



सत्यमेव जयते

ANNUAL REPORT

to the

PEOPLE

on Health

**Government of India
Ministry of Health and Family Welfare**

September 2010

We present to the People of India the First Annual Report on Health with the objective to have discussions and debate on the health sector and the challenges we face in meeting the health needs of the people. The report examines the path travelled, the efforts that are underway and the challenges before us in promotion of health and in the organization, financing and governance of health services. We solicit valuable comments and suggestion from the people on the issues highlighted in the report.

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EXECUTIVE SUMMARY

The Report to the People on Health examines the progress made in the health sector, identifies the constraints in providing universal access and provides options and future strategies. In terms of life expectancy, child survival and maternal mortality, India's performance has improved steadily. Life expectancy is now 63.5 years, infant mortality rate is now 53 per 1000 live births, maternal mortality ratio is down to 254 per lakh live births and total fertility rate has declined to 2.6. However there are wide divergences in the achievements across states. There are also inequities based on rural urban divides, gender imbalances and caste patterns.

The National Rural Health Mission (NRHM) launched by the Hon'ble Prime Minister on 12th April 2005 throughout the country with special focus on 18 states, including eight Empowered Action Group (EAG) states, the North-Eastern states, Jammu & Kashmir and Himachal Pradesh seeks to provide accessible, affordable and quality health care services to rural population, especially the vulnerable sections. The NRHM operates as an omnibus broadband programme by integrating all vertical health programmes of the Departments of Health and Family Welfare including Reproductive & Child Health Programme and various diseases control Programmes. The NRHM has emerged as a major financing and health sector reform strategy to strengthen States Health systems. The NRHM has been successful in putting in place largely voluntary community health workers in the programme, which has contributed in a major way to improved utilisation of health facilities and increased health awareness. NRHM has also contributed by increasing the human resources in the public health sector, by up-gradation of health facilities and their flexible financing, and by professionalization of health management. The current policy shift is towards addressing inequities, though a special focus on inaccessible and difficult areas and poor performing districts. This requires also improving the Health Management Information System, an expansion of NGO participation, a greater engagement with the private sector to harness their resources for public health goals, and a greater emphasis on the role of the public sector in the social protection for the poor.

The Reproductive and Child Health Programme (RCH), under the umbrella of NRHM, addresses the issue of reduction of Infant Mortality Rate, Maternal Mortality Ratio and Total Fertility Rate through a range of initiatives. The most important of these is the Janani Suraksha Yojana, which has led to a huge increase in institutional deliveries within just four years, the number of beneficiaries rising from 7.39 lakhs per year in 2005-06 to about 1 crore in 2009-10. Massive training of ANMs and nurses for safe delivery and management of sick children have also helped in a major way. In parallel to these efforts the up gradation of health facilities to provide emergency obstetric care and to improve access to skilled birth attendants made a significant difference to health outcomes. It is proposed to further accelerate achievement of RCH goals by giving focus to 235 poor performing districts, differential financing based on the performance, and a thrust to improve quality of care through external certification of facilities for quality of care provided. In child health, the major strategies proposed are inter-sectoral interventions against

child malnutrition, providing community level care for new born and sick children and strengthening facilities to provide institutional care for sick children. Emphasis on access to safe drinking water, sanitation and nutrition is also being underscored.

Disease Control Programmes have also shown considerable improvements. Polio is near elimination and diseases like Tuberculosis, Neonatal Tetanus, Measles and even HIV have shown decreasing trends. However, Malaria continues to be a challenge. A number of newly emerging diseases like H1N1 have made it essential for us to strengthen surveillance and epidemic response capacities.

The crisis in unavailability of skilled human resources for the health sector has been addressed through the rapid expansion of medical education in the country. Under NRHM, the center has financed the addition of over one lakh skilled health care providers to the public health work force. But still much more needs to be done in this direction. In addition, we need to consider a model of Primary Health Care where many of the health services would be provided by the locally selected and adequately trained health care providers with medical doctors contributing largely to more specialised care. Likewise human resources are being augmented by relaxing several norms which were restricting the supply side. However, much more need to be done in addressing the issues related to availability and quality of human resources. Government is also considering the introduction of an undergraduate programme, to be taught in district hospitals, in Rural Health Care, to produce trained medical personnel for posting at Sub-centres, the lowest tier in the health delivery system. It is proposed to set-up a National Council for Human Resources in Health, as an overarching regulatory body. The Task-force set up for this purpose has submitted its report which is being examined in consultation with the State Governments.

The Union Health Budget has increased from Rs. 8000 crore in 2004-05 to over Rs. 21000 crore now. State Health expenditures have also shown higher growth rates in the NRHM period as compared to pre-NRHM period. The challenge now is to increase absorption of funds made available, improve efficiency in the use of these funds, while simultaneously securing greater allocation of funds to the health sector both at the Central and State level.

In the concluding section of the Report, those challenges and policy options are outlined which require a national consensus for increasing public investment in health and universal access to services. These are issues that will determine the nature of the health system tomorrow.

Major achievements in the past year are as follows.

MAJOR ACHIEVEMENTS IN THE PAST ONE YEAR (JUNE 2009 TO MAY 2010)

NATIONAL RURAL HEALTH MISSION

- Large number of medical and paramedical staff has been taken on contract to augment the human resources. During the year 2009-10, about 2475 MBBS doctors, 160 specialists, 7136 ANMs, 2847 staff nurses, 2368 AYUSH doctors and 2184 AYUSH paramedics were appointed.
- Mobile Medical Units increased to 363 districts in 2009-10 from 310 in 2008-09 to provide diagnostic and outpatient care closer to hamlets and villages in remote areas.
- About 50,000 Village Health and Sanitation Committees (VHSCs) set up.
- Under National Programme for Control of Blindness, number of cataract operation performed have registered a significant increase from about 22 lakh operations in 2007-08 to 59 Lakh cataract operations in 2009-10.

The Reproductive and Child Health Programme and National Disease Control Programmes are components of NRHM and their achievement is as under:

REPRODUCTIVE AND CHILD HEALTH

- Under Navjaat Shishu Suraksha Karyakram (NSSK-New born care programme) launched on 15th of September 2009, district level trainers have been developed for all the erstwhile EAG States and Jammu & Kashmir, while State level trainers have been developed in Non EAG States. 1400 trainers have already been trained.
- Under Janani Suraksha Yojana (JSY), a safe motherhood intervention for promoting institutional delivery, the number of beneficiaries increased from 7.39 lakh in 2005-06 to about 1 crore in 2009-10, registering an increase of 10 lakh during 2009-10.
- For the first time, Bivalent Polio Vaccine for 2 wild polio virus (P1 and P3) has been introduced in the immunisation programme in January 2010.
- To obtain accurate data from across the country, a system for name based tracking of pregnant women and children for Ante-Natal Care and immunisation is being put in place. The tracking system will also capture the contact numbers of the beneficiaries and the health providers. This will help national monitoring of the health status of each pregnant women and infants / children across the country. A help desk/call-centre is also being established to randomly cross-check the health services delivered to these mothers and children.
- For the first time, an Annual Health Survey has been launched to provide data on key health indicators like the Total Fertility Rate (TFR), Crude Birth and Death Rates, Infant Mortality Rate (IMR), etc. at the district level and Maternal Mortality Rate (MMR) at the regional level. The survey is being conducted in collaboration with the Registrar General of India and has been launched in the 284 districts of 9 States, namely, Bihar, Jharkhand, Madhya Pradesh,

Chhattisgarh, Uttar Pradesh, Uttarakhand, Orissa, Rajasthan and Assam. A proposal for estimation of anaemia, malnutrition, hypertension, diabetes, testing of iodine in salt used by households has also been approved.

COMMUNICABLE DISEASE CONTROL AND PREVENTION

- For the first time, under the National Vector Borne Disease Control Programme (NVBDCP), 2.23 million Long Lasting Insecticidal Nets (LLINs) distributed in 2009-10 in highly endemic malaria states, Orissa, Assam, West Bengal and Chhattisgarh.
- For the first time in the country, National Sample Survey to estimate burden of Leprosy is being taken up.
- DOTS-Plus programme for management of Multi Drug Resistant (MDR)-Tuberculosis (TB) was initiated in 4 more states bringing up the total to 10 States.
- Global Fund (GFATM) has granted an amount of US \$ 100 million (approx.) for malaria control and an amount of US \$ 200 million (approx.) for TB control.
- Up gradation of National Centre for Disease Control (NCDC) as Centre of Excellence of Public Health has been taken up
- During the year 2009-10, under the National Aids Control Programme, an additional 4 district level blood banks and 28 blood component separation units have been established and over 60,000 blood donation camps organised. The free Anti Retroviral Treatment (ART) programme scaled up to 269 centres, and 315,640 patients were receiving free ART as of March, 2010. Second line ART initiated in Centres of Excellence and more than 1100 patients enrolled.
- State of art Blood Banks are being set up in four Metropolitan cities of New Delhi, Kolkata, Mumbai and Chennai at an estimated cost of Rs. 468 crore.
- State of art Plasma Fractionation centre is being set up in Chennai at a cost of Rs. 250 crore to produce blood components currently being imported.
- To create awareness about AIDS, second phase of specifically designed exhibition train, red ribbon express was launched on 1st Dec. 2009 to cover 152 stations in 22 states during its 1 year journey.

Revival of vaccine manufacturing units in public sector: Suspension of licences of the three public sector vaccine manufacturing units viz. Central Research Institute (CRI), Kasauli, Pasteur Institute of India, Coonoor and BCG Vaccine Laboratory, Guindy was revoked on 26.02.2010 enabling them to resume production in the larger public interest of vaccine security in the country. CRI, Kasauli has already started production of Diphtheria, Pertusis and Tetanus Toxide (DPT) vaccine from April 2010.

Controlling the H1N1 pandemic

- Over one crore passengers were screened at entry points at 22 international airports and sea ports.

- Facility for laboratory testing of clinical samples for H1N1 and other Influenza increased from 2 to 45.
- 40 million capsules of Oseltamivir (anti viral drug) stockpiled of which 21 million have been given to the States/UTs both for preventive chemoprophylaxis and treatment of H1N1 cases. 1.5 million doses of vaccine have been imported and health care workers are being vaccinated across the country.
- Dedicated website: <http://mohfw-h1n1.nic.in> set up to keep entire information in the public domain for transparency.

NON-COMMUNICABLE DISEASE CONTROL AND PREVENTION

- To increase the availability of trained personnel required for mental health care, 7 regional institutes have been funded against the 11 to be undertaken during 11th Plan for production of clinical psychologists, psychiatrists, psychiatric nursing and psychiatric social workers. Further, support has been provided to 9 institutes for 19 PG departments during the year 2009-10 for manpower development. Under the Programme, an amount of Rs. 408 crore has been approved for manpower development and another Rs. 150 crore is under approval for the revised district mental health programme in the states.
- National Policies for Geriatric Care, cardio vascular & diabetes and cancer finalised for a total outlay of about Rs. 1519 crore.

MEDICAL EDUCATION

- To increase the number of doctors across the country and for opening more medical colleges, norms relating to requirement and land and infrastructure have been rationalised in order to attract more entrepreneurs, particularly in under-served and difficult areas.
- The norm of 25 acres of land for setting up a medical college has been relaxed to 20 acres throughout the country. Further relaxation has been granted to hilly areas, notified tribal areas, North Eastern States and some Union Territories where 20 acres of land can be in two pieces within a distance of 10 kms keeping in mind the terrain and non-availability of land in these areas. In major cities, the norm has been further relaxed to 10 acres.
- Infrastructure requirements for setting up new medical colleges have been rationalized and requirement of bed strength and patient occupancy has been relaxed.
- Companies registered in India have been permitted, for the first time, to set up medical colleges.
- To increase availability of doctors, ceiling for MBBS admissions has been raised in Government colleges from 150 to 250 depending on bed strength.
- To encourage Government medical officers and fresh MBBS graduates to serve in remote, difficult and inaccessible areas of the country, two major steps have been taken: (a) 50% of

seats in postgraduate diploma courses reserved for government medical officers who have served in these areas for 3 consecutive years. (b) For fresh MBBS graduates wishing to be selected through the national entrance examinations for post-graduate courses, a weightage of 10% is given for each year of rural service, whether appointed on permanent, adhoc or contractual basis, subject to a ceiling of 30%.

- To overcome the acute shortage of faculty in medical colleges and specialists and super specialists in hospitals, Teacher-Student ratio has been relaxed from 1 : 1 to 1: 2. As a result of this, 4000 additional Post Graduate seats have been created this year alone in Government Medical Colleges.
- To overcome shortage of faculty in medical Colleges at different levels, i.e., Assistant Professor, Associate Professor and Professor level, the requirement of number of years of service stipulated in the Medical Council of India (MCI) regulations in each of the three grades has been reduced by one year, i.e., from 4 years to 3 years.
- Similarly, in Central educational institutions like All India Institute of Medical Sciences (AIIMS), New Delhi, Post Graduate Institute of Medical Education and Research (PGI), Chandigarh, Jawaharlal Institute of Post-Graduate Medical Education & Research (JIPMER), Puducherry, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore etc, to impart parity with Indian Institutes of Technology (IITs) in promotions, the Assessment Promotion Scheme has been suitably amended. Earlier, it took 15 years for an Assistant Professor to become Professor and as per the revised scheme, it would require only 10 years.
- To overcome the acute shortage of nurses and ANMs in states with poor health indicators, that have no ANM or GNM school, the Ministry of Health and Family Welfare is focusing on districts, for the first time, to provide training assistance to open 269 GNM and ANM colleges which will increase capacity by an additional 20,000 persons each year.
- Setting up of one national institute and 8 regional institutes of paramedical sciences across the country is under approval for an estimated cost of Rs. 1000 crore.
- To encourage entrepreneurs establish more AYUSH institutions the requirement of land, infrastructure and faculty for the establishment of AYUSH colleges and hospitals have been further rationalised, including reduction in land requirement from 10 acres to 5 acres.

PRADHAN MANTRI SWASTHYA SURAKSHA YOJANA

- For setting up of AIIMS like institutions, environmental clearance was obtained for hospitals and medical colleges to be set up at Bhubaneswar, Patna, Jodhpur, Rishikesh, Raipur and Bhopal sites in 2009. Hostel construction in all the places is at advance stage of completion.
- Works for Medical College Complex for all six sites have been awarded. Award of work for construction of hospital complex is under finalization and work likely to start by June, 2010 to be completed in two years.

- For completion of construction of college and hospital before the prescribed time, an incentive up to Rs. 12.5 Crore shall be payable to contractor. However, for delay beyond the prescribed time of up to 6 months, penalty up to Rs. 25 Crore shall be levied and for delay beyond six months, contractor shall be liable to be blacklisted for a specified period.

MEDICAL HEALTH RESEARCH

- For the first time, Influenza A Vaccine is being developed in the country.
- Seed Virus was obtained from WHO to take up indigenous manufacturing. Three indigenous manufacturers are being supported by the Ministry of Health and Family Welfare to manufacture pandemic H1N1 vaccine by providing Rs 10.00 crores to each as advance market commitment. The research has reached the last and final stage of human trials.
- For 2 patent items, (a) reagent for testing H1N1 influenza virus and (b) strip used in Glucometer for testing diabetes, the Department of Health Research is working on developing indigenous techniques.
- To strengthen public health measures, the Department of Health Research identified 53 technologies (Diagnostic, Management, Prevention and Public Health System) for evaluation for introducing them in the National Public Health Programmers.
- Diabetes prevalence and management survey approved in 8 states of North East and is being launched from June 2010.
- A Centre for Research in Indian Systems of Medicine (CRISM) has been set up at the University of Mississippi (USA) to facilitate scientific validation and dissemination of information on Ayurveda, Siddha and Unani Medicine through collaborative research and advocacy.

HOSPITALS

- Comprehensive Health Check up card was introduced in current session of Parliament for Members of Parliament to help creating a data base of health indicators and detecting the various silent diseases like diabetes and hypertension.
- A state of art Sports Injury Centre is nearing completion at Safdarjung Hospital, New Delhi at an estimated cost of Rs. 75.00 crores. The centre would be commissioned before the Commonwealth Games in October 2010.
- New Emergency Care centre of 290 bed capacity in Ram Manohar Lohia (RML) Hospital is under construction.

LEGISLATION

- The Clinical Establishments (Registration & Regulation) Bill 2010 to provide for the regulation of clinical establishments through compliance with minimum standards of service delivery, etc. was passed by the Lok Sabha on 3rd May 2010.

- A Bill to recognize the Sowa Rigpa (Amchi) system of medicine has been introduced in the Rajya Sabha on 06.05.2010.
- Transplant of Human Organs (THOA) amendment bill was introduced in the Lok Sabha last December and presented to the Parliamentary Standing Committee on 17 February 2010. The THOA amendments would help address the huge gap in demand and supply of organs.

Chapter I

Introduction and Vision

The objective of the *Report to the People on Health* is to examine and address critical macro issues including identifying barriers and providing options and strategies for the future. This report is more than a document as it reflects the directions of the government as developed in a spirit of partnership and mutual respect in the context of the country's overall efforts in health development.

It is the government's mandate to shape, strengthen, support and sustain a health system where every citizen has access to readily available, qualitatively appropriate and adequately wide ranging health services at affordable costs.

The report examines the paths travelled, the constraints faced, the efforts that are underway and the challenges before us in the promotion of health, and in the organization, financing and governance of health services. Based on this overview, the report sets out some policy imperatives and agendas for discussion. The objective is to have public discussions and debates that engage people from various sections on the growth of the health sector and the challenges we face in ensuring a healthy nation, a nation where the health needs of the people are met given the limited resources available.

The report draws its inspiration from the Declaration of Alma Ata, 1978, 'Health... is a fundamental human right and the attainment of the highest possible level of health is a most important worldwide social goal.' In the above framework the guiding principle has been that 'No individual should fail to secure adequate medical care because of inability to pay for it' (the opening sentence in foreword to the Bhore Committee Report, 1946).

It is a sincere hope that this document will inspire all of us to take individual and collective responsibility to work towards the improvement of the health of our country and ensure a healthier future for our children.

Background

The Second National Health Policy statement of 2002 and the National Macro-Economic Commission on Health are two key documents that describe the policy perspective on the health sector. These policy statements were further elaborated and contextualized in the formulation of the XIth Five Year Plan's chapter 'Health, Family Welfare and AYUSH'. The programmatic response to the policy that underscored the urgent need to revitalize and scale up access to basic health services in rural areas was the National Rural Health Mission (NRHM) which was launched in 2005. The Framework of Implementation of the NRHM enunciated the vision for strengthening the health system in the rural areas, which account for about 72 per cent of India's population.

The vision, goals and objectives as well as broad strategies as articulated in the XIth Five Year Plan for the years 2007-12 and the Framework of Implementation of its flagship programme the National Rural Health Mission currently provide the guiding principles for the health sector. These are as briefly summarized below.

Vision

(XIth Five Year Plan, Planning Commission, 2007, Ch.3, pg. 56-57)

- Health as a right for all citizens is the goal that the Plan will strive towards.
- A comprehensive approach that encompasses individual health care, public health, sanitation, clean drinking water, access to food, and knowledge of hygiene, and feeding practices.
- To transform public health care into an accountable, accessible, and affordable system of quality services.
- Convergence and development of public health systems and services that are responsive to the health needs and aspirations of the people.
- Public provisioning of quality health care to enable access to affordable and reliable health services, especially in the context of preventing the non-poor from entering into poverty or in terms of reducing the suffering of those who are already below the poverty line.
- Reducing disparities in health across regions and communities by ensuring access to affordable health care.
- Good governance, transparency, and accountability in the delivery of health services that is ensured through involvement of Panchayati Raj Institutions (PRI)s, community, and civil society groups.

Goals

- To raise public spending on health from 0.9 per cent of GDP to 2-3 per cent of GDP, with improved arrangement for community financing and risk pooling.
- To undertake architectural correction of the health system to enable it to effectively handle increased allocations and promote policies that strengthen public health management and service delivery in the country.
- Reduction in child and maternal mortality.
- Universal access to public services for food and nutrition, sanitation and hygiene.
- Universal access to public health care services, integrated comprehensive primary health care, with emphasis on services addressing women's and children's health and universal immunization.
- Prevention and control of communicable and non-communicable diseases, including locally endemic diseases.

- Population stabilization, gender and demographic balance.
- Revitalize local health traditions and mainstream AYUSH.
- Promotion of healthy lifestyles.

Objectives

The time-bound objectives set out for the XIth Eleventh Five Year Plan for achievement by the year 2012 are:

- Reducing Maternal Mortality Ratio (MMR) to 1 per 1,000 live births.
- Reducing Infant Mortality Rate (IMR) to 28 per 1,000 live births.
- Reducing Total Fertility Rate (TFR) to 2.1.
- Providing clean drinking water for all by 2009 and ensuring no slip-backs.
- Reducing malnutrition among children in the age group 0–3 year to half its present level.
- Reducing anaemia among women and girls by 50 per cent.
- Raising the sex ratio in the age group 0–6 years to 935 by 2011–12, and to 950 by 2016–17.
- Malaria Mortality Reduction Rate: 50 per cent up to 2010, additional 10 per cent by 2012.
- Kala Azar Mortality Reduction Rate: 100 per cent by 2010 and sustaining elimination until 2012.
- Filariasis / Microfilaria Reduction Rate: 70 per cent by 2010, 80 per cent by 2012 and elimination by 2015.
- Dengue Mortality Reduction Rate: 50 per cent by 2010 and sustaining at that level until 2012.
- Cataract operations: Increase to 46 lakhs by 2012.
- Leprosy Prevalence Rate: Reduce from 1.8 per 10,000 in 2005 to less than 1 per 10,000 thereafter.
- Tuberculosis DOTS series: Maintain 85 per cent cure rate through entire mission period and also sustain planned case detection rate.

In terms of systems improvements the NRHM targets were

- Upgrade all PHCs into 24x7 PHCs by the year 2010.
- Upgrading all Community Health Centres to Indian Public Health Standards.
- Increase utilization of first referral units from bed occupancy by referred cases of less than 20 per cent to over 75 per cent.
- Engaging 4,00,000 female Accredited Social Health Activists (ASHAs).

Chapter II

Current Status and Progress

Part A: Progress on Key Indicators

Changes in Life Expectancy at Birth

Life expectancy in India has more than doubled in the last sixty years. It increased from around 30 years at the time of independence to over 63.5 years in 2002-06. Although the decadal increase has slowed from 5.7 years in the 1970s to 3.2 years in the 1990s, the overall life expectancy increased by 14.1 years in the rural areas and 9.9 years in the urban areas during the period 1970-75 to 2002-06. The wide variance in performance across states is of special concern. While in Kerala, a person at the time of birth is expected to live for 74 years, the expectancy of life at birth in states like Assam, Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh is in the range of 58-62 years, a level Kerala achieved during the period 1970-75. Globally India's life expectancy is lower than the global average of 67.5 years and the average of most countries that won their independence from colonial rule at about the same time—China, Vietnam, Srilanka, and so on.

Improved Child Survival

India's infant mortality rate too has shown a steady decline, from 129 deaths per 1,000 live births in 1971 to 53 in 2008. The rate of decline has been slowing, from 19 points in the 1970s to 16 points in the current decade. Currently the urban IMR is 36 as compared to the rural IMR of 58.

Decreasing Maternal Mortality

The problem in estimating MMR has been the fixing of a reliable denominator due to the comparative rarity of the event, necessitating a large sample size. However, given this constraint, data suggests that India had a MMR of 460 in 1984, declining to 254 deaths per 100,000 live births in 2004-2006. Kerala and Tamil Nadu reporting an MMR of 95 and 111 respectively, lower than Assam (480), Bihar/Jharkhand (312), Madhya Pradesh/Chhattisgarh (335), Orissa (303), Rajasthan (388) and Uttar Pradesh/Uttarakhand (440). These nine states account for 47 per cent of India's population represent the core of our poor performance on all four counts of life expectancy, IMR, MMR and TFR (Total Fertility Rate).

On the maternal mortality front, all South Asian nations except Sri Lanka do worse than India, and South Asia as a region has poor record of maternal mortality in the world, very significantly affecting the global effort to achieve the Millennium Development Goal set for 2015.

Population Stabilisation

TFR is the average number of children that a woman would bear over her lifetime if she were to experience the current age-specific fertility rates. At a level of 2.1, which is called the replacement level, population stabilization could be said to have been achieved.

Total Fertility Rate (TFR) had reduced from 5.2 in 1971 to 2.6 in 2008. Of concern are the states of Uttar Pradesh, Bihar, Jharkhand, Rajasthan, Madhya Pradesh and Chhattisgarh that account for over 40 per cent of India's population and have a TFR in the range of 3.0 to 3.9—a level that Kerala and Tamil Nadu had in the early 1970s.

India's record compares poorly with that of Japan, China and the United States which have TFRs of 1.3, 1.7 and 2.1, respectively. As per population projections, the population of India in the year 2025 will be 143.1 crore as compared to 145.3 crore of China.

TFR varies significantly with female literacy, mean age of women at marriage, percentage of females working in non-primary sectors, infant and child mortality, type of housing, and level of urbanization. The TFR declines significantly with the level of education of mother, from 3.6 in case of mothers and income/wealth. Scheduled Tribes have the highest level of TFR followed by Scheduled Castes, Other Backward Classes and Others.

Maintenance of gender balance is also a part of population stabilization. The sex ratio fell from 946 females per 1,000 males in 1951 to 933 in 2001.

Table 1: Health Indicators of Select Countries

<i>Country</i>	<i>GDP per capita PPP US \$</i>	<i>Infant Mortality Rate (IMR) (per 1,000 Live Births) 2009</i>	<i>Life Expectancy at Birth M/F (in Years) 2009</i>	<i>Maternal Mortality Ratio (MMR) (per 1,00,000 Live Births)2005</i>	<i>TFR 2007</i>
India*	2753	53	62.6/64.2	254	2.6
China	5383	19	71.6/75.1	45	1.7
Japan	33632	3	79.4/86.5	6	1.3
United States	45592	7	77.1/81.6	11	2.1
Indonesia	3712	25	69.2/73.2	420	2.2
Vietnam	2600	13	72.6/76.6	150	2.2
Bangladesh	1241	47	65.5/67.7	570	2.9
Pakistan	2496	73	66.5/67.2	320	3.5
Sri Lanka	4243	17	70.6/78.1	58	1.9

Source: *India—Registrar General of India, Government of India (GoI) (SRS 2008) and abridged life tables 2002-06 (2008); Others—'State of World Population' (2009) and 'State of World Children (2009)'. GDP per capita- HDR, 2009.

Table 2: Differentials in Health Status Among Socio-Economic Groups

<i>Social Group</i>	<i>Infant Mortality/1,000 live births</i>	<i>Under-5 Mortality/1,000 live births</i>	<i>per cent Children Underweight (Under Age 5 Years)</i>
Scheduled Castes	66.4	88.1	47.9
Scheduled Tribes	62.1	95.7	54.5
Other Backward Classes	56.6	72.8	43.2
Others	48.9	59.2	33.7
INDIA	57.0	74.3	42.5

Source: NFHS-3- 2005-06

Reasons for Variations Across States

As a general proposition, much of the performance under the critical indicators of Life Expectancy, IMR, MMR, TFR correlates with economic wealth and levels of poverty. The reasons for such adverse health indicators may relate to high levels of malnutrition and anaemia, and the lack of access to essential health services. Not surprisingly, the states which are the weakest in terms of life expectancy, maternal and infant mortality and total fertility areas, are also the lowest in terms of economic wealth and highest in terms of poverty levels and total health expenditures.

Table 3: Key Demographic Health Indicators and Relationship to Poverty and Wealth

<i>High Focus EAG States</i>	<i>Life Expectancy at Birth (2002-06)</i>	<i>IMR (2008)</i>	<i>MMR (2004-06)</i>	<i>TFR (2008)</i>	<i>Poverty Level (2004-05)</i>	<i>Per capita NSDP 2008-09 (in Rs.) (in Rs.)</i>	<i>Per capita Health Expenditure (NHA-04-05)</i>
1	2	3	4	5	6	7	8
Bihar	61.6	56	312	3.9	41.4	10206	513
Chhattisgarh	–	57	–	3.0	40.9	19521	772
Jharkhand	–	46	–	3.2	40.3	16294	500
Madhya Pradesh	58.0	70	335	3.3	38.3	13299*	789
Orissa	59.6	69	303	2.4	46.4	18212	902
Rajasthan	62.0	63	388	3.3	22.1	19708	761
Uttar Pradesh	60.0	67	440	3.8	32.8	12481	974
Uttarakhand	–	44	–	–	39.6	25114	818
High Focus NE States							
Arunachal Pradesh	–	32	–	–	17.6	22475	1454
Assam	–	64	480	2.6	19.7	16272	774

Manipur	–	14	–	–	17.3	16508	673
Meghalaya	–	58	–	–	18.5	23069	894
Mizoram	–	37	–	–	12.6	20483	1133
Nagaland	–	26	–	–	19.0	17129*	819
Sikkim	–	33	–	–	20.1	30652	1507
Tripura	–	34	–	–	18.9	12481	1486
General Category States							
Himachal Pradesh	67.0	44	–	1.9	10.0	32343	1511
Jammu & Kashmir	–	49	–	2.2	5.4	17590*	1001
Andhra Pradesh	64.4	52	154	1.8	15.8	27362	1061
Goa	–	10	–	–	13.8	60232*	2298
Gujarat	64.1	50	160	2.5	16.8	31780*	953
Haryana	66.2	54	186	2.5	14.0	41896	1078
Karnataka	65.3	45	213	2.0	25.0	27385	830
Kerala	74.0	12	95	1.7	15.0	35457	2950
Maharashtra	67.2	33	130	2.0	30.7	33302*	1212
Punjab	69.4	41	192	1.9	8.4	33198	1359
Tamil Nadu	66.2	31	111	1.7	22.5	30652	1256
West Bengal	64.9	35	141	1.9	24.7	24720	1259
INDIA	63.5	53	254	2.6	27.5	25494	1201

Note: IMR: Infant Mortality Rate, MMR: Maternal Mortality Ratio, TFR: Total Fertility Rate, NSDP: Net State Domestic Product (Per capita Income) at constant (1999-2000) prices

‘–’ : Not available

* : 2007–08

Source: (col. 2) to Col. (4): Registrar General of India; Planning Commission; for col. (6), NHA 2004-05, for Col. 8 table 1.3. , Col.7-CSO.

The MMR estimate of Bihar, Madhya Pradesh and Uttar Pradesh also apply to Jharkhand, Chhattisgarh and Uttrakhand respectively.

Part B: Improving Reproductive and Child Health

As maternal and child health indicators, measured in terms of the number of maternal deaths or children that die within the first year of their life, childbirth, are accepted as proxies for assessing the functioning and status of the health system, high priority has been accorded to this aspect of health policy. The International Conference on Population and Development in 1995 was the milestone which resulted in India shifting the unitary focus on sterilization-centred family planning

approach to a broad-based reproductive and child health policy framework. Comprehensive policies containing the range of reproductive health services for women and an array of services for children were formulated.

The implementation of the Reproductive and Child Health Program was strengthened with its integration into the National Rural Health Mission, where improved programme implementation and health systems development was seen as mutually reinforcing processes. Some of the gains that have resulted are outlined below:

<i>Indicator</i>	<i>Expected Outcomes</i>	<i>Outcome Achieved</i>	<i>Outcome Aimed for</i>
Infant Mortality Rate	IMR reduced to 30/1,000 live births by 2012	53 in 2008.	Current rate of decline should accelerate to about 6 points per year to achieve the goal of IMR of 30 by 2012 and to about 3.3 points to achieve it by 2015.
Maternal Mortality rate	MMR reduced to 100/1,00,000 by 2012	MMR 254 in 2004-06	Must decline by 154 points to reach the goal by 2012—about 22 points per year from the level of 254 in 2005 (2004-06).
Total Fertility Rate	TFR reduced to 2.1 by 2012	2.6 in 2008.	Needs to decline by about 0.13 points per year during 2009-12. For the states of Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan, the decline should be in the range of 0.3 to 0.5 points (approximately) per year.

B.1. Reducing Maternal Mortality: Key Strategies and Progress Achieved

With the launch of the NRHM, the RCH programme efforts got further boost with the two-legged policy of restructuring the rural health care system (the supply side) along with stimulating the demand side with the introduction of the innovative conditional cash transfer scheme for pregnant women to deliver in public health facilities. Popularly known as the Janani Suraksha Scheme (JSY), the conditional cash transfer scheme resulted in dramatic increases in institutional delivery. JSY enables women to make use of public health facilities for safe delivery by providing Rs. 1,400 to cover travel costs and other expenses in rural areas of low performing states. It also provides cash incentives to female community health workers for promoting safe care in pregnancy and facilitating access to institutional care.

In the five years since the launch of the NRHM in 2005, institutional deliveries have increased rapidly witnessing a remarkable jump in coverage from 7.39 to 90.37 lakh beneficiaries in 2008-09 accounting for an annual expenditure of Rs. 1,241 crores. Quality of antenatal and postnatal care is also being strengthened, with the ASHA providing support for increasing utilization. To achieve the targets for 2012 and 2015, and in view of the recommendations made

in the Mid Term Appraisal Report of the Planning Commission, a five-pronged strategy with following key elements is an option:

- Improving quality of the facilities where institutional deliveries are being conducted in accordance with the standards laid down and certified by the Quality Council of India;
- Focussing on 235 districts that account for a major proportion of the infant and maternal deaths and having a high TFR for intensive training of health care service providers and community health workers in home-based care;
- Providing an additional package of incentives for those facilities notified by district authorities as remote and inaccessible;
- Strengthening supportive supervision in these 235 districts by placing trained public health nurses to improve capacity of health workers for delivering the package of reproductive and child health services in accordance with the laid down protocols in institutions and home settings;
- Re-formulating the financing of these services based on results and performance based so as to ensure all key partners – the beneficiary - clients, the health providers and the health facility managers are all equally incentivized to maximize the outcomes.

<i>Key components of RCH strategy</i>	<i>Baselines and Progress Made</i>	<i>Expected Level of Achievement for 2010 -11</i>
Janani Suraksha Yojana (JSY) for promotion of institutional deliveries:	7.39 lakh beneficiaries in 2005-06 to about 1 crore in —2009-10.	Over one crore beneficiaries
Improving facilities for institutional deliveries on a 24*7 hour basis.	7613 Primary Health Care facilities (33 per cent of total) and 3606 out of the 4276 CHCs (84 per cent) strengthened to function on a 24*7 hour basis.	100 per cent of CHCs and 50 per cent of all PHCs to becomes 24*7 functional facilities. Ensure all the present 7613, 24*7 PHCs and 4276 CHCs are delivering basic emergency obstetric care services with specified quality as per guidelines.
Providing for Emergency Obstetric Care:	2471 facilities (district hospitals, sub-divisional hospitals, and CHCs) operationalised as First Referral Units (FRUs)	100 per cent of FRUs to be made functional as per standards.
Universalising and improving quality of antenatal care.	51 per cent pregnant women received 3 or more antenatal care checkups. Early detection of pregnancy through rapid detection kits (Nishchay), by field level workers (ANMs and ASHAs) introduced.	To increase three ANC coverage and full ANC coverage rates by at least 10 per cent every year till over 95 per cent ANC coverage achieved.
Post natal care	As per NFHS-3, 37.1 per cent of all women received post natal care within 48 hours	To increase to at least 60 per cent of deliveries.

Skilled Birth Attendant Training	25 per cent of nurses & ANMs complete training.	Training of SBAs to be expedited with focus on poor performing districts. MOs training to be continued.
Safe Abortion Services and RTI/STI services;	Current baseline not available.	All FRUs and 24*7PHCs providing emergency obstetric care should also be providing safe abortion services.

B.2 Child Health

The strategy for child health care aims to reduce under-five child mortality through interventions at every level of service delivery and through improved child care practices and child nutrition. One major component of the strategy was training to the Anganwadi workers and ANMs for early diagnosis and referral to facilities. At the facility level, the focus was on strengthening capacity to cope with essential newborn care in newborn corners in every facility and promptly treat or refer sick newborns and sick children to more specialised newborn stabilisation units or special newborn care units at the district hospital. 213 sick newborn care units have been set up so far.

The Navjat Shishu Suraksha Karyakram (NSSK): A new two-day training programme on basic new born care and resuscitation has been launched in September 2009. 651 Nutrition Rehabilitation Centres have been set up across states for treatment of sick and severely malnourished children and this would be expanded to more districts. Infant and young child feeding programme has been undertaken to improve child nutritional status and promote exclusive breastfeeding.

Another aspect of the strategy is in scaling up the universal access to immunization with particular focus on eradicating polio. More effort at micro-planning, mobilisation of beneficiaries by ASHAs, improved cold chain management, Vitamin A administration, pediatric anemia management and periodic deworming are also a part of this programme.

More concerted efforts to tackle malnutrition and neo-natal mortality will facilitate a 5 point decline per year required for achievement of expected outcome. 6 States / UTs have achieved the goal of reducing IMR below 28 and 12 States are in the 30-40 range.

In keeping with the above and embedding the child health strategy as an integral part of maternal health the following new initiatives have been introduced in the policy mix:

- Expand training of ASHAs for home-based newborn and child care and develop a policy framework for constituting community-based women empowerment groups under the leadership of the women Panchayat members but also consisting of other women networks that may be existing in the village. The aim of such a strategic direction would be to one day ensure that the female functionaries—ASHA, AWW, ANM—become accountable to and work with these groups to help them realise their well-being and rights.
- Strengthen all primary and secondary health care facilities providing institutional delivery with capacity for new born care through stricter supervision and monitoring.

- More closely monitor the immunisation program by listing the mothers and the children for tracking their care. Computerisation of this data which is underway would enable identifying the missing children and enhancing the timeliness of the coverage.
- Include in the UIP protocol the second dose for measles and a catch-up campaign for measles so as to reduce the incidence of mortality on account of this disease, which is estimated to be almost 4 per cent.
- Overall tighten supervision, particularly in the 235 laggard districts.

<i>Main strategy</i>	<i>Baselines and Progress Made</i>	<i>Progress aimed for in 2010-2012</i>
Integrated Management of Neonatal & Childhood Illnesses (IMNCI):	Ongoing in 356 districts. IMNCI has been introduced in to the curriculum of 79 Medical colleges and some 4000 students have been trained.	To complete training of service providers in all these 356 districts and also ensure that all poor performing districts are covered as a priority.
Home Based Newborn and Child Care.	Home Based Newborn and Child Care has been incorporated into the ASHA training and duties.	To train ASHAs in poor performing districts as a priority to conduct home based newborn and child care
Facility Based Newborn and Child Care:	213 Sick Newborn Care Units (SNCUs) have been set up to address care of sick neonates at facilities.	All district hospitals to have SNCUs- All sites of institutional delivery to have newborn stabilisation units.
Infant and Young Child Feeding (including Improving Early and Exclusive Breastfeeding, and Complementary Feeding)	Exclusive breastfeeding 24.9 per cent-Integrated into ASHA training module.	Increase to 50 per cent in two years. To train ASHAs on this in all the poor performing districts
Reduction in morbidity and mortality due to Acute Respiratory Infections (ARI) and Diarrhoeal Diseases	Use of ORS in diarrhoea at 34.2 per cent.Appropriate care for acute respiratory infection : 71.4 per cent	To increase by at least 10 per cent. Annually.
Strengthening Routine Immunisation:	Full Immunisation at 54.0	Full Immunisation to increase by 10 per cent in first year and 20 per cent in the next year

B.3 Population Stabilisation

The states of Andhra Pradesh, Delhi, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu and West Bengal have already reached the goal of population stabilisation, i.e. TFR of 2.1 or below. But states like Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh need much greater support to achieve it.

The health departments took the following measures in the last year to further these objectives:

- A number of primary and secondary care facilities in the government sector are being geared to provide 'Fixed Day Services' (FDS) for sterilization. States are being provided technical

and financial support for the development of human resources and upgrading of health facilities for operationalisation of the FDS approach. In states with high unmet need for limiting methods, sterilization camps are to continue until the time FDS can be universally implemented.

- The compensation scheme for sterilization acceptors has been revised so as to compensate the wage loss at current rates across all the states.
- The National Family Planning Insurance Scheme (NFPIS) covers service providers in both public and accredited private facilities so as to provide compensation for adverse events and failure of sterilization. Quality Assurance Committees (QACs) have been constituted in all the states and districts so that adequate standards of care are maintained in family planning services.
- A new and better IUD-T 380 A, which has ten-year effectiveness, has been introduced along with better training, both as a short and long term spacing method.
- Emergency Contraception Pills (ECPs) which are effective for preventing conception due to unplanned/unprotected sex have been introduced. Guidelines have been developed and disseminated regarding its use.
- Promotion of No Scalpel Vasectomy (NSV) acceptance: A major effort has been made to train trainers for this procedure in the medical colleges at the district level. The proportion of male sterilizationsterilization rose to 5.15 per cent in the year 2008-09 and it has maintained 5 per cent level for the period ending September 2009-10.

The main strategies for population stabilisation would be FDS with quality sterilization in at least one facility in every block, to increase male sterilizations to at least 10 per cent of all sterilizations, to promote ready availability of spacing contraceptives in every habitation, and increasing the age of marriage and age of mother at birth of first child.

<i>Strategy/Output</i>	<i>Progress Made</i>	<i>Progress Planned.</i>
Contraceptive use	Use of modern contraceptive methods at 47.1 per cent.Total unmet need for family planning at 21.3 per cent.	To increase use by about 10 points over three years.Reduce unmet needs by 5 points every year.

Policy Options for Achieving RCH Goals

- (a) Three strategies are proposed to accelerate the decline in infant and neonatal mortality:
- an inter-sectoral campaign against child malnutrition;
 - providing ASHAs with the skills and support needed to provide newborn care and community-level primary care for the sick child;

- ensure that every facility currently providing institutional delivery is also able to provide an adequate degree of care for the sick newborn and sick child with a referral link to at least one advanced newborn and child care centre in the district.
- (b) Special focus on 235 poor performing districts which contribute the bulk of child and maternal mortality and high fertility rate in the nation. The intervention would be in the form of a special district plan and closely monitored by a joint State–Centre monitoring mechanism. It also involves the introduction of skilled human resources from outside in the form of well-supported trainers and skilled and quality supervisors who would ensure that the necessary skills development in the existing workforce is improved.

Part C: India's Disease Burden

The Causes of Deaths

Communicable diseases, maternal, peri natal and nutritional disorders constitute 38 per cent of deaths. Non-communicable diseases account for 42 per cent of all deaths. Injuries and ill-defined causes constitute 10 per cent of deaths each. However, majority of ill-defined causes are at older ages (70 or higher years) and likely to be from non-communicable diseases.

Rural areas report more deaths (41 per cent) due to communicable, maternal, peri natal and nutritional conditions. The proportion of deaths due to non-communicable diseases is less in rural areas (40 per cent). Injuries constitute about the same proportion (about 10 per cent) in both rural and urban areas.

India's Epidemiologic Transition

Many countries have in the course of their development gone through what is known as an 'epidemiologic transition', where the initial high burden of disease and mortality due to infectious diseases and maternal and child mortality, declines and gives way to non-communicable diseases, injuries and geriatric problems as the main burden of disease. India's epidemiologic transition, however, is marked by three challenges in disease control, all of which need to be managed concurrently. First, India has to complete its unfinished agenda of reducing maternal and infant mortality as well as communicable diseases such as Tuberculosis, vector-borne diseases of malaria, kala-azar and filaria, water-borne diseases such as cholera, diarrhoeal diseases, leptospirosis, and the vaccine-preventable measles and tetanus. Second, India has to contend with the rising epidemic of non-communicable diseases including cancers, diabetes, cardiovascular diseases, chronic obstructive pulmonary diseases and injuries. And finally developing systems to cope with there is the category of the new and re-emerging infectious diseases like HIV, avian influenza, SARS, and novel H1N1 influenza.

C.1. Communicable Disease Burden

Of the 9.2 million cases of TB that occur in the world every year, nearly 1.9 million are in India accounting for one-fifth of the global TB cases. Experts estimate that about 2.5 million persons have HIV infection in India, World's third highest. More than 1.5 million persons are infected with Malaria every year. Almost half of them suffer from *p.falciparum* Malaria. Diseases like Dengue and Chikungunya have emerged in different parts of India and a population of over 300 million is at risk of getting Acute Encephalitis Syndrome (AES) / Japanese Encephalitis (JE). One-third of global cases infected with filaria live in India. Nearly half of leprosy cases detected in the world in 2008 were contributed by India. More than 300 million episodes of acute diarrhoea occur every year in India in children below 5 years of age.

Because of the existing environmental, socioeconomic and demographic factors, the developing countries like India are vulnerable to rapidly evolving micro-organisms. During the past three decades more than 30 new organisms have been identified worldwide including HIV, *Vibrio cholerae* O139, SARS corona virus, highly pathogenic avian influenza virus A, and novel H1N1 influenza virus. Many of these organisms emerged in the developing countries of Asia.

The Progress on Control of Communicable Diseases

Despite high disease burden and health system constraints, contagious diseases like smallpox and Yaws and Leprosy nearly eliminated. Polio is now confined mainly to 107 blocks in UP and Bihar.

Malaria which used to cause 75 million cases in early 1950s has been reduced to less than 2 million cases every year. With the scaling up of long lasting insecticidal nets (LLINS) for prevention and Rapid Diagnostic Kits (RDK) and ACT drugs for early diagnosis and complete treatment of *p.falciparum* Malaria, we expect a further reduction. With each diagnosis and supply of drugs like milefosine, deaths on account of Kala-azar have started declining rapidly. With the improvement in surveillance system and efficient management of cases, the case fatality rate on account of dengue has declined from 3.3 per cent in 1996 to less than 1 per cent in 2009.

Concerted efforts under the Revised National Tuberculosis Programme for over a decade have led to decline of TB prevalence from 586 cases per lakh population in 1990 to 283 cases per lakh population in 2007. Similarly, mortality from TB has declined from 42 deaths per lakh population in 1990 to 28 deaths per lakh population in 2007.

Communicable Disease Challenges and Policy Response

Recent policy shift in TB control is on improving case detection and treatment success in 271 districts by way of closer monitoring, strengthening of management capacity and providing additional manpower wherever required. Broader and more diverse partnerships with the private sector, NGOs, civil society, corporate entities is another important element in the strategy towards ensuring universal access to TB care in India.

Further, despite admittedly successful implementation of DOTS strategy in India, MDR-TB has emerged as a major public health concern with. India have the second highest number of

(multi-drug resistant) MDR-TB cases in the world. However, at the policy level India has effectively moved towards rolling out DOTS-Plus plan for the control of MDR-TB, which besides being more difficult is also more expensive to treat. India has successfully negotiated a grant from Global Fund of about Rs. 1,000 crores for scaling up of MDT treatment DOTS-Plus plan throughout the country. DOTS-Plus services have already been initiated in 10 states and will be available in all the states by the end of 2010-11.

Leprosy though eliminated at the national level as a public health problem, afflicts more than 130,000 people in the country and is a public health challenge in some parts of India. For further reducing the disease burden, blocks with more than one case per 10,000 population have been identified for focused attention. Moreover, after 1983, a nation-wide representative and systematic survey is being undertaken to estimate the disease burden on account of leprosy.

Likewise the Malaria Control Programme in India underwent a dramatic policy and programme shift in 2009 with the scaling up of the three most effective tools of malaria prevention and control—Long Lasting Insecticidal Nets (LLINs) for use by community, Rapid Diagnostic Kits (RDks) for rapid diagnosis of *Falciparum malaria* in remote areas of high endemic states and supply of Artemisinin-based Combination Therapy (ACT) as the first line of treatment for *P.falciparum* Malaria.

For the first time in India, 2.23 million LLINs were distributed in 2009-10, mostly in Orissa and Assam and is planned to further scale up the distribution of LLINs to about 5 million during the current financial year. The real challenge lies in ensuring proper and effective utilisation of these nets by social mobilisation for change in the behaviour of communities.

To address human resource issue, the Government of India is supplementing the efforts of state governments by providing about 10,000 health workers in malaria-endemic states. Yet there is a need of or more workers which needs to be addressed upfront by the state governments so that the newly available tools for malaria control do not fall into disuse for want of trained and motivated manpower at the community level.

Dengue, Chikungunya and Japanese Encephalitis outbreaks in different parts of India have recently underlined the need for the participation of local communities in undertaking preventive measures for effective control. Emergence of Dengue in cities like Delhi and Gurgaon is attributable to negligent human actions like use of desert coolers and water storage facilities without adequate measures to prevent breeding of *ades aegypti* mosquitoes.

HIV Prevention and Control

India had an estimated 2.27 million HIV-positive persons in 2008, with an estimated adult HIV prevalence of 0.29 per cent. This is nearly 7 per cent of the global burden of 33 million HIV cases. As HIV prevalence among high-risk groups (HRG) is very high compared to that among the general population, India continues to be in the category of concentrated epidemic. The sexual mode continues to be the major mode of transmission, though transmission through injecting drug use and men having sex with men are on the rise in many new pockets.

The annual HIV sentinel surveillance covered 1,215 sites in 2008-09.

The National AIDS Control Programme (NACP) Phase-III (2007-2012) has the overall goal of halting and reversing the epidemic in India over the five-year period. It places the highest priority on preventive efforts while, at the same time, seeking to integrate prevention with care, support and treatment through a four-pronged strategy:

1. Prevention of new infections in high-risk groups and general population through:
 - (a) Saturation of coverage of high-risk groups with targeted interventions (TIs)
 - (b) Scaled up interventions in the general population.
2. Providing greater care, support and treatment to larger number of persons living with HIV/AIDS (PLHA).
3. Strengthening the infrastructure, systems and human resources in prevention, care, support and treatment programmes at the district, state and national level.
4. Strengthening the nationwide Strategic Information Management System.

The specific objective is to reduce new infection as estimated in the programme's first year by 60 per cent in high prevalence states so as to obtain reversal of the epidemic; and by 40 per cent in the vulnerable states so as to stabilize the epidemic. NACP's organizational structure was decentralized to implement programmes at the district level, with priority for more vulnerable districts.

The main achievements in this period were:

- Establishment of 1103 blood banks, and the organisation of over 60,000 blood donation camps with an over 69.6 per cent voluntary donor collection.
- Establishment of 1311 Targeted intervention projects which between them covered an estimated 53.4 per cent of all female sex workers, and 74.2 per cent of IDU and 78.3 per cent of MSM and transgender populations.
- Establishment of 5210 ICTCs which tested over 140 lakh people including 59 lakh pregnant women. Of the 19723 who tested positive, about 12083 were put on nevirapine.
- The free ART programme was scaled up to 269 centres, and 315,640 patients were receiving free ART as of March, 2010. Second line ART initiated in Centres of Excellence and more than 1100 patients enrolled.
- Information, education and communication campaigns were strengthened throughout the nation and condom use has been widely promoted. Second phase of specifically designed exhibition train, red ribbon express was launched on 1st Dec. 2009 to cover 152 stations in 22 states during its 1 year journey.

Emerging Infectious Diseases

In recent times, Influenza A H1N1 virus created a scare by affecting birds/poultry in more than 60 countries including India. The speed and virulence with which the novel H1N1 virus spread in 2009

in over 200 countries, including India, took the public health system by surprise and created a public health crisis. Containment of epidemics and rapid response to disease outbreaks through a nationwide networking of public health resources including public health laboratories is one of the major problems today. In an important policy shift during 2008-09, the Government of India decided to provide the services of epidemiologists in all district headquarters and state headquarters and entomologists and microbiologists in all state headquarters of them so far 200 epidemiologists, 85 microbiologists and 23 entomologists have joined. However, integrated disease surveillance is still faced with inadequately trained professionals, ill-equipped public health labs and inadequate capacity for rapid response to disease outbreaks in many states. The ongoing initiative of upgrading the National Institute of Communicable Diseases into National Centre of Disease Control with responsibility for enhanced capabilities for lab-based surveillance of communicable diseases and rapid response for minimizing the effects of disease outbreaks is a major development in this field.

Integrated Disease Surveillance Programme

Disease surveillance means early detection and timely response to disease outbreaks. Which requires constant contact with multiple sources of information—health workers, laboratories and health facilities, and capacity for prompt investigation into each outbreak. Towards achieving this a network of regional laboratories have been established and the aim is to put an epidemiologist in place in every district. 762 information points have been established. During the year, over 1,000 outbreaks were detected and responded to by the IDSP system, the commonest cause being acute diarrhoeal diseases. Urban surveillance has been initiated in metros Mumbai, Chennai, Delhi and Kolkata). Non-Communicable Disease (NCD) Risk Factor survey was completed in seven states.

Communicable diseases will continue to engage public health attention and resources in India for quite some time to come because of factors relating to ecology, climate and human behaviour. However, as more emphasis is being laid on tackling these challenges, there is a much greater need for inter-sectoral collaboration, community empowerment and community participation through different mechanisms like, village health and sanitation committees and district and state health societies.

Trends of Communicable Diseases in India

<i>Diseases Showing Increasing Trends</i>	<i>Diseases Showing Decreasing Trends</i>
Dengue, Chikungunya	Poliomyelitis
HIV-TB Co-infections	Tuberculosis
Cholera O139	Neonatal tetanus
Japanese Encephalitis	Measles
Leptospirosis	HIV/ AIDS
Novel H1N1 Infections	
Eradicated : Smallpox , Guinea worm	
Eliminated : Yaws, Leprosy	

Part C.2. Non-communicable Diseases

India is witnessing a rising incidence of non-communicable diseases (NCDs) and old age diseases. This rise is occurring in a setting where health expenditures are growing rapidly led by an unregulated private sector and where health insurance and pension coverage are still limited. These financial concerns are further exacerbated by the emerging evidence that the India's poor are at heightened risk of acquiring NCDs owing to high rates of smoking and tobacco use, occupational risks, and living conditions. According to a World Bank report, it is estimated that Indians spent nearly Rs. 84, 600 crores out of pocket on health care expenses (year 2004), amounting to 3.3 per cent of India's GDP for that year. If we consider only those who are working, the annual income loss to households associated with NCDs is estimated to be Rs. 28,000 crores.

Uptil now we have had no policy for intervention with regard to non-communicable diseases barring giving some limited financial assistance for purchasing of equipment or undertaking pilot projects or studies. Recently, a National Programme for the Control of Cancer, Vascular Diseases and Diabetes, Health Care of Elderly (Geriatrics Care) and Mental Health have been approved to be taken up in 100 districts during the next two years (2010-11 and 2011-12). Major NCD programmes under approval for the remaining two years of the XIth Five-Year Plan are:

- National Cancer Control Program with an outlay of Rs. 731.52 crores.
- National Programme for Prevention and Control of Diabetes, Cardiovascular Diseases and Strokes with an outlay of Rs. 499.38 crores.
- National Mental Health Programme (district component) with an outlay of Rs. 600 crores.
- National Programme for Health Care of the Elderly with an outlay of Rs. 288 crores.

Under this key initiative, dedicated staff will be positioned in community health care centres and district hospitals and training being given to frontline health workers as well as medical and paramedical staff at different health facilities for diagnosis and early referral an appropriate health care facilities. It is also believed that decentralisation of such a comprehensive package of services (including prevention, diagnosis and early treatment) would reduce patient flow to city hospitals, reduce out-of-pocket expenses among the affected families and save lives due to timely treatment. Effort has been made to integrate and synergise all these programs at various levels.

There's acute shortage of specialists in the fields of diabetology, nephrology, cardiology, etc required to cope with the NLDS. in periphery institutions. The health ministry is currently engaged in formulating short-term courses for in-service MBBS doctors working in periphery services to gain technical proficiency in these areas. A one-year course on dialysis for physicians would be started by IGNOU later this year for which an amount of Rs. 28.60 lakhs has been provided.

The Ministry of Health has also launched a pilot project to evaluate the efficacy and reliability of stand-alone dialysis units that can be set up outside a hospital environment without the availability of a nephrologist. The PPP pilot on stand-alone dialysis unit is being established in CGHS, Delhi, in partnership with a leading hospital chain. After the experience gained, this model may be replicated at more centres.

Organ Transplant

Transplant of Human Organs Rules have been amended recently and the Transplant of Human Organs Act (THOA) is also being amended. The THOA amendment bill was introduced in the Lok Sabha last December and presented to the Parliamentary Standing Committee on 17 February 2010. The THOA amendments would help address the huge gap in demand and supply of organs. It is estimated for example that against about 1 lakh corneas for transplantation while only about 25,000 corneas are being transplanted every year or against a requirement of about 1 lakh kidneys and only about 5,000 kidney transplants are done annually.

Role of Health Promotion: Given the high cost of treatment for non-communicable diseases and the pressure of the unfinished agenda of communicable diseases, the most cost-effective option for the country today is to invest in health promotion, behaviour change and promotion of healthy lifestyles. It is for this reason that a major effort in tobacco control in the form of a national programme has been initiated. Short-term courses on health promotion are also being planned through the National Institute of Health and Family Welfare. Diabetes Control Programme is also included as an integral part of the national strategy for the control of cancer and CVD.

Part D: The Social Determinants of Health

Nutrition, access to safe drinking water and sanitation, and education are the three most important proximate determinants of health status that have an impact on both infectious disease and vital health statistics.

All these three are closely related to poverty and marginalisation. Unhealthy lifestyle, tobacco, alcohol and other substance abuse underlie much of the non-communicable disease epidemics we face. In addition marginalisation and discrimination on account of gender and caste are social determinants themselves.

It is therefore not surprising that the poor performing states are those with the highest levels of poverty and the highest levels of malnutrition, among children and adult women. Female literacy rates, School enrolment rates, and rates of households with safe drinking water and sanitation are all distinctly lower.

Malnutrition and Anaemia: of great concern is the persistent level of malnutrition with over 40% of children and 36% of adults women classified as undernourished.

The reasons for such high levels of malnutrition and anaemia are complex. They include poverty, gender inequity, specific dietary patterns and recurrent illness, all these acting in conjunction. Patriarchy and gender discrimination contribute to malnutrition levels by early age of marriage and birth of the first child, reduced access to nutrition during critical periods like pregnancy, lactation, adolescence and the first five years of life, and less access to education and health care. Keeping girls in schools till they complete adolescence could be one of the most effective health measures.

The health department does promote correct infant and young child feeding practices including exclusive breastfeeding for the first six months and micronutrient supplementation, especially iron and folic acid tablets for children and pregnant women, Vitamin A supplementation and promotion of the use of iodised salt. The health department also organises institutional care services in over 600 facilities for sick and severely malnourished children. The issues of availability of safe drinking water and sanitation along with other areas of preventive and promotive actions in health are also important.

Chapter III

Organisation and Design of Health Care Services

The health sector in India is characterized by: a government sector that provides publicly financed and managed curative, preventive and promotive health services from primary to tertiary level throughout the country free of cost to the people and a fee-levying private sector that plays a dominant role in the provisioning of curative care.

The Public Health Sector

The provision of health care by the public sector is a responsibility shared by the state government, Central Government and local governments. General health services are the primary responsibility of the states with the Central Government focussing on medical education, drugs, population stabilisation and disease control. The National Health Programmes of the Central Government related to reproductive and child health and to the control of major communicable diseases like malaria and tuberculosis have always contributed significantly to state health programmes. More recently, under the NRHM, the Central Government has emerged as an important financier of state health systems development.

Government health care services are organised at different levels. Primary health care is provided through a network of over 146,036 health sub-centres, 23,458 PHCs and 4,276 CHCs. At the district level on an average there is a 150-bedded civil/district hospital in the main district town and a few smaller hospitals and dispensaries spread over other towns and larger villages.

The Private Health Sector

At the time of independence only about 8 per cent of all qualified modern medical care was provided by the private sector. But over the years the share of the private sector in the provision of health care has at about 80 per cent of all outpatient care and about 60 per cent of all in-patient care.

The private sector in India has a dominant presence in all the submarkets—medical education and training, medical technology and diagnostics, pharmaceutical manufacture and sale, hospital construction and ancillary services and, finally, the provisioning of medical care. Over 75 per cent of the human resources and advanced medical technology, 68 per cent of an estimated 15,097 hospitals and 37 per cent of 623,819 total beds in the country are in the private sector. Of these most are located in urban areas. Of concern is the abysmally poor quality of services being provided at the rural periphery by the large number of unqualified persons. Its relationship to health outcomes at the population level has never been established.

The private sector's predominance in the health sector has led to inequities in access to healthcare. Hospitalisation rates among the well-off are six times higher than those among the poor.

Such inequities lead to a situation where women from families who can afford suffer unnecessary Caesarean operations in delivery of babies—in some urban centres close to half the deliveries are C-sections—while in contrast poorer, rural women are more likely to die during childbirth due to lack of access to these operations.

National Rural Health Mission

The policy response of the government to strengthen the health sector and attain its health objectives was the launch, in 2005, of the National Rural Health Mission. In its design and implementation, the NRHM has been greatly influenced by the principles of primary health care as outlined in the Alma Ata Declaration of 1978.

In keeping with the principles of primary health care, the NRHM seeks to address the structural issues rooted in the health system and promote policies that strengthen public health management and service delivery in the country. It seeks to be pro-poor in its focus, and stresses on community participation and most critically aims to bring the people back into the public health system. Alongside, it seeks to address issues of convergence, human resources, and provides flexible funding right from the village to the national level. These changes are supported by governance reforms, emphasis on monitoring and evaluation along with the establishment of institutional mechanisms at various levels. The aim and thrust of the mission is ensuring a fully functional, community-owned, decentralized health care delivery system with inter-sectoral convergence and institutional integration across levels. From narrowly defined vertical disease control programmes, the NRHM is shifting its focus to developing a functional health system. The NRHM is thus conceived as a scheme that includes reproductive and child health programmes and disease control programmes as part of a sector wide health systems strengthening approach.

Major Achievements of the NRHM

- (a) **A clear definition of norms and standards for each level of care**—in terms of services provided, human resources and skills deployed and in infrastructure and support services and systems. Known as the Indian Public Health Standards, a few facilities have been certified as having reached IPHS. With IPHS the perception of service guarantees that each facility must provide and the human resources each facility must be sanctioned has changed. Based on experience, the IPHS itself would need revisions which is currently underway.
- (b) **ASHA programme:** The ASHA programme is one of the most significant achievements. The selection by communities and the training and deployment of over 700,000 women community health volunteers opened the space for community participation and facilitation of services and increased utilisation of public facilities. Even now the programme is rapidly evolving with ASHAs progressively acquiring more skills and providing more services locally, in addition to their roles as facilitators and community mobilisers.
- (c) **Human resource additions:** The addition of over one lakh skilled health workers (other than ASHAs) has served to revitalise the public health system and increased the quantity and

variety of services delivered. Of these one lakh workers, almost half are nurses and a third are doctors and specialists.

- (d) **Communitisation:** The NRHM has enabled much greater community participation through the creation of a wide number of platforms and activities. The most notable of these are the village health and sanitation committee, village health and nutrition days, space for public participation in hospital development committees and in district health societies and the support to community monitoring programmes.
- (e) **District health planning:** The efforts towards institutionalisation of district health planning, and the effort to provide resources and audit programmes at district level has been a step towards decentralisation. Both the technical quality of these plans and their participatory nature need to be enhanced and , but as capacities developed.
- (f) **Facility upgradation:** The upgrading of facilities at all levels in all states has been a major achievement. In infrastructure alone, this period has seen new buildings for 9,144 sub-centres, 1,009 PHCs, 435 CHC and 57 district hospitals. Another 8,997 sub-centres, 2,081 PHCs, 1,255 CHCs and 357 district hospitals have had their infrastructure renovated or upgraded. Every public health facility now receives an annual untied fund as grant for local initiatives to upgrade it. With addition of new human resources and skills over 8,324 PHCs have reached 24x7 functionality status and 2,463 are being upgraded into FRUs. This is reflected in the increasing figures of out-patient and in-patient attendance and institutional deliveries across all states. An increasing number of facilities have also been certified by external assessors under different quality accreditation schemes.
- (g) **Improved management:** Programme and facility management has been strengthened by the addition of management- and accounts-trained contractual staff in every district and in a large number of hospitals. Further, a large number of health officers playing administrative roles have completed or are undergoing training in public health management. New institutions like state and district programme management units and state resource centres have also helped improve technical and professional management capacity.

Biomedical and Health Research

The Department of Health Research (DHR) was established in the Ministry of Health and Family Welfare on 18 September 2007. The objectives of the department are the promotion and coordination of basic, applied and clinical research including clinical trials and operational research in areas related to medical, health, biomedical and medical profession and education. The department also promotes and provides guidance on research governance issues, including ethical issues in medical and health research, technical support for dealing with epidemics and natural calamities, investigation of outbreaks due to new and exotic agents, development of tools for prevention, and administering and monitoring the Indian Council of Medical Research.

ICMR, established in 1911, has 29 national and regional institutes as well as more than 100 field stations/ units in medical colleges. Besides its own institutions, the ICMR also funds research

through medical colleges, universities and other institutions. New initiatives have been started to expand research infrastructure by providing special support for medical colleges, establishment of Model Rural Health Research Units and a network of virology diagnostic laboratories.

Research in Communicable Diseases

- The ICMR has well-focused research programmes on communicable diseases like tuberculosis, leprosy, water-borne diseases, HIV-AIDS, different respiratory diseases, leptospirosis, various vector-borne as well as several other diseases caused by viral, bacterial, parasitic and fungal agents.
- The National Centre for Disease Control, Delhi, and the National Institute of Virology, Pune, are involved in the investigation and diagnosis of almost every viral epidemic outbreak. Action has been initiated to establish as well as improve facilities for the diagnosis of viral infections in all states of the country. There is a plan to establish three types (Grade I and II with biosafety labs; Grade III for serological and molecular diagnosis at medical colleges) of laboratories covering all the states. This network is proposed to be established in a phased manner in coordination with the Integrated Disease Surveillance Project (IDSP) so as to ensure synergy.
- *Vaccine development and evaluation:* The ICMR has been supporting different vaccine development programmes. Phase I HIV vaccine trial of TBC-M4 co-developed by ICMR's institutes was completed and a phase 3 heat-killed bivalent oral cholera vaccine trial completed successfully has resulting in the issuing of license to produce vaccine for public health use.

Public Health

The council has established the ICMR School of Public Health in Chennai where Master's in Public Health (MPH) was started in July 2008. As part of the goal of bringing modern health technology to the people, a Model Rural Health Research Unit (MRHRU) of the National JALMA Institute of Leprosy and Other Mycobacterial Diseases (NJILOMD) at Agra has been established at Ghatampur, Kanpur in which medical treatment for tuberculosis, leprosy and filariasis is provided free of cost to all patients. The unit is expected to serve as a model for transfer of technology to end-users in the rural areas. The work carried out at this unit shows that sophisticated technology can be effectively used for patient care as well as for studying the epidemiology of diseases.

Non-communicable Diseases

Keeping in view the changing profile, food habits, lifestyles of our population, it has become important to focus on obesity, diabetes, hypertension, other cardiovascular diseases, stroke, asthma, mental disorders, cancer and other degenerative disorders, especially those associated with ageing. Studies to monitor the effects of climate change have also been launched. The ICMR has launched important studies on risk factors such as tobacco/smoking for non-communicable diseases.

Tribal Health

Studies have focused on nutrition issues, hypertension, tuberculosis and malaria in specific tribal groups. Such epidemiological profiling would help develop strategies of prevention and management. Studies in the Northeast have focused on the high incidence of cancer and cancer registries have been started in all NE states.

Cancer

Over the years cancer has emerged as a serious public health problem. To monitor the trends, the ICMR has a National Cancer Registry Programme (NCRP). Over the years NCRP's network has widened and at present there are 25 PBC registries, 5 HBC registries and 16 POCSS (including 5 HBCRs) working under the network of NCRP. The coordinating unit of the programme is located in Bengaluru. This network is providing valuable data about the types of cancer prevalent in different parts of India. This information is being used not only for planning strategies but also for deciding research agenda.

Reproductive Health

Reproductive health has several components such as fertility control, sexually transmitted diseases and other issues connected with safe motherhood. The ICMR has important programmes addressing problems associated with high maternal and child mortality.

Research in Health Systems

Recently the ICMR has initiated a division on health systems research and is funding a wide variety of organisations for such work.

Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy (AYUSH)

The goals of the AYUSH department are the promotion and propagation of the traditional systems of medicine especially in the background of increasing chronic disorders due to modern day lifestyles. In order to meet this commitment the Department of AYUSH has taken steps for mainstreaming of AYUSH at all levels in the Health Care System, improving access to and quality of Public Health delivery, and promoting health and the prevention of diseases.

- Under mainstreaming of AYUSH over 2,368 doctors and 2,184 para-medics have been appointed, co-location in 1,918 PHCs, 171 CHCs / SDHs and 46 District Hospitals have been achieved. 93 hospitals upgraded and essential drugs supplied to 6,074 dispensaries. For taking AYUSH to the people a number of public health campaigns have been started like 'Homoeopathy for Mother and Child Care', 'Unani for Skin Disorders', 'Yoga for Health', 'Ayurveda for control of Anaemia' and 'National Campaign on Amla'. AROGYA fairs have been organized in all the North-eastern states for the first time in addition to Srinagar, Patna, Bhatinda etc.

- Ensuring quality assurance in the AYUSH sector has continued to be a priority area for which the Department in collaboration with the Quality Council of India (QCI) has developed a scheme for voluntary certification for AYUSH products and also for accreditation of laboratories, colleges and hospitals to provide quality services to the people.
- Regarding AYUSH education a number of reforms have been initiated including modernization of institutes, revision of syllabi and introduction of new courses. Over 15,000 doctors have been trained under Re-orientation of Training Programme (RoTP).
- Collaborative Research Projects on prevention and treatment of Cancer, Diabetes, Kala Azar, Chickungunia etc with top level institutions within and outside the country have been taken up. A Centre for Research in Indian Systems of Medicine (CRISM) has been set up at the University of Mississippi (USA) to facilitate scientific validation and dissemination of information on Ayurveda, Siddha and Unani Medicine through collaborative research and advocacy.
- The Traditional Knowledge Digital Library (TKDL) was setup by the Department in collaboration with Council for Scientific and Industrial Research (CSIR). So far a total of 218000 formulations from classical texts have been transcribed into patent compatible format. Agreements have been signed with European Patent Office (EPO) and US Patent & Trademarks Office (USPTO) enabling them to gain access to this database in order to prevent bio-piracy. This is an important milestone in the protection of Traditional Knowledge globally.
- The National Mission on Medicinal Plants has been started at a total outlay of Rs. 630 crore during the 11th Plan to tackle the entire gamut of issues related to Medicinal Plants from conservation, cultivation, processing to marketing. A national campaign on *AMLA* has been launched to popularize the use of *AMLA* which has high medicinal value.

A number of other initiatives like giving recognition to the ‘Sowa Rigpa’ system of medicine, setting up of an autonomous Pharmacopoeia Commission for Indian Medicine (PCIM), Council for International Cooperation for Indian Systems of Medicine (CICISM) and a separate Research Council for Siddha, upgradation of 9 existing State institutions into National level institutions at a cost of Rs.650 crores have been taken up by the Department. Further, it has been decided to establish AYUSH hospitals in all the states of the North East. Setting up of new AYUSH integrated universities/institutions is also envisaged in the near future. AYUSH industry clusters will be expanded and efforts for propagation of AYUSH systems both within and outside the country will be stepped up.

Policy Options

There must be further efforts for integration of various systems of medicine, with emphasis on developing synergy between modern and AYUSH systems of medicine and offering choice of system of treatment to patients. There is a need to institutionalise courses in various medical systems for practitioners belonging to other systems, e.g., we could consider courses for training in basic allopathic care for AYUSH practitioners who desire to acquire these skills. Similarly there

could be courses for basic care in specific systems like ayurveda and homeopathy for desiring allopathic practitioners. Of course in all these cases, practice should be in keeping with the level of training and expertise based on some regulation.

Adequate support for ongoing research about validity and effectiveness of integrated practices. This should be combined with weeding out of specific harmful practices through research actively involving indigenous practitioners. As in the case of modern medicine, there is a definite need for strengthened professional regulatory mechanisms to be developed within the framework of each system.

Over a period of time, there is a ***need to work out a model of primary healthcare based on integration of different systems***, incorporating various efficacious and synergistic remedies. These systemic changes would be part of the larger process of moving towards a system for universal access to healthcare, which provides space for medical pluralism and rational integration of systems.

Chapter IV

Human Resources for Health (HRH)

A health human resource policy must continually balance the need for functional health teams at primary, secondary and tertiary levels of health care and also facilitate a judicious mix of public health practitioners and clinical practitioners and specialists. The problem of non-availability and uneven distribution of skilled health care providers is the central challenge to meeting our health goals. WHO estimates that worldwide, this factor—more than any other single factor—may lead to the failure in attaining the Millennium Development Goals within the timelines.

Health Workforce–Numerical Adequacy

Does India have adequate number of health workers? One international norm is a minimum of about 25 skilled health workers per 10,000 population (doctors, nurses and midwives) in order to achieve a minimum of 80 per cent coverage rate for deliveries by skilled birth attendants or for measles immunisation as seen in cross-country analysis (JLI, WHO, 2006). Workforce estimates based on the 2001 Census suggest that there are around 2.2 million health workers in India but these are based on self-reported occupation which is susceptible to unqualified providers being counted as qualified ones. Adjusting for this, the density of health workers falls to a little over 8 per 10,000 population of which allopathic physicians are 3.8 and of nurses and nurse-midwives are 2.4 per 10,000 population. Allopathic doctors comprising 31 per cent of the workforce, followed by nurses and midwives (30 per cent), pharmacists (11 per cent), AYUSH practitioners (9 per cent) and others. It is important to note however that the overall health workforce estimates do not include the substantial number of community health volunteers and workers introduced under the NRHM after 2005.

The nurse-doctor ratio in India is heavily skewed in favour of doctors. According to a computation from census there are approximately 1.2 nurses and midwives per allopathic physician. In comparison, developed countries such as USA and UK have nurse-physician ratios of 3 and 5 respectively. Almost 60 per cent of health workers reside in urban area. This mal-distribution is substantially exacerbated when adjusted for the larger share of the population residing in rural areas. The majority (70 per cent) of health workers are employed in the private sector.

According to the 2001 Census, almost 60 per cent of health workers reside in urban areas, which skews their distribution considerably. The density of health workers per 10,000 population in urban areas (42) is nearly four times that of rural (11.8) areas. The majority (70 per cent) of health workers are employed in the private sector.

Major factors related to the growth of the health sector that are responsible for the acute shortage of health personnel that we were faced with are:

1. States with the greatest human resource needs also have the lowest capacity of producing them. The distribution of medical and nursing colleges across the country is highly skewed. The five south-western states of Andhra Pradesh, Maharashtra, Karnataka, Kerala and Tamil Nadu (with 31 per cent of the country's population) account for 58 per cent of medical colleges in India, both public and private; and 63 per cent of the GNM nursing colleges in the country, 95 per cent of which are private. States with poor health records like Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh have nurse densities lower than the national average, and account for only 9 per cent of the nursing schools in the country.
2. Migration of health workers depletes the available stock in the country: This also creates vacancies for teaching staff which further hinders the production of professionals.
3. Better economic and professional opportunities and better working and living conditions make for an urban preference. Specialisation makes government employment and rural services even less attractive. Public sector efforts to recruit and retain health workers to rural posts are also compromised by a number of workforce-management issues.
4. The failure to provide for adequate sanctioned posts in the public sector, and often not even replace staff retirements over long periods, due to decreasing public investment in health in the earlier period is another major reason for the crisis.

However these problems, including the central problem of getting skilled professionals to work in rural areas, are amenable to solution, and the achievements of the last few years show the general directions needed.

Achievements

1. Numerical Additions to the Health Workforce

The launch of the National Rural Health Mission (NRHM) in 2005 marked a turning point in human resource for health. The commitment of the Centrally-funded scheme to provide the funds needed to close the human resource gaps between posts that were sanctioned by state governments and posts that were required to meet the new standards, dramatically changed the situation. As an immediate measure states were funded by the Centre to hire a second nurse-midwife for the peripheral health sub-centres and three nurses, a second doctor for the primary health centres and nine nurses and seven doctors including five specialists in the 30-bedded CHCs. Further recruitments were expedited by empowering district health authorities to allow immediate appointment on contractual terms.

This led to the appointment of almost 1,06,949 more skilled service providers in the public health system by March 2010, of which 2,460 were specialists, 8,624 were doctors, 7,692 were AYUSH doctors, 26,993 were nurses, 46,990 were ANMs and 14,990 were paramedical. This was one of the largest increments to the public health workforce in recent times.

Unfortunately a few states that needed it most were unable to make use the opportunity afforded by NRHM simply because there were not enough ANMs or nurses or doctors available for recruitment. NRHM funds have also enabled the revitalising of the community health worker programme in India, and the over 7,00,000 ASHAs signifies a massive increase in health workers in the country.

2. Strategies for Attracting and Retaining Skilled Human Resources in Rural Areas

- (a) Preference in postgraduate admission for those serving in rural areas has been incorporated in the rules of a large number of states. This seems to be a very effective method of attracting doctors to rural areas for a fixed period as PG admission seems to be a priority for many young doctors. This year onwards additional weightage of 10 per cent is being given for each year of rural service, subject to a maximum of 30 per cent for admission to postgraduation through the common All India entrance examination. Fifty per cent of diploma seats have been reserved for medical officers serving in rural areas.
- (b) Higher gross emoluments on contract to doctors willing to serve in rural areas has also been a principle followed in some states with good results. The government is in the process of identifying PHCs which are located difficult or inaccessible in every state and is introducing incentives for staff working there.
- (c) The three year Rural Health Practitioner course in Assam and the Rural Medical Assistants programme in Chhattisgarh are initiatives that, with modification and an appropriate policy framework, are under process to be scaled up for implementation throughout the country to make trained personnel available where there are no doctors.
- (d) The continuous efforts at skill development among the ASHAs and systems of getting them priority admission to ANM and nursing schools will be able to secure resident health workers in remote areas.
- (e) New courses like the 18-week emergency obstetric and life-saving anaesthetist skills, and training programmes to skill MBBS doctors with select specialist skills are innovative solutions to find specialist skills for rural areas.

3. Major Efforts at Skill Upgrading

- (a) Training programmes to train every ANM and staff nurse in peripheral health facilities to the levels required of a skilled birth attendant, for the integrated management of childhood and newborn illnesses and for IUD insertion by the new technique have been rolled out nationwide.
- (b) Integrated skill-based training programmes for medical officers for male and female sterilization, safe abortion services, basic and comprehensive emergency and obstetric care are being implemented nationwide.
- (c) Efforts to strengthen all in-service training institutions and expand training capacity through collaborations with non-governmental organisations have been put in place.

4. Expansion and Improvements of Medical and Nursing Education

The last one year has seen major advances in expansion of medical and nursing education. These include:

- (a) Medical Council of India (MCI) regulations have been amended to revise norms for setting up of medical colleges and increasing PG seats. Over 4,000 PG seats have been increased during this period consequent to revision of teacher-student ratio.

- (b) Central scheme for an amount of Rs. 1,350 crores has been approved for funding state government medical colleges to start/increase PG medical seats.
- (c) The scheme for setting up 132 ANM and 137 GNM schools at a cost of Rs. 660 crores and Rs.1,370 crores, respectively has been approved. Schemes for upgrading about 25 nursing schools attached to medical colleges into nursing colleges have been announced.
- (d) State Nursing Councils and state nursing cells have been provided with Rs. 1 crore each to improve their capacities and a faculty development programmes to train 300 faculty members for expanding schools in difficult states has been put in place. Nursing Councils have also revised norms for setting up nursing schools and colleges, thus enabling many more to start up immediately.
- (e) A paramedical and physiotherapy central council bill and a scheme to set up a National Institute of Paramedical Sciences and eight regional institutes are under active consideration.
- (f) The Pradhan Mantri Swasthya Suraksha Yojana programme has been expanded and accelerated and sanctioned a revised sum of Rs. 9,307 crores. This would go towards evoking the establishment of six AIIMS-like institutions within the next 2 years, and upgrading 19 medical college institutions of which nearly 8 will be upgraded by end of this year. PGIMER, Chandigarh and JIPMER, Pondicherry's expansion plans have both been approved.

Policy Challenges for further work:

- One major initiative in this period has been the dialogue over the setting up of National Council for Human Resources in Health. Such a council would prescribe standards with a view to proper planning and coordinated development of medical and allied health education throughout the country, promote quality in such expansion of education, maintain a national live register of health professionals and overhaul the current regulatory framework for the regulation of human resources in health. A high powered task force has made its recommendations in this regard and both these recommendations and the draft bill have been posted for public comments.
- There is a need to produce a larger number of well-trained health workers across all categories of health workforce. A national health human resource policy which maps the current deficits, and also projects the needs for 2020, will help define the number and location of the new institutions needed for training doctors, nurses, dentists, paramedics and other health workers. It would also help to prioritise presently underserved districts for establishment of these new institutions with linkages to the district health system.
- A model of rural and urban primary health care where many of the health services are provided by non-physician health care providers has been shown in many countries to extend the coverage of health services without compromising quality. Such a model would involve allopathic doctors with shorter term training, AYUSH doctors, nurses, technicians and health workers. This would also allow for local selection, training and appointment of such health

workers, which evidence has shown contributes in a major way to retain skilled professional in underserved areas.

- Strengthening nursing in India is a critical area of human resource reform so that the potential of the nursing personnel to provide safe, technical services at a lower cost is fully utilised. The rapid expansion of nursing institutions must be accompanied by faculty development programmes, establishing standards of training and certification, and mechanisms to monitor and maintain quality of nurses being trained. Strengthening nursing in India also requires that the status of nurses within the health workforce and their working environment are improved. For all this, it is critical that the ‘voice’ of nursing within the health sector is raised and that representatives of the profession are included in all health decision-making bodies, at the Centre, the states and in the districts.
- Appropriate monetary and non-monetary incentives are critical to encourage qualified health workers to serve and remain in rural and remote areas. These could involve providing health workers with ‘packages’ of monetary and non-monetary incentives to attract them to serve in underserved areas. Contents of these packages could include, but not limited to, higher salary, reservation for postgraduate seats in return for rural service, and better housing. In conjunction with appropriate incentive packages it is also important to introduce efforts at building a positive working and living environment that addresses the key issues of professional and social isolation that doctors particularly in rural areas face. Improving workforce management policies, including a fair system of postings are also essential.
- Every health worker, from the ASHA to the specialist, should have avenues for skill upgrading and promotion. Use of modern technology and innovative mentoring systems could allow for a combination of distance education programmes and self-learning approaches and contact programmes, leading to the acquisition of a certified new skill.
- Both the expansion of professional education and the improvement in the quality of professionals require systems of continuing education, accreditation and regulation. This calls for improved governance and reform of current regulatory bodies and professional councils.

Chapter V

Financing of Health Care

Health Financing is an important component of health systems' architecture, and deals with sources of funding the health system. From a public policy point of view, it is desirable that health financing is so arranged that it reduces the overall out-of-pocket (OOP) expenditure on healthcare, and protects against financial catastrophe related to healthcare. The global standard related to the 'desirable' limit of OOP to protect people from financial catastrophe is less than 15 per cent of total health spending. In contrast, in India, the OOP is to the tune of 71 per cent of total health spending.

The per capita public health spending is low in India, being among the five lowest in the world. The public health expenditure in the country over the years has been comparatively low, and as a percentage of GDP it has declined from 1.3 per cent in 1990 to 0.9 per cent in 1999, increased marginally to 1.1 per cent by 2009. The Central budgetary allocation for health over this period, as a percentage of the total Central Budget, has been stagnant at 1.3 per cent, but has almost doubled to 2 per cent by 2008-09. Taking cognisance of the important role of public health expenditure, the Eleventh Five-Year Plan (2007-12) document suggests the necessity of building a responsive public health system with the need for increasing the public spending on health from 0.9 per cent of GDP to 2-3 per cent of GDP and stepping up investment on primary care, communicable diseases and HIV/AIDS prevention.

Sources of Funds

As per the NHA (2004-05), the total health expenditure in India, from all the sources, was Rs. 1,33,776 crores, constituting 4.25 per cent of the GDP. Of the total health expenditure, the share of private sector was the highest at 78.05 per cent, public sector at 19.67 per cent and external flows contributed 2.28 per cent (see Figure 1). The provisional estimates from 2005-06 to 2008-09 show that health expenditure as a share of GDP came down to 4.13 per cent in 2008-09. Though health expenditure has increased in absolute terms, the proportionately higher growth of GDP has resulted in a moderate increase in the share of health expenditure to GDP over the years. But the share of public health expenditure in the GDP has increased consistently from 2005-06 to 2008-09. It increased from 0.96 per cent in 2005-06 to 1.10 per cent in 2008-09.

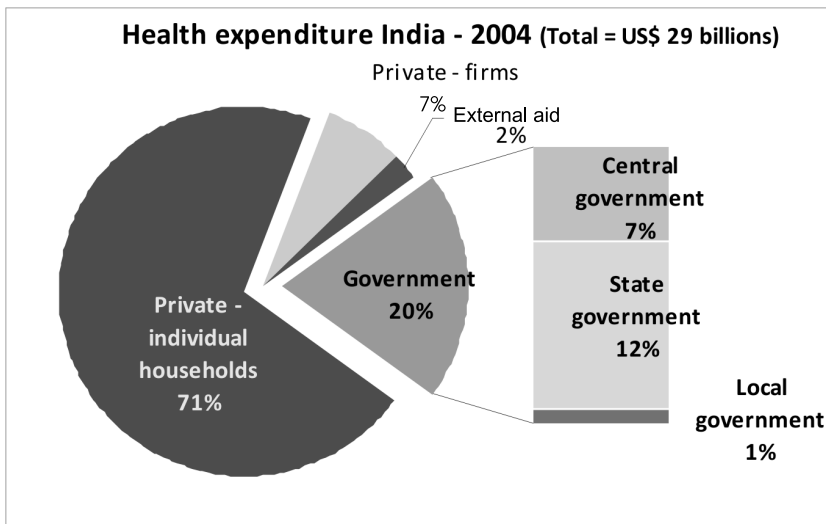


Figure 1: Health Expenditure in India (2004) by Source of Financing

Source: National Health Accounts (2009)

Public Financing of Health

Public spending on health accounts for around 1 per cent of the GDP. This ratio is among the lowest in the world, although in recent years the share of public spending in total health spending has been steadily increasing. An important issue in public spending on health relates to the distribution between the Central and state sectors. With the launch of National Rural Health Programme (NRHM), the level of public spending on health has risen nearly 2.6 times between 2004-05 and 2009-10 (the estimates for 2009-10 are budget estimates). The share of the Central Government in the total health expenditure (including grants-in-aid to states through treasury and society routes) increased from 32.1 per cent in 2004-05 to 38.4 per cent in 2007-08. However, there has been a change in the composition between the treasury and society routes in so far as the Central grants to states are concerned. The share of Central grants through State health societies increased from 5.1 per cent in 2004-05 to 16.1 per cent in 2007-08. On the other hand, the share of Central grants to states through treasury route declined from 14.9 per cent in 2004-05 to 8.5 per cent in 2007-08.

Looking at the significance of public health expenditure in achieving better health outcomes and reducing catastrophic health expenditure, the Central and state governments in India have been increasing their expenditure on health, especially since 2005-06, due to the focus on health with the launch of NRHM. . The Union Health Budget increased from Rs.5,255 crores in 2000-01 to Rs.8,086 crores in 2004-05 and to Rs.21,680 crores in 2009-10 while that of States for 2009-10 was Rs. 43,848 crores.

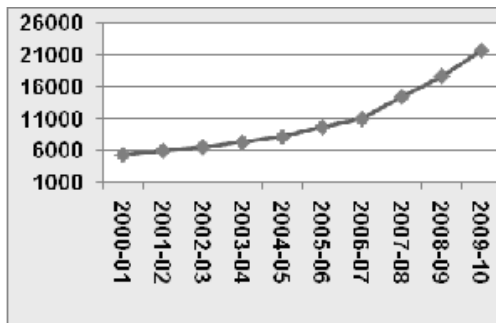


Figure 2: Trend in Central Government Health Budget

Source: Compiled from Expenditure Budget Volume 1: Government of India 2001-02 to 2009-2010.
Note: 2001-02 to 2008-09 is Accounts, 2009-10 is RE

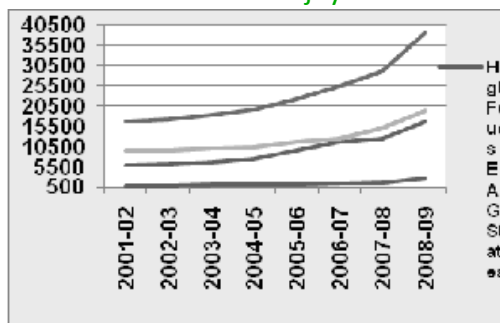


Figure 3: Trend in State Government Health Budget Expenditure (excluding NRHM)

Source: Compiled from RBI Study of Budgets 2001-02 to 2008-09.
Note: 2001-02 to 2007-08 is Accounts, 2008-09 is RE

If we look at the growth in state health expenditures (excluding NRHM) in three time periods: (a) Overall—2000-01 to 2008-09, (b) pre-NRHM phase—2000-01 to 2004-05, and (c) post NRHM phase—2004-05 to 2008-09, we find that the overall growth rate for all states was 12.8 per cent (compounded annually.) In the pre-NRHM period it was 5.7 per cent, and in the post-NRHM period it was 18.4 per cent.

Looking at the different category of states, the overall growth rate for High Focus states was 16.5 per cent, for High Focus-NE states it was 17.2 per cent, and for Non-high focus states it was 10.8 per cent (compounded annually). It clearly comes out that all three categories of states shows higher growth rates in the post-NRHM period as compared to the overall growth rate in the pre-NRHM period.

Household Spending on Health

Out-of-pocket expenditure (OOP) on healthcare forms a major barrier to health seeking in India. According to the National Sample Survey Organisation, the year 2004 saw 28 per cent of ailments in rural areas go untreated due to financial reasons—up from 15 per cent in 1995-96. Similarly, in urban areas, 20 per cent of ailments were untreated due to financial reasons—up from 10 per cent in 1995-96. Those who access ‘free’ government health services are expected to purchase medicines from private pharmacies; pay user fees for laboratory tests and of course the ubiquitous informal fees. Those who use the private services of course have to pay considerable amounts. Significantly, those who are insured also do not get full protection. While their OOP payments are reduced, they still have to pay for ambulatory care and for excluded conditions. It is clear that Indians (especially the vulnerable sections) do not have any form of financial protection and are forced to make OOP payments when they fall sick. This is regressive and has both economic as well as social consequences.

Social Health Protection

Apart from increasing public expenditure on direct provision of healthcare, the Central and state governments have also initiated various innovative schemes to increase access and choice of healthcare provider (public or private) to the people, especially in the form of various subsidized health insurance schemes. In order to reduce OOP expenditure of poor sections of the society, especially the unorganized sector which constitutes 93 per cent of the total work force, the XI Plan envisages effective risk pooling arrangements at the state level. A lot of health insurance schemes have been launched in the recent past, with Rashtriya Swasthya Bima Yojana (RSBY) being the most important one announced in the Union Budget 2007-08.

Launched on 1st October 2007, the RSBY provides coverage to workers in the unorganized sector who come in the category of Below Poverty Line (BPL) with a total assured sum of Rs. 30,000 per family per annum. Of the estimated premium of Rs.750 per family, the Government of India contributes 75 per cent and the remaining 25 per cent comes from the state governments. In the year 2008-09, the Central Government outlay for the RSBY was Rs. 205 crores; and until December 2009, 22 states and Union Territories had initiated the scheme across 172 districts covering 2.98 crore households.

Since 2005-06, the Central Government has been implementing a health insurance scheme for handloom weavers and ancillary workers, and in 2008-09 the outlay for this was Rs.340 crores. The scheme covers handloom weavers and three dependents and the benefit package includes hospitalisation expenses, including for all pre-existing diseases, as well as substantial provision for outpatient services. The scheme had covered 1.8 million weavers by 2008-09.

Many state governments have initiated health insurance schemes for the BPL population and unorganised workers. Some of the notable schemes are the Arogyasri Yojana (Andhra Pradesh), Kalainger Insurance Scheme for Life-Saving treatments (Tamil Nadu), Suvarna Arogya Suraksha Scheme (Karnataka), and Mukhya Mantri BPL Jeevan Raksha Kosh (Rajasthan). The focus of these schemes is to cover identified tertiary care diseases which involve catastrophic expenditure and are not covered under any other pre-existing health programmes.

Further many states have adapted the RSBY/Arogyasri model to suit their requirements and launched health insurance programmes. Haryana, Punjab, Maharashtra, Pondicherry, Tamil Nadu and Karnataka, Assam, Himachal Pradesh, Kerala, Sikkim, Uttarakhand, Himachal Pradesh and Jammu and Kashmir have initiated various models of health insurance schemes in 2008-09 and 2009-10.

Policy Issues for Health Financing in India

India should reiterate its commitment to achieving a target of increasing public spending on health to 3 per cent of the GDP—a recommendation of the National Commission on Macroeconomics and Health, endorsed by the NRHM and the Working Group on Health Care Financing including Health Insurance for the XIth Five-Year Plan and reiterated in the Eleventh Five-Year Plan document (2007–12) as well.

To achieve this level of funding, the following critical issues need to be addressed. More attention needs to be paid to Centre–State financial flows. Under the NRHM, the Central and state governments are expected to share additional health expenditures in the ratio of 85:15. Beyond 2012, the state governments are expected to absorb a higher burden, with the ratio changing to 75:25. As per the estimates made in the note prepared by the Ministry of Health & FW for the XIII Finance Commission, the additional funding needed for this increase in states share is Rs. 15,710 crores for the period 2012-15. This arrangement, however, needs to be carefully examined on a state-by-state basis, mainly with due consideration to the state’s fiscal ability. This also calls for working out appropriate incentive systems to ensure that states are rewarded financially for better utilization of public funds and also for recording improved health outcomes. Governments should move away from uniform norms of financing based on population size, geographical area, and unit of operation (such as PHC or sub-centre) towards differential funding based on services delivered, disease burdens, remoteness and difficulty of access.

Also, as per the Ministry’s note to the XIII Finance Commission, the gap in Health Human Resources and Infrastructure needs to be plugged to guarantee quality health services from the public health system at affordable costs, thus addressing the social health protection of the poor and underprivileged. As per these estimates, Rs.12,239 crores is needed to fill the infrastructure gap, of which Rs.9,074 is needed for creating new infrastructure and Rs.3,164 for upgrading the existing infrastructure from sub-centre to the CHC/FRU level. The same note estimated that the annual HR cost burden for the new facilities would be Rs.3,771 crores; while Rs.4,577 crores per year would be needed additionally to fill the existing HR gap.

The government has made a small beginning in the provision of untied funds to facilities, but currently the same funds are provided to all institutions irrespective of case loads, quality of care and package of services available. Also all providers of care receive the same payments despite wide variations in case loads managed or remoteness or difficulty of the area served. This if changed so that after a flat amount is guaranteed for retaining them in public service, those facilities and those providers that require more financial support or incentives are given can result in higher productivity.

Public expenditure in the health sector falls short of the target of 2 per cent of the GDP, as suggested in the Eleventh Five-Year Plan document. In order to achieve that target the public expenditure on health will have to increase to around Rs.1,60,000 crores by 2011-12 as against the budgeted amount of Rs. 66,000 crores in 2009-10 by the Centre and states put together. This will imply that the annual expenditure in the health sector will have to increase by 56 per cent per annum in the next two years. Raising the level of public expenditure by this magnitude in such a short span is a difficult proposition and would require fundamental changes in some key macro-economic indicators. The Tax/Revenue-GDP ratio could be an important factor in this regard, as currently (as per World Development Indicator 2008) the Central Government revenue-to-GDP ratio in India is 12.7 per cent as against the 27 per cent global average. This clearly shows that increasing the tax-to-GDP ratio may go a long way in raising the level of public health spending to the desired levels, along with increasing the absorptive capacity in the states.

Chapter VI

Policy Challenges and Need for Consensus

At the present stage of India's development, the health indicators have lagged behind the impressive economic progress evident over the past two decades. A new public health policy needs to be drafted which will reconfigure the health system to make it more efficient and equitable, so that this gap can be bridged. Such a policy must be evolved through wide-ranging consultations in which the voice of multiple segments of society are heard, unlike in the past where policies have been influenced mainly by recommendations of expert groups or international organisations. The new initiatives in health must be uniform and influenced by vigorous public debate. The consensus of national goals, emerging from such a process is, likely to gain greater acceptance and ownership by professional bodies, civil society organisations, the private sector and community representatives.

In the context of the above, this section suggests policy options that require debate and discussion. These suggestions have evolved from the evidence and analysis of the health sector concerns detailed in the previous pages. It is believed that India is at a critical juncture where policy choices made or options not considered could well have a profound impact on the health and well-being of future generations. It is for this generation to make the choice of which road to travel. Listed below are some key policy issues that need to be addressed in the short term.

1. *Increase Public Investment*

The accepted norm for public spending on health is 2-3 per cent of GDP and about 15 per cent of public budget. The political will to provide the money has been built but public health governance is to rise to the challenge of absorbing these funds.

2. *Role of Purchasing Health Care Services from the Private Sector*

Universal access to health care is our policy commitment. But this cannot be done by public-sector provisioning alone. There needs to be an engagement with the large and unregulated private sector, so one can harness the human resources and the investment in that sector for public good. This would also require regulatory frameworks and the ability of the government to monitor closely any deviation and keeping control on prices. It would require ensuring that such partners bring in investments to the public health cause and supplement public health services, and not become transfers of state investment into private hands or substitution of free public services by private ones. Also, public-private partnerships should be cashless services with no payments except token ones at the point of utilisation. Should we not have a policy to put in place a set of schemes in which the private sector can contribute and then map the private sector and recruit as many partners as are willing to work under this framework? Not everyone would join but the more ethical and those willing to work at reasonable profit margins would join and this would lead to the emergence of a much larger network where, like in the UK, the practitioners are de facto a part of the public health

system. However, what must be remembered is that a viable and extensive public sector would be needed to provide both cost and quality benchmarks. Also, to what extent is such a large-scale purchase of health services going to be feasible, cost effective, and sustainable?

3. Focus on Health Determinants

No insurance policies or government spending on health can be sustainable if the basic status of health as determined by access to safe water, nutrition and sanitation are not ensured. We need to move towards ensuring access to safe drinking water, sanitation including waste disposal systems, controlling environmental pollution and ensuring a measure of nutritional safety nets. Each of these basic entitlements—which have profound impact on health—is to be secured through a coordinated approach.

4. Human Resources for Health

One major constraint in achieving universal access to health services is the non-availability of skills and trained human resources. By international standards, India fares very poorly, calling for strong remedial action. This requires primarily:

- (a) Opening many more medical colleges and nursing schools, taking care to see by positive state action, that most of these are opened in the areas where skilled human resource densities are low and professional educational institutions are few. This would also require major efforts at faculty development and the use of modern technology to provide quality education. How would we ensure that these colleges open up where they are needed most?
- (b) How can we make our health services less doctor-dependent and more nurse-enabled? Can new models of medical and nursing and paramedical education be created to meet specific shortages? Should every medical college and nursing college be linked to a district hospital and a district health system and augment the skills of the service providers there?
- (c) Putting in place a National Council for the Human Resources in Health, which would play a guiding role in defining national human resource requirements and policies to meet these requirements and which should define the regulatory framework with respect to professional bodies and standards and the expansion of professional and technical education with quality.

5. Impact of Technology and Technology Assessment

Technological developments have contributed to improved quality outcomes and have also in several cases reduced the need for hospitalisation. There's been rapid development in telemedicine which has the ability to make the services of a specialist needed at every community health centre redundant. The coming years will therefore require a shift in the way health care delivery is organised. How can public health policy integrate these developments into its delivery systems which have already been attempted in the private sector? What investments would need to be put in for obtaining these skills and competencies into public sector provisioning? Further given the inappropriate and inefficient use of technology resulting in increased biological and economic costs there is a need for guidelines, technology audits and cost-effective studies. Creation of an institution

on the lines of the National Institute of Clinical Excellence would help develop evidence for technological assessment and decision-making. The issue is how will adoption of such guidelines be regulated and enforced?

6. *Rising Out-of-Pocket Expenditures*

A major expenditure item is drugs. With the patent regime and the deregulation of administered pricing regime, prices of new drugs and drugs for many non-communicable diseases have made them unaffordable to the majority of the poor. There is a need to develop a balanced policy which would encourage innovation but also ensure that none are denied access to life-saving drugs due to inability to pay.

7. *Health Promotion*

The rise of institutional care and technology necessitating a measure of specialisation and the increasing demand for such technology-based care have 'medicalised' health care. On the one hand, the huge wealth of low-cost, rational and sustainable systems of traditional medicines is not being optimally tapped and on the other basic preventive health care has been given a secondary place in public policy. In almost every state the public health cadres trained to promote good health, prevent disease and educate good-health values have been replaced by clinicians with little interest in preventing ill-health. India needs a health system where treating the disease is not the only option but health promotion is given priority.

8. *Role for Civil Society Organisations*

In several parts of India, civil society organisations have played a pioneering role in developing community health programmes. The process of community participation that has started needs to be strengthened with a shift of much greater share of promotive and preventive work to community-level institutions and functionaries. It would also involve encouraging not-for-profit organisations to provide leadership and direction and capacity-building inputs for community roles including the critical role of community participation in the management of public health facilities and community monitoring and facilitator arrangements, especially where health care is purchased. However, civil society response has been slow in being able to respond on scale. High quality civil society organizations with capacity to deliver and be accountable continue to be few and scattered. What can / needs to be done to energize this so that they can become equal partners to government and private sector in providing the health care services.

9. *Role of Centre in State Health Systems Development*

At present Central funding is largely programmatic. However it is increasingly being recognised that unless states also invest in primary health services the desired improvements in health indicators cannot be achieved. It is worth asking if it would not be more efficient to shift from programme-based financing to performance-based financing, where allocations are linked to achievements of specified indicators that are assessed by independent evaluations.

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LIST OF ABBREVIATIONS

ANC	:	Antenatal care
ANM	:	Auxiliary Nurse Midwife
ARI	:	Acute Respiratory Infection
ARSH	:	Adolescent Reproductive and Sexual Health
ASHA	:	Accredited Social Health Activist
AWW	:	Anganwadi Worker
AYUSH	:	Ayurveda, Yoga, Unani, Siddha and Homeopathy
BMI		Body Mass Index
BPL	:	Below Poverty Line
CBR		Crude Birth Rate
CGHS		Central Government Health Scheme
CH	:	Child Health
CHC	:	Community Health Centre
DHFW	:	Department of Health and Family Welfare
DH	:	District Hospital
DLHS	:	District Level Household Survey
DPMU	:	District Program Management Unit
DOTS	:	Directly Observed Treatment Strategy
EAG	:	Empowered Action Group
EC	:	Emergency Contraception
EmOC	:	Emergency Obstetric Care
ESIS	:	Employees State Insurance Scheme
FDS	:	Fixed Day Services
FMG	:	Finance Management Group (MOHFW)
FP	:	Family Planning
FRU	:	First Referral Unit
GoI	:	Government of India
GDP	:	Gross Domestic Product
GNM	:	General Nurse Midwives

HIV	:	Human Immunodeficiency Virus
HMIS	:	Health Management Information System
HR	:	Human Resources
HRD	:	Human Resource Development
HDR	:	Human Development Report
JE	:	Japanese Encephalitis
ICDS	:	Integrated Child Development Services
ICMR	:	Indian Council of Medical Research
IDSP	:	Integrated Disease Surveillance Project
IEC	:	Information, Education and Communication
IGNOU	:	Indira Gandhi National Open University
IMEP	:	Infection Management and Environment Plan
IMNCI	:	Integrated Management of Neonatal and Childhood Illness
IMR	:	Infant Mortality Rate
IPC	:	Interpersonal Communication
IPHS	:	Indian Public Health Standards
IUD	:	Intra Uterine Device
JRM	:	Joint Review Mission
JSY	:	Janani Suraksha Yojana
LLINS	:	Long Lasting Insecticidal Nets
LSAS	:	Life Saving Anaesthesia Skills
M&E	:	Monitoring and Evaluation
MDR	:	Multi Drug Resistant
MMR	:	Maternal Mortality Ratio
NACP	:	National AIDS Control Programme
NCD	:	Non Communicable Disease
NCRP	:	National Cancer Registry Programme
NFHS	:	National Family Health Survey
NGO	:	Non Governmental Organisation
NHA	:	National Health Account

NHP	:	National Health Policy
NRHM	:	National Rural Health Mission
NSDP	:	National State Domestic Product
NSSK	:	Navjat Shisu Suraksha Karyakram
NSSO	:	National Sample Survey Organisation
OOP	:	Out of Pocket Expenditure
PHC	:	Primary Health Centre
PPP	:	Purchasing Power Parity
RDK	:	Rapid Diagnostic Kits
RCH	:	Reproductive and Child Health
RKS	:	Rogi Kalyan Samiti
RSBY	:	Rashtriya Swasthya Bima Yojana
RTI /STI	:	Reproductive tract infection / Sexually transmitted infection
SBA	:	Skilled Birth Attendant
SNCU	:	Sick Newborn Care Unit
TB	:	Tuberculosis
TFR	:	Total Fertility Rate
THOA	:	Transplant of Human Organs Act