs) have set up roadside dustbins which are regularly cleared. The drainage system in the village is cleared thrice a week. Sanitation faults are reported and mostly attended to on the same day. A village of 2,400 families generates 48 tonnes of garbage a year, which is now converted into manure and recyclable waste generating over Rs 3 lakh of revenue. Villagers pay Rs 10 a month per family for this service. This effort has also given employment to 36 people who are now paid employees of the Panchayat. Funds for their salaries are generated from the sale of manure and recyclable waste.

The Department of Drinking Water could promote such models in collaboration with the Ministry of Health.

areas and 17 per cent households in rural areas have access to improved sanitation. Even today, nearly 70 per cent of the population across the country has no option other than open air defecation, and this directly contributes to the high incidence of water-borne and parasitic diseases. There are 13 million dry latrines from where human excreta is removed by scavengers. Top priority needs to be accorded to improving sanitary conditions and ensuring a clean micro-environment at home and at the workplace, which must now include factories, coalmines, quarries and roads. The Total Sanitation Campaign aims to eliminate the practice of open defecation completely by 2012.

2.2.87 Implement a National Mission on Sanitation and Public Health, with the objective of building a safe hygienic toilet in every household, developing corresponding sewerage structures and enhancing awareness of good personal hygiene. This may be executed in mission-mode, through village panchayats jointly with civil society mobilised for this purpose, preferably by empowering women. Training programmes could be organised for instance, through the Environment Sanitation Institute, Ahmedabad and other appropriate institutions. The aim should be to provide all dwelling units with sanitation facilities by 2010, at the rate of 20 million dwelling units per year, with adequate water supply. Establish sewerage and land fill disposal systems for urban waste. Any comprehensive approach must also point in the direction of converting waste into wealth. The Mission on Sanitation and Public Health could attempt to make the village community dynamic, provide employment opportunities and also involve families and teachers in educating children from an early age to use sanitary facilities. Public toilets may be conveniently built, and made compulsory in the vicinity of panchayat bhawans, railway stations, bus stands, markets, and health centres. These should be operated preferably, by trained NGOs, on a pay and use basis.

2.2.88 Rural sanitation programmes typically impose one uniform design on users and this is neither acceptable nor feasible. Eligible families could be provided with several options to choose from, depending on their requirement and resources. Any programme of construction of toilets must be linked to IEC efforts relating to the health impact of unsanitary conditions and the significance of adhering to and maintaining sanitation standards. NGOs and civil society may be co-opted into this effort for a nation-wide campaign that will generate a demand for safe, hygienic toilets.

Provide access to maternity health insurance and community risk pooling

2.2.89 To address the health care needs of the poorest segments of society, and to ensure that frequent bouts of illness do not continually add to impoverishment, we need to introduce mechanisms for risk pooling. At present, no more than 11 per cent of the population are covered by some form of health insurance, which has so far excluded the poorest segments. The National Common Minimum Programme states that government should "introduce a national scheme for health insurance for poor families". *Two innovative health financing schemes at primary health levels, are proposed for introduction through the National Rural Health Mission.*

2.2.90 The Universal Health Insurance Scheme (UHI) for BPL populations launched in September, 2004, does not include coverage towards maternity care. Specifically to restore gender justice and address the unacceptably high maternal and infant mortality, this Mid Term Appraisal recommends a maternity health insurance scheme, and additionally, a community risk pooling initiative.

Maternity Health Insurance Scheme (MHIS)

2.2.91 A Maternity Health Insurance Scheme may be first implemented as an initiative across a few states during the National Rural Health Mission, prior to scaling up, nation wide. This scheme is premised on capitation based financing, where the provider is assured a fixed per capita payment in respect of all those who enrol for maternity care. All BPL pregnant women will be eligible to participate in the scheme, to be administered by the District

Health Board. The pregnant woman would register with the ANM, and simultaneously identify from a listing of diverse accredited providers, any institutional facility across the public or private sector, as provider during her pregnancy. The ANM will complete the ante-natal check in collaboration with the provider identified (hospital, nursing home, clinical facility or the public sector community health centre). The provider identified by the pregnant woman, would receive a standard fee (Rs.1200 per delivery, normal or otherwise), for the package of services contracted. The provider will undertake complete responsibility for institutional delivery including emergency obstetric care, post partum recovery and neonatal care for six weeks after child-birth. In other words, price barriers and costs of access to a qualified, accredited provider are eliminated for those who enrol in this scheme. The capitation fee (for the BPL population) will be borne by government This intervention will improve outcomes for maternal and infant mortality by ensuring that the complete cycle of maternity care in particular for the poor, is handled by a qualified institutional provider. From the point of view of government, this capitation based financing caps expenditures and shifts responsibility to the provider for service delivery. He has no incentive to over-prescribe, or over-medicate. On the contrary, the reputation of the provider is dependent upon good performance which will attract higher enrolment of patients.

2.2.92 It is estimated that 45 per cent of the 26 million deliveries taking place each year in India are from BPL households. Hence the annual cost of covering all BPL families in the MHIS, is roughly Rs.1500 crore, inclusive of a ten per cent administrative cost. If government introduces the MHIS in a few states, the initial expenditures will be much less, depending on the numbers of deliveries from BPL households. More specifically, this intervention will increase institutional deliveries and lower maternal mortality, empower women with improved access to reproductive health care, enable and facilitate women to adopt post partum terminal methods of family planning if they need to, stimulate development of accredited health infrastructure accessible in rural and remote areas, facilitate partnerships, and finally, also improve the responsiveness and accountability of public sector facilities.

2.2.93 The accreditation of institutional providers must be the responsibility of the District Health Board. Public sector hospitals would possibly need to introduce user fees to be eligible for accreditation, although this needs closer examination.

Community risk pooling, during illnesss

2.2.94 There is repeated evidence that nearly 70 per cent households in the poorest income quintile borrow money, or sell assets including stored food, to meet hospitalisation costs and, continually get further impoverished. Providing financial cover during hospitalisation at the grass-roots will have an immediate impact on alleviating indebtedness. Local governments could identify small risk pools for populations of up to 250 households and provide a revolving fund of Rs.1 lakh, to be managed by a consortium of self help groups (SHGs). This consortium would, whenever required, advance to needy households, a cash support of Rs.5000/-Rs.10,000 for hospitalisation, catastrophic illness and death. This will save households from immediate financial debt at the point of crisis, and they would repay this money at a modest interest rate within an appropriate time-frame so that the village health risk pool does not fall below Rs 1 lakh. Pilots may be undertaken for community risk pooling through the National Rural Health Mission.

2.2.95 SHGs are strong even in states like Bihar where, otherwise, the public health service delivery may be weak, and would welcome this initiative. This scheme will empower self help groups, enable households to gain access to micro-credit, and also recover from financial stress in the face of loss of earnings. Additionally it will significantly improve the outreach of government during major outbreaks of disease. This is one intervention for risk pooling that can commence immediately through the NRHM, with accountability to local elected governments, across states/union territories where SHGs are well-established.

Systematise insurance at secondary health care levels through reform of the Central Government Health Scheme (CGHS)

2.2.96 The Central Government Health Scheme (CGHS) is a contributory health scheme for central government employees, currently with 44 lakh beneficiaries. Recurring expenditures are incurred to stock and run a network of 250 CGHS clinics for participants, and provide general physician services, including free medicines and drugs. Initially costs were sought to be controlled by limiting the number and location of clinics and entitlements to treatment. Several reports have drawn attention to low satisfaction levels with CGHS, particularly on account of poor emergency services, non-availability of medicines, and inconvenient timings. Central government employees living in peri-urban areas are hardly able to avail of city based medical facilities on a routine basis. In an attempt to address some of these shortcomings, private hospitals were contracted three years ago (in addition to central government hospitals), to provide specialist health services. Purchase of drugs and medicines were permitted in the open market, in a deviation from traditional bulk procurement. Government expenditures on the CGHS have increased and risen to over Rs.500 crores per annum. The scheme has also spawned considerable infrastructure, including a cadre of medical and paramedical personnel.

2.2.97 It is time to restructure, reform and rejuvenate this contributory health scheme. Ministry of Health and Family Welfare is already examining the shortcomings reported, and could consider several options. Existing subscribers to the CGHS could exercise an option of continuing with the current arrangement, or alternately, subscribing to a new system developed within the CGHS. One option is to convert CGHS to a public sector provider of clinical health care for the general public, on payment for services, in competititon with other providers, public and private, at secondary levels of health care. Central government employees may be gradually shifted to a system of health insurance, through which they may access the CGHS or any other clinical health care provider of their choice. The direct budgetary support to the CGHS could be phased out to the health insurance system. The remaining two years of the Tenth Plan may be used to develop these options further, confer greater operational autonomy to the CGHS in preparation for its new role, and convert it into an appropriate organisational form, like a registered society.

Institutionalise public private partnerships in health care

2.2.98 Since government resources have been unable to maintain existing health systems, increase access to health services for those not covered by current systems, and improve the quality of care provided, government is no longer viewed as the necessary "engine of development", or the main provider and financer of health services. There is increasing consensus that it is neither feasible nor practicable for government alone to shoulder the entire responsibility of expanding coverage and outreach, and to be the payor and provider of diverse health care services. Moreover, the end users are seeking choices and options, over and above the public health delivery system. The co-existence of the public and private sectors in the health sector is not new. We have earlier acknowledged that mutual, solidarity driven, community based initiatives on health care need strengthening by targeting resources through elected local bodies to community and household levels. In the context of the Indian Systems of Medicine, this inter-dependence is centuries old. However, specific recognition of the role of private providers has been absent from health planning until recently. Eventually, the state needs to ensure that essential services are provided to poor people, whatever the public-private mix of finance and provisioning, so that resources are used as effectively, efficiently and equitably as possible.

2.2.99 The issue is no longer whether there should be private provision of health services. Since over 68 per cent of hospitals, 37 per cent of hospital beds and over 80 per cent of the provisioning of health care is attributed to the private sector, the private sector is beginning

to occupy centre-stage, by design or default. The private sector is increasingly, also a significant source of new investment (particularly across tertiary health care, pharmaceuticals and R&D). Given that the private sector is a predominant provider of services across the primary, secondary and tertiary levels, we need to ensure that people are not forced to switch from weak and inefficient public health services to expensive private provision, or even compelled to forgo health care entirely, except in life threatening situations, only to slide into severe debt. We can only ensure protection for people through institutionalizing appropriate collaboration, training, information and accreditation. Within a state-led health system, an overall vision of the public role of the private sector should guide and inform future planning of health care across the country. It is feasible to engage the private sector as an additional instrument, and partner for achieving shared public health outcomes. The public challenge is to capture the efficiency advantages of the private market while paying sufficient attention to equity and quality concerns to meet public performance criteria. In a "Report of the PPP Sub-Group on Social Sector" (November, 2004), the Planning Commission identified institutionalized public private partnerships being implemented in the health sector, particularly through the national disease control programmes and the reproductive and child health programme.

2.2.100 The *National Health Policy, 1983* encouraged government to enter into contractual arrangements with the private sector to augment providers and improve quality of care. The *National Health Policy, 2002* further endorsed and promoted the need to institutionalise partnerships with diverse providers to rapidly increase the supply of health services, expand coverage, improve technical quality of care at all levels, and control costs for users. Government has been facilitating the private sector through subsidies in major inputs like prime land at low cost and in terms of customs duty exemptions on import of equipment and drugs. Government justified this subsidy on account of the locational advantage, technological superiority and higher quality of health care by professionally qualified health providers that would become available to benefit BPL populations. Future MOUs between public and private partners need strengthening to safeguard public interest, and to more clearly define the role and responsibility of each partner in order to ensure easy access (fully paid for, in terms of the MOU) for BPL populations, and for low income groups in a graded fee structure. Though the potential arena of public-private partnerships is very wide, there are policy and regulatory hurdles that inhibit their realisation. A forum of representatives from government, the professional councils and industry representatives need to develop a generic framework for different categories of public-private partnerships (PPPs) at primary, secondary and tertiary levels of health care, to for improve cost-effectiveness, enhance quality and expand access. This basket of MOUs should implement collaboration between public-civil society-private sector entities, with a view to ensuring a seamless provisioning of health care from the rural habitat right up to the district hospital at secondary level, and the super-speciality hospital at tertiary level, when and where needed.

2.2.101 The private sector in India now recognizes the need for greater government oversight and involvement in quality assurance and regulation. The public sector is also discovering that it may not always be wholly cost-effective to extend itself without engaging diverse sectors, including the private sector, through multiple partnerships, at different levels of health care. Any partnership between the public and private sectors must be mindful of trade-offs in terms of welfare implications such as raising the costs of health care**.** State governments have engaged the private sector and civil society in innumerable ways, at tertiary, secondary and primary levels of health care such as handing over public health facilities to the private sector, and some to NGOs, for management (Karnataka, Gujarat, Tamilnadu), giving land to a major corporate cardiac care hospital within the premises of the state Medical College together with a grant to build and operate a cardiac speciality centre at tertiary levels (Chhattisgarh), outsourcing laboratory

and blood screening services to a private sector entity, at secondary and tertiary levels (Tripura), contracting private specialist services at primary levels (Himachal Pradesh, and other states) and granting financial autonomy to hospitals at secondary and tertiary levels (MP, Rajasthan, Andhra Pradesh, Punjab, Karnataka, Maharashtra and West Bengal). At primary health care levels, in addition to all of the above, Nagaland has successfully attempted a communitisation of health care which needs to be emulated across other states, possibly through the National Rural Health Mission and could promote appropriate targeting of resources to community and household levels. Through all these instances of public-private partnerships, the end users of services gain options and choices in terms of health care providers to choose from, and the providers themselves are more mindful of the quality of care they deliver.

2.2.102 Strategies to improve service access and product uptake, especially by the poor and other priority groups, usually require actions that will simultaneously stimulate demand and support provision. Ensuring quality and controlling costs are an integral part of this strategy. A very simple rule of thumb that could guide decision making in respect of public-private partnerships in the health sector is that *the degree of complexity of the product or service provided differentiates the strategies that ought to be adopted*. A simple product like the condom is distributed through the public distribution system (for triple protection against HIV/AIDS, the unwanted pregnancy and sexually transmitted disease). The public health delivery system needed additional spread and supplementation. In 1968-69, India commenced, now globally acclaimed, as the oldest national social marketing programme for condoms (other health products have since been added on). Social marketing organizations receive a public subsidy to lower prices to users and to cover wide programme costs. They engage the resources, techniques and distribution networks of the private commercial sector to make products with a public health benefit, more widely available and affordable. Accordingly, the condom is being marketed via innumerable public and private channels, and the costs to users are lower than market rates. People prefer to pay for the condom through the Social marketing of condoms is slowly overtaking the free supply of condoms, in the national programme route. When dealing with a more complex product or service, for instance TB diagnosis **or** voluntary counseling and testing for HIV, any provider, including the private sector provider requires a minimum level of knowledge and skill for more effective service delivery. Training and external monitoring would ensure appropriate quality of care. For more systematic oversight, public and private sector providers (PSPs) could be recruited into an accredited network, more commonly known as franchising. The PSPs would deliver services in accordance with the franchisor's specifications, and receive training and subsidized supplies in return for conforming to the standards. Pakistan has an accredited clinical network known as the "Green Star" in urban and peri-urban areas which enables women to access injectable contraceptives and other long lasting family planning methods. Indonesia and Bangladesh also have similar franchised networks which have retained significantly enhanced utilization of services. Finally, as the role of government shifts (at secondary and tertiary levels of health care), from provisioning to purchasing services from diverse providers (including both for-profit and not-for profit providers), government may contract services from public or private providers, through a competitive process. Any eventual MOU will specify the type of service, precise coverage, cost and quality. Essential health care packages in district level hospitals are contracted out in many countries of Asia, for example, Cambodia.

2.2.103 In the tertiary sector, a more active and strategic engagement with the private sector is called for, so that high investments by government do not crowd out its commitment towards primary health care. We have an enviable pool of talent in the private sector providing world class clinical and diagnostic services. We need to utilize these skills to put in place reliable health systems at tertiary levels, accessible to all. The private sector has gained a dominant presence in medical education and training, diagnostics and technology,

pharmaceutical manufacture and sale, hospital design, construction and management of ancillary services. For over half a century, government has designed, constructed, manned and run huge hospitals, which often continue to under-perform. Leveraging the public-private mix in augmenting tertiary level infrastructure would be particularly advantageous. Large public sector teaching hospitals now require huge initial capital investments (Rs 284/ crores to set up one teaching hospital, as per the costing for the six AIIMS like institutions, received from Ministry of Health & Family Welfare), with heavy recurring costs to run the hospital (possibly similar costs, amount, on an annual basis). Such institutions have so far been managed by Government of India through highly centralized budgets and norms. It may not be wholly feasible for government to continue to spread limited resources so thinly, on large hospitals, while struggling to complete the "unfinished agenda" at primary health levels such that government leaves little impact on either. At state levels, from Tamilnadu to Chhattisgarh, and Tripura to West Bengal there are several examples of viable public-private collaboration at tertiary levels. These partnerships serve to limit the role of government in the actual delivery of services. The central government could consider entering into joint venture agreements with the private corporate sector to set up the six Institutes of higher learning, proposed on par with the All India Institute of Medical Sciences (AIIMS). This would perhaps, rapidly expand the availability of large hospitals because if the capital and recurring costs are borne solely by government, then the limited resource base will stall early availability of all six hospitals as also possibly, the upgradation of another seven. Second, there is, globally, and also visible in South East Asia, a paradigm shift in the concept, design and implementation of hospital management. Any public private partnership in this programme would guide high quality tertiary care in the six AIIMS like institutions in keeping with this paradigm shift.

2.2.104 A primary objective is to enhance the ability of government to direct more public resources at primary health levels, in particular, towards activities for public health promotion and prevention, for which the private sector is mostly not available.

2.2.105 A second significant objective is to expand the role of the public sector towards providing oversight, corresponding to a shrinking of its role as producer of health services. Close involvement in quality assurance and regulation of the health sector will also require resources. The structure of the health industry, with a large number of formal and informal providers, diverse distribution, and low capital investment coupled with poor public records and registration, makes the regulatory role both difficult and expensive. We need a sensible mix of external regulation and professional self-regulation in consultation with the profession to ensure competence, quality and accountability.

Set up a Public Health Development Authority (PHDA)

2.2.106 Diverse support systems which do not in themselves provide health care services, may nevertheless greatly improve the cost-effectiveness, coverage, outreach, and quality of service provision, through the public, civil society, or private sectors. The health sector is performing sub-optimally, and performance will remain stymied in the absence of appropriate governance and regulation, particularly directed towards training, information dissemination and accreditation. Some interventions in this respect are suggested below:

Set up a Public Health Development Authority (PHDA) with a corpus of Rs.500 crores, to implement the following tasks:

Prescribe standards for quality assurance in healthcare

2.2.107 In the sector of health care, there are no widely accepted or prescribed regulatory frameworks, treatment protocols, minimum standards, performance benchmarks, and standardisation of accounting and reporting formats and procedures. There is limited effort to develop organisational capacity or to promote the ability to negotiate contracts and enforce these through increased use of information technology.

2.2.108 Government needs to set standards for quality assurance in healthcare, and then make registration of all health care facilities mandatory (inclusive of diagnostic centres). A potential high impact initiative is to define performance standards for accreditation of health care facilities.

2.2.109 Quality standards may be made mandatory for all public and private health care facilities. The Ministry of Health and Family Welfare could develop consensus over performance standards through widespread consultations with stakeholders, including state governments, professional medical associations, apex industry associations, CII, FICCI, the Medical Council of India and others. A Task Force for developing accreditation standards for health care organisations, constituted by the Confederation of Indian Industry (CII) and the Indian Healthcare Federation, has completed a preliminary draft of standards and norms for accreditation. On this basis, the Quality Council of India has proposed the setting up of a National Accreditation Board for Healthcare Organisations. This could well become a starting point for commencing the dialogue.

2.2.110 Public information campaigns across the print and electronic media should be launched to increase awareness among consumers about the certification programme. NGOs could be used to spread awareness at community levels. A sensitive programme needs to be launched to make health providers fully aware of clearly defined mechanisms to get certification.

2.2.111 These standards may be legislated for all medical establishments, with prohibitive penalties for non-compliance, and enforced by statutory bodies at state levels, in partnership with professional medical associations.

2.2.112 Setting standards for healthcare facilities will improve the quality of care for patients, create healthy competition among providers, and boost consumer confidence.

Develop national practice guidelines and consumer information

2.2.113 Treatment protocols, driven by evidence-based medicine, rational use of drugs and cost effective care will promote and sustain a cost-effective health system. Treatment protocols will contribute to better management of health care institutions and improve doctor-patient relationships. The National Health Service of the United Kingdom has a wealth of information on basic, palliative and emergency care for the most common ailments, available on their web site. Without necessarily re-inventing the wheel, India could utilise these efforts as a basis for similarly developing its own national practice guidelines and treatment protocols. The PHDA may need to incrementally support a number of practice guideline development teams, identifiable in consultation with the ICMR and other institutions. Placing this information in the public domain is important for consumer information.

Reform professional councils

2.2.114 Effective regulation of professional practice or standards is crucial to deal with the problem of asymmetry of information between providers and consumers of health care. People need the assurance that a health care provider has the required professional competence and is bound by an enforceable professional code to act strictly in good faith and in the interest of the patient. Regulation of medical and other professions is a subject in the Concurrent List of the Constitution of India . The Ministry of Health and Family Welfare must pro-actively steer the regulation of medical and allied health professions.

2.2.115 Several professional councils in the health sector, including the Medical Council of India, the Indian Nursing Council, the Dental Council, the Pharmacy Council and the Central Councils of Indian Medicine and Homeopathy must ensure that

- new entrants to the profession have the requisite training and demonstrated professional competence;
- practising professionals are in good standing; and that

- people have access to relevant information about health professionals in order to make informed choices.

2.2.115.1 Unfortunately, the different professional councils have not been able to always enforce observance of standards or discipline among their members. Institutional mechanisms of transparency, consumer feedback, and redressal of grievances are poorly developed or non-existent. The constitution of all the professional councils, including the Medical Council of India, needs to be re-examined. More diverse representation from among a wide array of provider constituencies needs to be brought on board. Registration fees should be increased and so should the penalties for non-compliance with regulations. Reform measures should include (a) improved accessibility to professional registers, using the full range of technologically feasible access solutions, and widely dispersed access points (b) installation of mechanisms for periodical review of professional standing, and (c) appropriate mechanisms to deal with professional misconduct

2.2.116 The Ministry of Health and Family Welfare may like to concretise suggestions and current thinking about setting up a Medical Grants Commission. The Medical Council of India and the State Medical Councils may also be consulted.

Build capacity in public health

2.2.117 The complex interplay of the many determinants of health call for inter-disciplinary and multi-disciplinary skills for comprehending emerging public health problems, as well as for the design and implementation of public health interventions. Availability of medical and paramedical professionals is a necessary but not sufficient condition for effective health care service delivery. While innumerable medical and paramedical professionals per 100,000 population may be required, the crucial role of public health in relation to health sector reform needs recognition.

2.2.118 In India, the major thrust in health manpower planning has so far been on medical and paramedical education. Lack of well trained public health professionals is not recognized as a critical bottleneck for utilization of the large investments made in public health infrastructure and further development of the health system. The Expert Committee on Public Health Systems, 1996, constituted by Government of India, emphasised the need for public health skills at district levels to provide the interface between surveillance and management of disease control programmes on the one hand, while attending to the causes and mitigation of high IMR, U5MR and MMR.

2.2.119 Some efforts have been made, but poor spread and limited funding has not produced results on a scale matching our need for professional public health manpower. Many developed countries addressed this problem by educating and training a pool of public health managers in world-class schools of public health, within an interdisciplinary and multidisciplinary curriculum. One way to increase the profile and, therefore, recruitment to public health practice in India would be to strengthen collaboration between existing public health institutions and prestigious organisations overseas (including international centres of public health), so that Indian institutions begin to develop as institutes of excellence, preferably in a regionally balanced manner. Existing public health institutions need international collaboration to blossom as institutes of excellence.

2.2.120 Grass roots efforts in the nonprofit sector have spawned several health systems research, training, and consultancy organizations in the country. Institutions set up by the voluntary sector with a good track record and demonstrated potential for innovative programmes, could be supported in respect of core faculty, land, and capital grants. The Planning Commission has accorded "in principle" approval to the setting up of a Public Health Foundation, and this agenda should be carried forward.

2.2.121 In the meanwhile, some action could be initiated to strengthen the visibility and availability of public health personnel. These are:

- Utilise the community needs assessment approach in the NRHM to genuinely promote decentralised planning for effective public health plans (village levels upwards), based on local epidemiological priorities as opposed to solely targeting the achievement of centrally driven programmes.
- Rotate the public health personnel between the Departments of Preventive and Social Medicine in medical colleges, secretariat assignments at state and central levels and also in field assignments at community hospitals and primary health centres. This will loosen up the current rigid structure between the secretariat and the field. Participants will benefit with cross-fertilisation between research skills, the pressing what practical needs of populations at and below district levels, and the compulsions of administration and decision making in the secretariat .
- Strengthen the capacity of Departments of Preventive and Social Medicine in at least four medical colleges per region, to enhance their ability to train more postgraduates in public health. Until appropriate qualified public health professionals are available, general category health professionals may be trained in health services administration, management and epidemiology.
- Incentivise, as an interim measure, at least three medical officers from each district across the country to avail of certified courses in public health run by any of several institutions such as Sree Chitra Tirunal Institute for Medical Sciences and Technology, Kerala; School of Medical Education Kottayam; Indian Institute of Health Management and Research, Jaipur; National Institute of Health and Family Welfare, New Delhi, and any others similarly identified. Policies and programmes in education, nutrition, drinking water, sanitation, housing, industry and public works have an impact on health and these linkages should be incorporated into the curriculum at these institutions
- (v) The PHDA could motivate implementation of a collaboration between Ministry of Health & Family Welfare and Ministry of Information Technology and the industry to define the IT infrastructure necessary at the primary, secondary and tertiary levels of health care, with a view to expanding access and improving quality of care.
- (vi) Institutionalise the role of telemedicine in the provision of health care, through ensuring satellite linkages of major centres of health care with distant locations can augment services in a big way, without any unnecessary additional burden of manpower and infrastructure (except for installation of the facility). The functions of teleconsultation, telepathology, teleradiology, remote ECG, remote ICU management and other innovative ideas is the need of the hour. ISRO could play a major role in providing linkages and collaboration to eligible willing partners. Tele-medicine can enhance the quality of medical care for the vast majority only when the first level of primary care is fully functional, we need to improve the public and private tracks for health care through training, public information and accreditation.

Set up a National Authority for Drugs and Therapeutics

2.2.122 The National Common Programme states "Take all steps to ensure availability of life saving drugs at reasonable prices. Re-examine the feasibility of reviving public sector units set up for the manufacture of bulk drugs"

2.2.123 The J.L. Haathi Committee, 1975 suggested an autonomus National Authority for Drugs that would take over all drug related functions currently divided between the Ministry of Chemicals and Fertilizers, and of Health & Family Welfare, and have jurisdiction over drug industry licensing,

imports, exports, technological development, manufacture, sale, monitoring of the pricing, availability and quality control of drugs and medicines. The Drug Policy announced in 1994 confined the role of a National Drug Authority (NDA) to the regulatory functions performed by the Central Drugs Standard Control Organisation (CDSCO) prescribing standards, enforcing quality control, and promoting rational drug use i.e. the functions assigned to MoHFW. This recommendation in respect of the National Drug Authority was dropped in the Pharmaceutical Policy, 2002, formulated by the Ministry of Chemicals and Fertilizers.

2.2.124 States are empowered to license persons for the manufacture and sale of any drug. Sometimes, states license irrational Fixed Dose Combinations, which are allowed so long as the constituents are displayed on the label of the container, without necessarily always examining all aspects of safety and efficacy. As a result, ineffective drugs manufactured in one State/UT can be sold in other parts of the country.

2.2.125 Ministry of Health & Family Welfare constituted in 2003, the Dr. R.A. Mashelkar Committee to examine all aspects of the drug regulatory infrastructure, including the problem of spurious and counterfeit drugs. The Mashelkar Committee enhanced the penalty for sale and manufacture of spurious drugs from life imprisonment to capital punishment and the Drugs and Cosmetics Act, 1940 has been appropriately amended. The Mashelkar Committee supported the Haathi Committee recommendation in respect of setting up a National Authority for Drugs.

2.2.126 Currently, the National Pharmaceutical Pricing Authority (NPPA) created under a Drug (Pricing Control) Order, 1995 under the aegis of the Ministry of Chemicals, administers the pricing of scheduled drugs and their formulations; monitors the prices of non-scheduled drugs and oversees the availability of drugs. The NPPA is somewhat handicapped by the absence of a fully accountable field organisation, which lies with the Ministry of Health (viz. the establishment of the Drug Controller General of India). The NPPA does not have authority commensurate with the responsibility entrusted to it.

2.2.127 To address these problems, the Mid Term Appraisal recommends the following:

(i) Create an independent National Authority on Drugs and Therapeutics (NADT) with sole jurisdiction over licensing, manufacture, sale, pricing, and quality control of drugs and medicines.

(ii) Levy a small cess on the manufacture and import of pharmaceuticals, to be collected together with excise and customs duties, for example, 1 percent of the value of bulk drugs and formulations manufactured in India; and 1 percent of the CIF value of imports of bulk drugs, intermediaries and formulations, etc. The cess will provide resources for a National Drug Fund (NDF) which could (i) support the operations of a National Authority on Drugs and Therapeutics (NADT), and (ii) subsidize R&D by the Indian pharmaceutical industry and government, on drugs for some widely prevalent health conditions, for example, TB, vector borne diseases like malaria. The detailed TORs for the NADT need to be developed.

(iii) Alternately, provide a corpus of funds for an autonomous NADT, say Rs.400 crores. The Drugs and Cosmetics Act, 1940 would need to be amended, to give effect to these recommendations.

2.2.128 Additionally, the central government should continue to fund state governments for the next ten years to strengthen their supervisory and regulatory capacity. Drug inspectorates need enhanced capacities which may be built, inter alia, through constant training for higher performance. Central assistance towards salaries could be considered on a sliding scale during this period. The small scale industries, in particular, require support for establishing facilities (and upgrading existing facilities) to include good manufacturing practices (made compulsory under the Drugs and Cosmetics act by amending Schedule M).

2.2.129 State governments also need assistance to set up public procurement systems on the lines of the Tamil Nadu Medical and Supplies Corporation. We need to examine the Rajasthan Model of Medicare Societies for mass procurement, and making medicines and equipment available to hospitals, sometimes over 50 per cent cheaper than the market rates. A similar system has been successfully attempted in the National Capital of Delhi. The Rajasthan model requires negligile assistance from Government. A cursory analysis of drug prices indicates that publicly procured drugs *are cheaper* by a fraction ranging from 100 per cent to 500 per cent. Assuring regular supply of drugs in public facilities (not achieved so far, across the board), would in itself, improve utilisation of public sector services, and reduce out of pocket expenditures quite significantly, since a significant portion of expenditures by the poor is on the purchase of drugs and medicines.

Deliver Health Information, Education and Products through the Indian postal network

2.2.130 When thinking about health sector solutions, one area of concern is the need to use public information more strategically to empower consumers of health care to become more mindful of their own health care. A better educated and empowered public needs to become a force for higher standards across both the public and private sectors. A number of states are making available standards for procedures and pricing, patients' rights and responsibilities at health facilities in an available initial effort at improving public accountability in public facilities. Panchayati Raj Institutions are beginning, in some places, to hold health facilities accountable in terms of improving clinic hours, reducing staff absenteeism and organising patient transport. The Ministry of Health and Family Welfare and the Department of Women and Child and some states are beginning to use public health and nutrition information more strategically and are moving beyond dissemination of messages to raising awareness and concentrating on changing behaviours to improve health.

2.2.131 Reaching across to communities and household levels with health information, education and products is a challenge. The public and private sectors continue to disseminate health information, education and products through the print and electronic media, internet and telemedicine. The Mid Term Appraisal draws attention to the Indian postal network as an important channel for communication and dissemination of health information and education to access household levels in remote rural areas, with the possible inclusion of products as well.

2.2.132 The unparalleled reach and connectivity of the postal network, comprising over 1,55,000 post offices of which 89 per cent are in the rural areas should be utilised to disseminate health information and education, as also to disburse health products. 83 per cent of this postal network is manned by employees who are residents of the village in which the post office is located and who provide postal services for three to five hours every day. We need to utilise and build upon the amazing credibility and access that postal employees enjoy within communities and households.

2.2.133 The Indian postal network has several unique advantages in terms of reach and credibility:

- delivery at the doorstep of any address anywhere in the country;
- outreach in any given, most remote and least accessible part of the country;
- can transmit mail, funds and products to and from any point in the network;
- is backed by an intimate understanding of the local environment through its employees;
- enables the retailing of products and information to household levels and can be utilised for collection of essential information (such as births, deaths, illness, pregnancy), which, in turn, is invaluable for targeting appropriate health interventions at household levels.

Upgradation of this capability through e-services, like e-post, would combine the physical connectivity of the postal network

with the electronic connectivity through 650 Head Post Offices across the country.

2.2.134 The Department of Post is also now ready to leverage and optimise this valuable resource to generate revenues to strengthen its Universal Service Obligations.

The health sector could utilise the Indian postal network as a most valuable and cost-effective channel for disseminating health Information, Education and Communication (IEC), in diverse languages, to access household levels and to disburse products The East India Company is known to have mailed spices and chillies to deficient areas across the country, through the Indian postal network. It could be life saving for BPL households to receive ORS packets, condoms, and medication for burns and snake bites.

THE WAY FORWARD

Interventions recommended for early attention

1. Augment resources for health. If health is a vital dimension of social justice, make an exception for the health sector and treat external grant money (with zero debt burden) as an additionality to the budget. The absence of budgetary constraints will facilitate early availability of grant funding for disease control programmes (HIV/AIDS, TB, Malaria) and for neonatal, infant, and maternal survival. This may well make all the difference.
2. While implementing the National Rural Health Mission (NRHM), focus on the monitorable targets of the Tenth Plan (accelerate reductions in maternal and infant mortality), and develop a functioning primary health care system, from the habitat to community and district hospital levels, to address the unmet need for critical health care, particularly among the poorest segments of the population.
3. Introduce a cadre of skilled birth attendants based upon learning from Kerala, Tamilnadu, Sri Lanka and China. Operationalise health sub-centres and primary health centers to function 24 hours, as in Tamilnadu. Orient, train and co-opt practitioners of Indian systems of medicine to address national priorities across public health programmes, at sub-centre, PHC and CHC levels. Set up a 30-50 bedded functioning community hospitals for every 100,000 population, to provide curative care. The community hospital will strengthen supervision over the primary health system and will take comprehensive health services closer to the people. Every health sub-centre, primary health centre and the community hospital may be registered as Rogi Kalyan Samitis.
4. Map the nearly 600 districts across the country using, inter alia, geographical mapping systems to identify existing health providers (all systems), register each health provider and bring those found eligible within an accredited network. Co-opt each health provider in a rigorous training regimen in respect of national health goals and priorities, disseminate health policies and guidelines and provide updation on public health interventions and treatment protocols.
5. Include the prevention, care and support of HIV/AIDS squarely within the National Rural Health Mission. Integrate the National AIDS Control Programme with primary health care

(as already achieved with other national disease control programmes like TB and Malaria) and also with the reproductive health programme so that the interventions and messaging on HIV prevention and care reach communities and household levels. Aim to step up treatment for AIDS over the next 12 months and place 25,000 AIDS patients on anti-retroviral treatment by March 2006.

6. Sanitation is a crucial, currently under-provided, determinant of health status of a population and could be instrumental in reducing disease burden up to nearly 50 per cent . Implement a National Mission on Sanitation and Public Health (NMSPH) to provide toilets in 100 million households by 2010, at the rate of 20 million households per year. The NMSPH may be executed by village panchayats jointly with civil society mobilized for this task. Dovetail the Total Sanitation Campaign with the NRHM.
7. Introduce a maternity health insurance scheme in the NRHM, to increase institutional deliveries, achieve reductions in maternal and infant mortality, stimulate the development of accreditation systems across rural and urban India, institutionalise multiple partnerships and contribute to the development of sound, inclusive referral systems.
8. Introduce small risk pools led by a consortium of self help groups, to administer financial help to needy households at village levels, in the event of hospitalisation and death.
9. Reform the CGHS into a social security and health insurance scheme, and include an accredited panel of diverse health care providers, to cover a wide range of health needs.
10. Develop a basket of MOUs for carrying forward multiple partnerships at primary, secondary and tertiary levels so that government organizes a seamless provisioning of health care from the habitat right up to the district, secondary and tertiary levels of health care, when and where needed. Illustrative terms of reference for the Forum on Partnerships for health care are:
    - Identify potential areas for PPP in the health sector
    - Develop specific implementation models in each potential area for civil society and private sector partnership
    - Develop contracts for each model, specifying deliverables, monitoring mechanisms, basis and terms of payment, dispute settlement, bidding processes, and selection parameters.

Interventions recommended for implementation during the Eleventh Plan (with preparatory work to commence now)

1. Launch a "Sarwa Swasthya Abhiyan" in a manner similar to the "Sarwa Shiksha Abhiyan", launched in 2001. Augment financial resources for health by accessing the WB IDA credit for the "Sarwa Swasthya Abhiyan".
2. Set up a National Authority for Drugs and Therapeutics (NADT) and ensure integrated planning to monitor the pricing, quality control and availability of drugs and medicines, to promote the rational use of drugs, to streamline the manufacture of critical bulk drugs and combat the problem of counterfeit and spurious drugs. This would reconcile the interest of both industry and consumers. Government could

consider levying a 1 per cent cess on the manufacture and import of pharmaceuticals to be collected along with customs and excise duties in order to mobilise resources to administer the NADT.

3. Set up a Public Health Development Authority (PHDA) with a corpus of Rs.500 crores, to set standards for quality assurance in health care; develop and disseminate national practice guidelines and consumer information; reform professional councils; build capacity in public health and develop the Information Technology Infrastructure for Health. This will boost consumer confidence, curb malpractices, and create an ethical environment for generating more appropriate health care delivery across the country.