Section 4

Components of Primary Health Care in india

I. Maternal and Child Health including Family Welfare

Current Situation Analysis of Maternal Health

From the inception of Family Welfare Programme to current stage, the country has progressed tremendously in key maternal and child indicators. The achievement is shown in Table 4.1.

Table 4.1: Progress of Family Welfare Programme in India

Sl. No.	Parameters	1951	1981	1991	Current Levels
1.	Crude Birth Rate (per 1000 population	40.8	33.9	29.5	23.8 (2005)
2.	Crude Dealth Rate (per 1000 population)	25.1	12.5	9.8	7.6 (2005)
3.	Total Fertility Rate	6.0	4.5	3.6	2.9
4.	Maternal Mortality Ratio (per 100,000 live births)	NA	NA	398 SRS (1997-98)	301 SRS (2001-03)
5.	Infant Mortality Rate (per 1000 live births)	146 (1951-61)	110	80	58 (2005)
6.	Child Mortality Rate (0-4yrs.) per 1000 children	57.3 (1972)	41.2	26.5	17.0 (2004)
7.	Couple Protection Rate (%)	10.4 (1971)	22.8	44.1	46.6
8.	Expectation of life at birth in years - Male - Female	37.1 36.1 (1951)	54.1 54.7	60.6 61.7 (1991-96)	63.8 66.1 (2001-05)

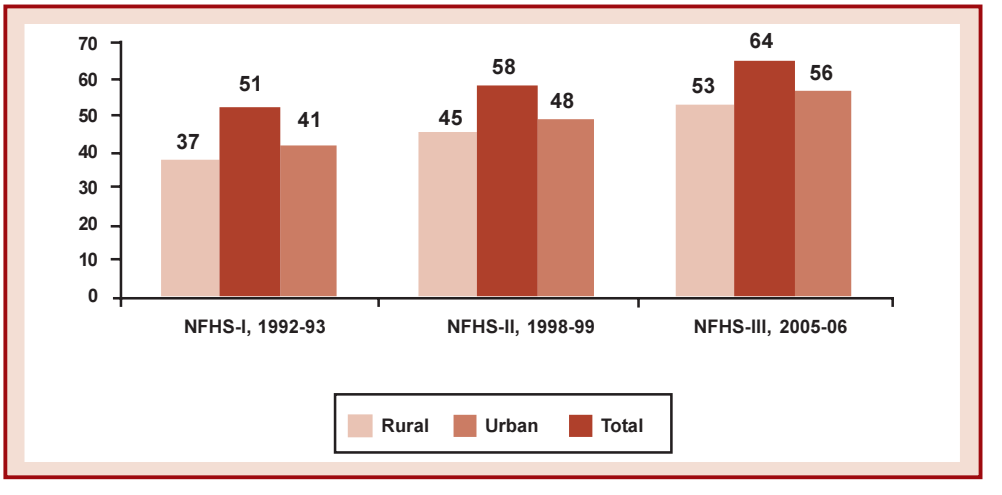
Note : NA Not Available

Source: Office of Registrar General of India; National Family Health Survey (NFHS)

The two important demographic goals of the National Population Policy (2000) are: achieving the population replacement level (TFR 2.1) by 2010 and a stable population by 2045. TFR, which in the early 1950s was 6.0, has declined to 2.9 in 2005. Thus, India is moving towards its goal of replacement-level fertility of 2.1. The percentage of married women using contraception has increased from a level of just over 10% in the early 1970s to 41% in 1992-93, 48% in 1998-99, and to 56% by 2005-06 (Figure 4.1). However, there are huge differentials amongst various States.

Photo Credit: Relative Media, Source NFHS 3 (2005-06)

Figure 4.1 : Trends in Contraceptive Use (%) (Currently married women in 15-49 yrs)



Source: NFHS-3, (2005-06).

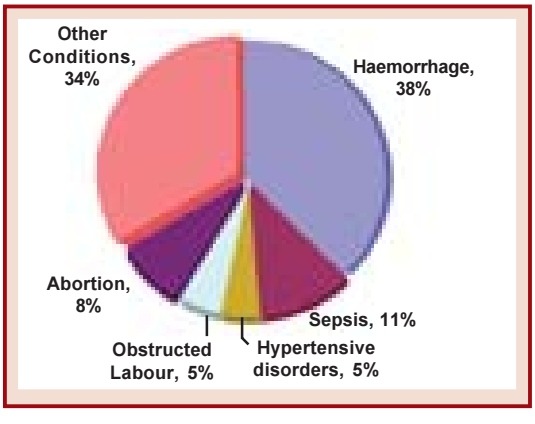
Maternal Mortality Ratio (MMR)

The MMR during 2001-03 has been 301 per 1,00,000 live births (RGI, 2006). Levels of maternal mortality vary greatly across the regions due to variations in access to emergency obstetric care, prenatal care, anaemia

rates among women, education level of women, and other factors. There has been a substantial decline during the seven-year period of 1997-2003 (398 to 301/ 1,00,000 live births). However, the pace of decline is insufficient. The major causes of these deaths have been identified as shown in Figure 4.2 as hemorrhage (both ante and post partum), toxemia (hypertension during pregnancy), anemia, obstructed labour, puerperal sepsis (infections after delivery and unsafe abortion).

Photo Credit: Relative Media, Source NFHS 3 (2005-06)

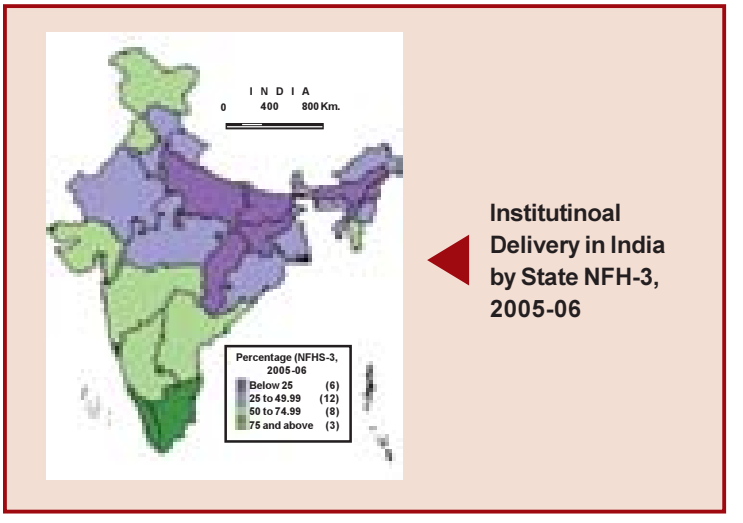
Figure 4.2 : Causes of Maternal Mortality in India



Source : SRS, 2003.

Other Maternal health indicators reflecting the ongoing programme interventions are shown in Table 4.2. Delivery care remains an important determinant of many maternal health outcomes. The trend for undertaking an institutional delivery is on increase as desired in India but differentials exist in rates in different parts as illustrated in Figure 4.3.

Figure. 4.3



Source : SRS, 2003.

Table 4.2: Trend in Outreach of Services for Maternal health in India

(In percent)

Indicator	NFHS I (1992-93)	NFHS II (1998-99)	DLHS (2002-04)	NFHS III (2005-06)
Any Antenatal Check Up	62.3	65.4	73.4	77.0
Three or more antenatal check ups	44.0	44.0	50.1	50.7
Total Institutional Deliveries	26.0	33.6	40.5	41.0
Safe Deliveries	34.2	42.3	47.6	48.2

Source: National Family Health Survey (NFHS) I, II, III; District Level Household Servery (2002-04)

Maternal and Child Health Programmes in India

India has a long history of maternal and health programmes since Independence, which have undergone significant shifts in their emphasis over time. The evolution of the programmes is shown in Table 4.3.

Table 4.3. Evolution of Maternal and Child Health Programmes in India

1952	Family Planning Programme
1961	Dept. of Family Planning Created
1971	Medical Termination of Pregnancy (MTP) Act
1977	Renaming of Family Planning to Family Welfare
1992	Child Survival and Safe Motherhood Programme
1996	Target Free Approach
1997	Reproductive Child Health Programme Phase II
2005	Reproductive Child Health Programme Phase II

The 5-year phase of RCH II was launched in 2005 with a vision to bring about outcomes as envisioned in the Millennium Development Goals, the National Population Policy 2000 (NPP 2000), the Tenth Plan, and the National Health Policy 2002 (Table 4.4) , minimizing the regional variations in the areas of RCH and population stabilization through an integrated, focused, participatory programme meeting the unmet demands of the target population, and provision of assured, equitable, responsive quality services.

Reproductive Child Health Programme promoted need - based, client - centered, demand - driven, high quality and integrated services- fertility regulation, maternal & child health with reproductive health provision.

Table 4.4 : Targets of Major Policies/Projects Relevant ot MCH

Indicator	Tenth Plan Goals (2002-2007)	RCH II Goals (2005-2010)	National Population Policy 2000 (by 2010)	Millennium Development Goals (by 2015)
Population Growth	16.2% (2001-2011)	16.2% (2001-2011)	-	-
Infant Mortality Rate	45/1000	35/1000	30/1000	-
Under 5 Mortality Rate	-	-	-	Reduce by 2/3rdsfrom 1990 levels
Maternal Mortality Ratio	200/100,000	150/100,000	100/100,000	Reduce by 3/4th from 1990 levels
Total Fertility Rate	2.3	2.2	2.1	-
Couple Protection Rate	65%	65%	Meet 100% needs	-

Source : Tenth Five Year Plan, RCH II, NPP 2000, Millennium Development Goals

Major Initiatives in Reproductive Child Health II

Maternal Health

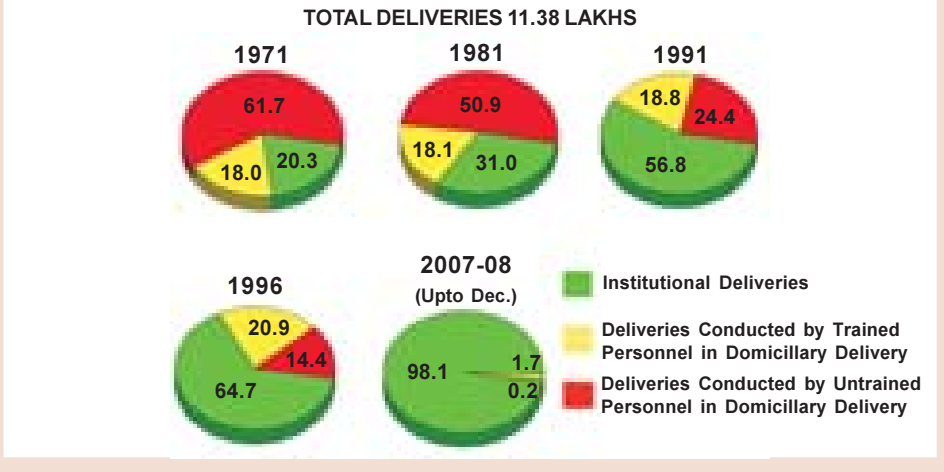
1. Provision of Essential Obstetric Services- Include antenatal care, Institutional/ safe delivery practices and postnatal care for timely and early detection of emergencies.
   a. Provision of 24 Hour delivery services at all CHCs and select PHCs.
   b. Post natal care for mother and newborn- ensuring post natal care within first 24 hours of delivery and subsequent home visits on Day 3 and Day 7
   c. Skilled attendance at Birth: Government of India is committed to provide skilled attendance at birth at every institution and

community level. A policy decision has been taken to permit staff nurses and ANMs to give certain injections and to also perform certain interventions under specific emergency situations to save the life of the mother.

Photo Credit: NRHM Photo Gallery

Tamil Nadu has achieved great success in increasing the institutional deliveries primarily by providing additional services at PHC level - posting of additional staff nurses and providing round the clock delivery services in all the PHCs currently. There was a remarkable increase in number of institutional deliveries, mainly at PHC level, after taking these measures as shown in Figure 4.4

Figure 4.4 : Increase in institutional deliveries (%) - Tamil Nadu



Source : www.mohfw.nic.in/nrhm

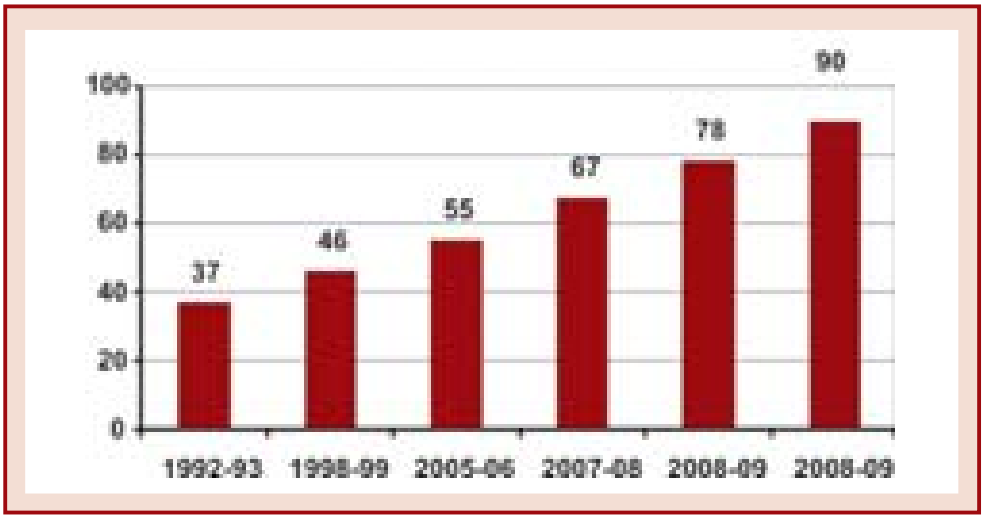
2. Emergency Obstetric Care at First Referral Units
    a. Referral services at Community and Institutional levels
    b. Setting up Blood Storage Centres at FRUs
    c. Training of MBBS doctors in life saving anesthetic skills for emergency obstetric care.
    d. Training of MBBS doctors in Emergency obstetric management skills
3. Safe Abortion facilities
    a. Medical abortion under Medical supervision
    b. Provision of Quality Manual vacuum Aspiration facility at all CHCs and 50% of PHCs
4. Provision of management of Reproductive Tract Infections/ Sexually Transmitted Infections facilities at FRUs, CHCs and 50% of PHCs
5. **Janani Suraksha Yojna (JSY)**- It is a safe motherhood intervention implemented under NRHM with the objective of reducing maternal and neonatal mortality by promoting institutional delivery among the poor pregnant women. It is 100% centrally sponsored scheme. The scheme has identified the critical role of ASHA in facilitating delivery by a poor pregnant female and arranging for referral transport. The scheme operates all over country with a special focus on 18 Low performing states and rest high performing states. It functions by giving package of cash incentives to pregnant lady and ASHA.

To improve rates of institutional deliveries, in addition to JSY, states have adopted their own specific models, one such successful initiative done in Gujarat is **Chiranjivee Yojana**. Understanding that access to delivery care services for management of obstetric complications is of prime importance,

the scheme focuses on building public-private partnership. The scheme was largely intended to benefit pregnant women from poor families, specifically those below the poverty line. The average cost per provider has been worked out under this scheme to be Rs 1,795/- of which Rs 200 was earmarked for transportation to the beneficiary and another Rs 50/- for the person accompanying the beneficiary. In all, a private provider is expected to get Rs. 1,545 for each delivery conducted. So far 862 private providers out of 2000 have been enrolled under this.The scheme has been successful in saving many lives of newborns and deliveries by handling complicated delivery cases. The success of this is depicted in saving lives of newborns and mothers and increase in institutional deliveries in Gujarat (Figure 4.5).

Source: NRHM Photo Gallery

Figure 4.5 : Trend of Institutional Deliveries in Gujarat (%)



Source : www.mohfw.nic.in/nrhm

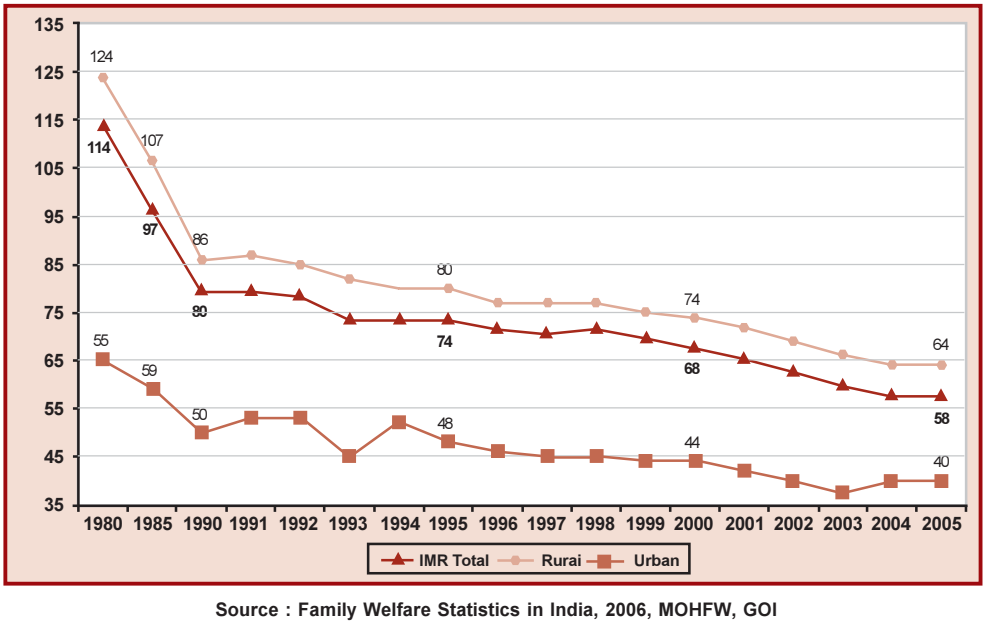
Current Situation Analysis of Child Health

India is faced with an unparalled child survival and health challenge. Child Mortality Rate (0-4 years) per 1000 children is 17.0 (2004,) declined from the levels of 57.3 in 1972 (RGI). Still, India contributes largely to global child, infant, and neonatal deaths.

Infant Mortality Rate (IMR) in India

One of the most sensitive indicators of the health status of a population is IMR currently at 58 per 1000 live births. (SRS 2005, RGI Office) It is lower in urban areas of the country, 40/ 1000 Live Births than in rural areas, 64/ 1000 live births. Kerala has lowest IMR (14/ 1000 live births) and Madhya Pradesh is the highest at 76 per 1000 live births. Higher rates of antenatal, delivery and postnatal are usually associated with Lower IMR. Such an inverse relationship is observed with higher education status of mothers and a higher Standard of living index. The trend of IMR with rural Urban figures is shown in Figure. 4.6

Figure 4.6 : Infant Mortality Rates - Rural / Urban (All India)

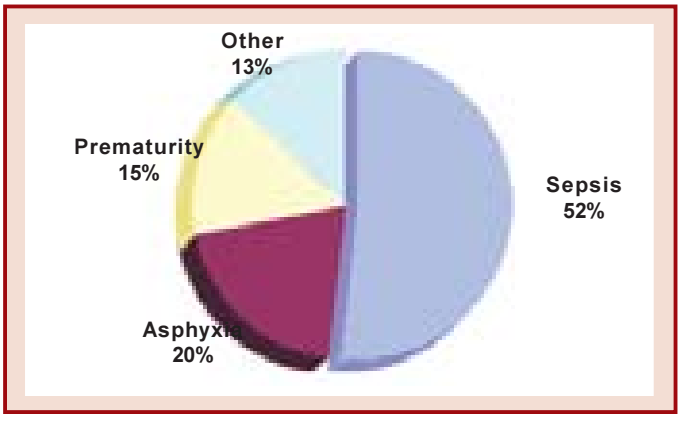


Source : Family Welfare Statistics in India, 2006, MOHFW, GOI

The causes of IMR in India comprise of Acute Respiratory Infections , Diarrhea, Sepsis, Asphyxia, Prematurity and Others. Neonatal Mortality In India (at 37 per 1000 live births) constitutes nearly 60-75% of the IMR in various states. The causes of Neonatal Mortality are shown In Figure 4.7.

Photo Credit: Relative Media, Source : NFHS 3 (2005-06)

Figure 4.7 : Causes of Neonatal Mortality in India



Source : State of India's Newborns, 2004

Child Health under Reproductive Child Progamme Phase II: Major Initiatives

1. Integrated Management of Neonatal and Childhood Illnesses
2. Home-based Neonatal Care
3. Promotion of Breast feeding and Complimentary feeding
4. Control of Deaths due to Acute Respiratory Infections.
5. Control of Deaths due to diarrheal diseases

Integrated Management of Neonatal and Childhood Illnesses (IMNCI)

IMNCI strategy encompasses a range of interventions to prevent and manage 5 major childhood illnesses- ARI, diarrhea, measles, malaria, and malnutrition with the major causes of neonatal mortality - prematurity and sepsis. In addition, IMNCI teaches about nutrition including breast feeding promotion, complimentary feeding and micronutrients. It focuses on preventive, promotive, curative services i.e. gives a holistic outlook to the programme. Major components of the strategy are:

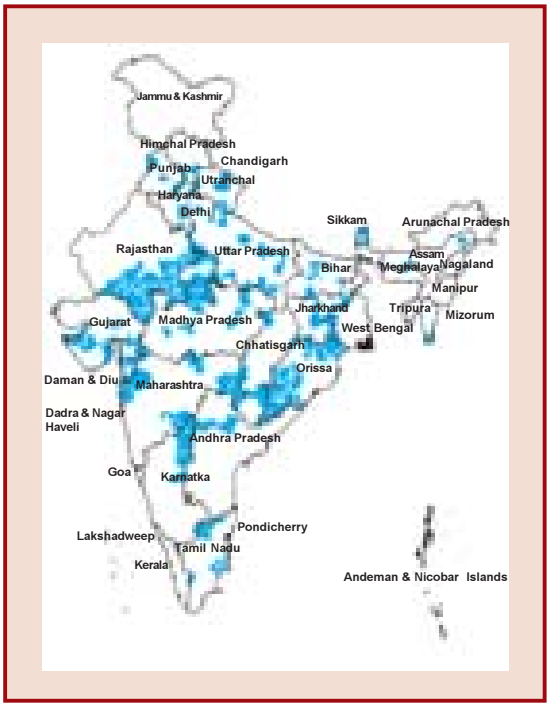
1. Strengthening the skills of health care workers
2. Strengthening the health care infrastructure.
3. Involvement of community

The first two components are facility based IMNCI and the third one is community IMNCI. The major features of the Indian adaptation are:

- Focus on the young infant: since a significant proportion of child mortality is centered in the first few months of life; the adapted version gives a concerted focus to management of children in this period of life and begins with the young infant and subsequently deals with conditions in older children.
- Inclusion of essential newborn care in the first week of life was a felt-need of the programme and has been included.
- Development of a protocol and algorithm for home visits by field functionaries like ANMs and AWW for all newborns in the first week of life.
- Ensuring harmonization between existing child health interventions and programmes like ICDS and anti malaria programme implemented by agencies other than the Department of Family Welfare that impact child health.

- 8 days training package in comparison to 11 days global training IMNCI has been introduced in the country in a phased manner. 140 districts have initiated IMNCI in the Country (Figure 4.8)

Figure 4.8 : Districts (140) Implementing IMNCI in India



Source : Annual Report 2007-08, MOHFW, GOI

Home Based Neonatal Care (HBNC): Government of India has approved the implementation of HBNC based on Gadchiroli Model (Box 4.1) ASHA will be utilized in provision of this care. Two districts in five states will implement HBNC- Madhya Pradesh, Uttar Pradesh, Orrissa, Rajasthan and Bihar.

Box 4.1: Home Based Neonatal care (Gadchiroli Study)

It is based on the provision of home-based care by the woman of the community-the VHWs, the TBAs, mother and the grandmothers. The VHWs provide health education to the mothers during the ANC vistis. They are also trained to resuscitate aphyxiated infants, support breastfeeding and maintenance of body temperature, recognize and teat sepsis / pneumonia using antibiotic, and provide are at home to preterm and LBW infants.

The major findings of the study were: the incidence of the neonatal morbidities (infections, breastfeeding problems, hypothermia) declined by 49% and the case fatality in preterm LBW infants reduced by nearly 60%

As 83% of births in rural india are in home, this study showed a promising new avenue in home-based care especially for the rural and the tribal community.

Source: National Neonatology forum & Save the Children/US, State India's Newboms, 2004

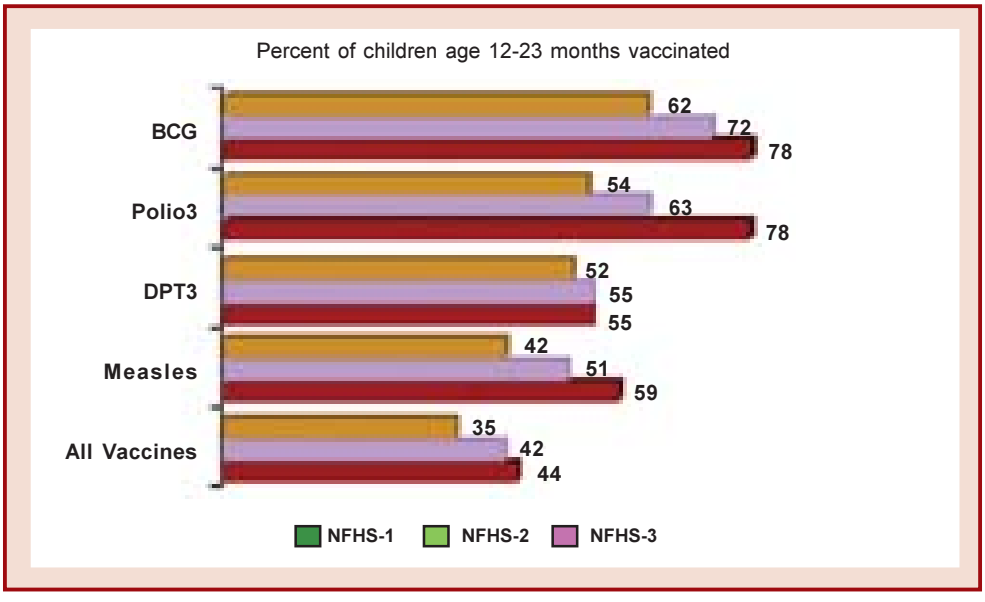
II. Immunization

The Expanded Programme on Immunization (EPI) was launched in 1978 in India with the objective of reaching 80% of the children in the country with vaccinations to protect them against six diseases namely, Polio, Diphtheria, Pertussis, Tetanus, Typhoid, and tuberculosis. The National Health Policy (1983) accorded high priority to the immunization of children, and universal immunization against the six vaccine preventable diseases (VPD) by 2000 was set as one of the goals. In 1985, the EPI program was renamed as Universal Immunization Programme (UIP) aiming at universal coverage of all children. Typhoid vaccine was withdrawn and Measles vaccine was included in the programme as part of the primary immunization schedule to infants and in addition; pregnant women were to receive Tetanus Toxoid vaccination. during antenatal period Recently Hepatitis B vaccine and injectable Vi antigen Typhoid vaccine have also been introduced as pilot projects

As per the third round of the NFHS (2005-2006), only 36 % children aged 12-23 months received all primary vaccinations including Measles by the age of one year, whereas 44% children received the same at any time before the

survey. Trends in immunization coverage of different vaccines are depicted in Figure 4.9.

Figure 4.9 : Child Immunization Trends

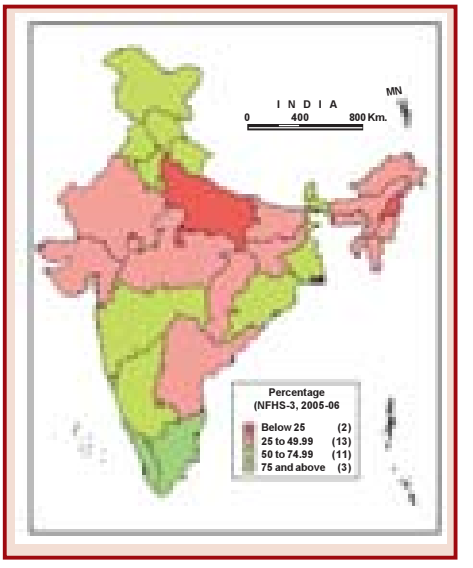


Soures : NFHS-3, India, 2005-6

Age-appropriate coverage rate were higher for Polio vaccine (73%) as compared to DPT (51%) because of the various rounds of Pulse polio campaigns. Trends in vaccination coverage over the 15 years period from NFHS 1 to NFHS 3 indicate that the percent of children not receiving any vaccination has dropped sharply from 30% (1992-1993) to 5% (2005-2006). There are differences in Immunization coverage by states as shown in Figure 4.10

Between NFHS-2 (1998-99) and NFHS-3 (2005-06), full vaccination coverage increased in 19 of the 29 states and dropped in the remaining 10 states.

Figure 4.10 : Children Fully Immunized in India



Soures : NFHS-3, 2005-06

Polio Eradication Programme

India has achieved remarkable success in reduction of polio cases in the country, and the incidence of wild poliovirus has drastically declined over the years. Box 4.2 describes the major milestones of the polio eradication programme of the country since 1994, which is when the Pulse Polio Immunisation (PPI) programme was initiated. As per the Ministry of Health and Family Welfare. The number of reported cases of Polio declined from 28,757 during 1987 to 3, 265 cases in 1995 and this success continued in regard to reduction in cases as depicted in Table 4.5; there were 1934 cases of polio in 1998 and latest figures in 2008 are 316 (as on July 19, 2008)

Box 4.2 : Polio Eradication in India: Milestones

1994	Pilot Project in Delhi with 2 PPI
1995	Introduction of PPI in country for children below 3 years
1996-97	PPI rounds for children upto 5 years
1997	Launch of National Polio Surveillance Project
1999-2000	Intensification of PPI as IPPI (house-to-house strategy)
2002	Major Resurgence (1600 cases)
2005	Use of Monovalent OPV 1 in selected areas
2006	Next Resurgence of Polio Cases (676 cases)
2006	Use of Monovalent OPV 3 in selected areas
2007-2008	Predominance of Wild Polio Virus 3 transmission in Uttar Pradesh

Table 4.5. Wild Polio cases from 1998 to 2008.

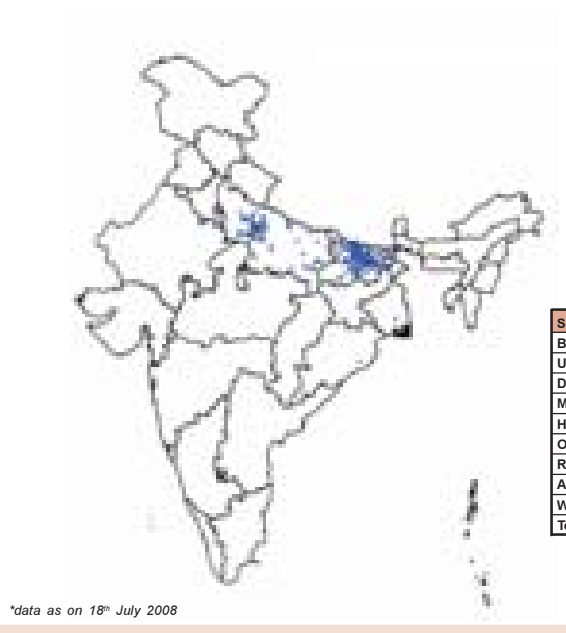
Month	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
January	112	36	36	7	18	51	4	10	8	24	112
February	32	22	10	1	8	16	3	5	9	14	53
March	42	11	10	3	7	9	1	1	8	14	41
April	26	8	20	3	16	7	1	2	13	14	41
May	49	39	6	4	42	5	9	2	36	32	33
June	118	69	8	13	117	7	14	6	76	30	32
July	324	142	25	30	251	25	13	3	121	64	4
August	418	187	39	62	280	29	18	6	114	78	
September	283	193	32	33	334	30	18	14	137	82	
October	170	195	31	38	247	20	32	7	71	98	
November	226	155	31	43	180	16	14	7	55	203	
December	134	69	17	31	100	10	7	3	28	221	
Total	**1934**	**1126**	**265**	**268**	**1600**	**225**	**134**	**66**	**676**	**874**	**316**

Source: National Polio Surveillance Project, Government of India.

In recent Years of Polio epidemiology in India, there has been a significant decline in the number of cases due to Type 1 and Type 3 is circulating largely in Bihar and Uttar Pradesh (Figure 4.11).

The Government of India is committed to realize the goal of eradication of Wild Polio Virus transmission from the country and sustained efforts are continuing to achieve this goal.

Figure 4.11 : Location of Polio Virus by Type, 2008*



State	P1	P3	Total
Bihar	2	206	208
Uttar Pradesh	1	97	98
Delhi	1	1	2
Maharashtra	0	2	2
Haryana	0	1	1
Orissa	1	0	1
Rajasthan	0	1	1
Assam	1	0	1
West Bengal	1	1	2
Total	7	309	316

*data as on 18th July 2008

Source: National Polio Surveillance Project, Government of India.

III. Nutrition

Malnutrition, defined as underweight children relative to an internationally accepted reference population, has not declined significantly over the last decade and a half. In 1992-93 (NFHS-1) it was 54%; in 1998-99 (NFHS-2), it

was 47%, and in 2005-06 (NFHS-3) it was 46%. The trends in 15 period time frame from NFHS-1 to NFHS-3 are depicted in Figure 4.12.

Figure 4.12 : Trends in Childhood (0 - 3 Years of Age) - Malnutrition in India

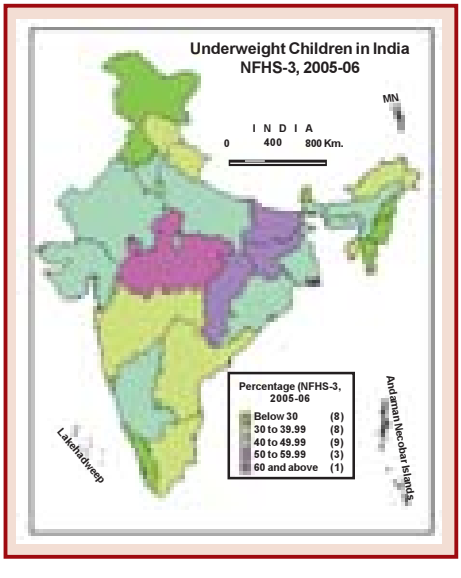
Nutritional	1992-93	1998-99	2005-06
Parameter	NFHS-1	NFHS-2	NFHS-3
Stunted	52.0	45.5	38.4
Wasted	17.5	15.5	19.1
Underweight	53.4	47.0	45.9

Note: Figures of NFHS-1 above are for 0-4 years. However, NFHS-1 later generated data for below 3 years children with 51.5% children being underweight.

Source: NFHS Surveys

Inter-state differences exist in respect to prevalence of malnutrition (Figure 4.13). In Bihar, Jharkhand, Madhya Pradesh, Chhatisgarh, and Uttar Pradesh malnutrition rates are well above the national average of 46%. Some of these states have actually seen an increase in the share of malnourished children in the 0-3 year-old child population between 1998-99 (NFHS-2) and 2005-06 (NFHS-3).

Figure 4.13



Micronutrient Deficiencies

Anaemia

As revealed by NFHS-3 among children and women, anaemia is on the rise. As much as 74.2% of the children of 6-35 months were anaemic (NFHS-2) that has increased to 79.2% as per the NFHS-3. Similarly, the percentage of married women in the age group 15-49 who were anaemic has increased from 51.8% in 1998-99 to 56.2% in 2005-06 and that of pregnant women of 15-49 years has increased from 49.7% in 1998-99 to 57.9% in 2005-06.

Iodine Deficiency Disorders (IDD)

They have been recognized as a public health problem in India since the 1920s. In India, it is estimated that more than 200 million people are at risk of IDD, while the number of persons suffering from goiter and other iodine deficiency disorder is above 71 million. The surveys conducted by the Central and State Health Directorates, Indian Council of Medical Research and Medical Institutes have clearly demonstrated that not even a single state/ Union Territory is free from the problem of IDD. Sample surveys have been conducted in 28 states and 7 Union Territories that have revealed that out of 324 districts surveyed so far, 263 districts are IDD endemic, i.e. prevalence of IDD is more than 10 percent.

Vitamin A Deficiency Disorders (VAD)

Though the prevalence of severe forms of VAD such as corneal ulcers/ softening of cornea (keratomalacia) has in general become rare, Bitot spots were present in varying magnitudes in different parts of the country (National Nutrition Monitoring Board 2003). The prevalence was higher than the WHO cut-off level of 0.5%, indicating the p ublic health significance of the problem

of VAD. There is huge inter-state variation in the prevalence of VAD among children.

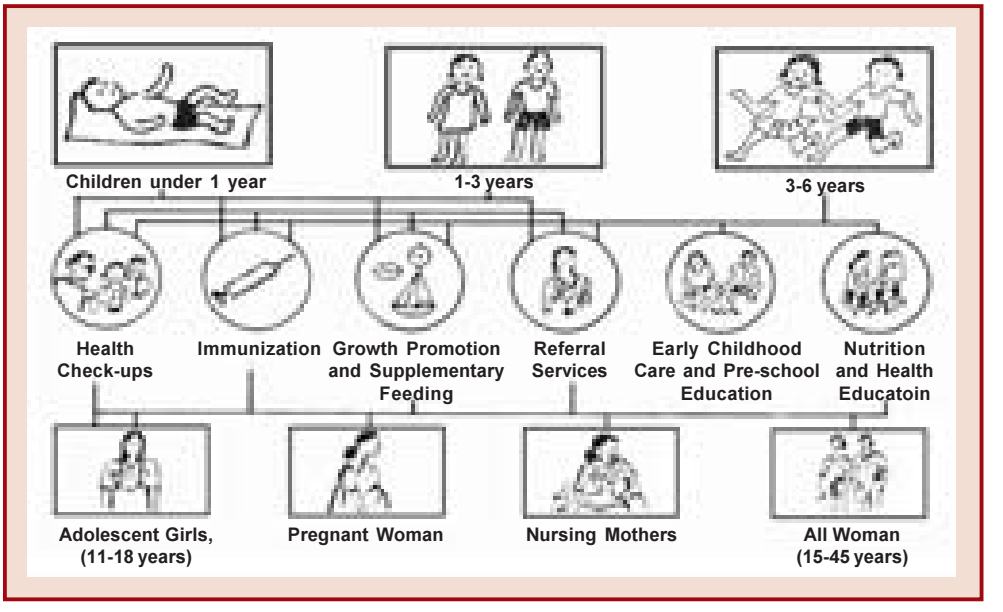
Major Nutrition programmes in India

Integrated Child Development Services

Started in 1975 in 33 experimental blocks of India, the *Integrated Child Development Services (ICDS) scheme* is the world's largest integrated early child development programme. The supplementary nutrition component of the scheme is the convergence point for the delivery of a range of health, nutrition, and education interventions from pregnant and lactating women and children below the age of 6 years. A new component for nutritional supplements to adolescent girls was added later. As on 31 March 2007, 5829 projects (blocks) and 0.8 million AWCs have been made operational. Currently, services under the scheme are being provided to about 70 million beneficiaries, comprising of about 58 million children (0-6 years) and about 12 million pregnant and lactating mothers (ICDS IV Concept Note, 2007). The ICDS is essentially seen to function as an important aspect of the primary health care programme. Apart from the distribution of nutrition supplements, the Anganwadi centre is the hub for the delivery of primary health care interventions by the ANM such as immunization, distribution of Iron Folic Acid and Vitamin A supplements, distribution of oral contraceptive pills and other contraceptives, growth monitoring and promotion, and health education and counseling to mothers. The beneficiaries and the functions of ICDS are depicted in Figure 4.14.

The programme is implemented through a network of community-based Anganwadi centres (AWCs) run by an Anganwadi worker (AWW) with assistance from a helper or sevika. At present, there are 7,81,000 AWCs operating in all the blocks of the country, though the scheme has yet to achieve the mandated universalization. Currently, ICDS is under its revamping phase under which univeralization of the scheme is planned.

Figure 4.14 : Beneficiaries of ICDS



Source: Ministry of Women and Child Development, Government of India

Tamil Nadu Integrated Nutrition programme (TINP)

The Noon Meal Programme launched in 1982 gave a tremendous boost for health, welfare and the acceptance of the small family norm. The programme was started with the objective of reducing the malnutrition rates, micronutrient deficiency rates and prevalence of low birth weight.With this programme, the school attendance has improved; centers serve as immunization/ antenatal care/ supplementary feed centers for 6 months to 2 years old children. It provides employment to 0.2 million women, mostly widows and destitute, as Mid-day Meal organizers. These women helped carrying the health message to the poorest households as they came from that social background.

Mid-Day Meal scheme (MDMS)

The National Programme of nutritional support to primary education or the Mid-day Meal Scheme was launched on 15th August 1995 to give a boost to universal primary education. It was expected to increase enrolment, attendance and retention and improve the nutritional status of children in primary classes in government, local-body and government-aided schools. The programme provides cooked meals to children through local implementing agencies. Mid-day meals are now being supplied to children in drought-affected areas during summer vacations also. The scheme is implemented in convergence with ongoing rural and urban development schemes for adequately meeting infrastructure requirements and with the involvement of local community, self-help groups and non-government organizations. Certain states have innovated the MDMS and converging nutrition and health issues at primary education level (Box 4.3).

Box 4.3 : Best Practices under MDMS

In Tamil Nadu, Health Cards are issued to all children and school health day is observed every thursday. Curry leaves and drum-stick trees are grown in the school premises. In Karnataka, all schools have gas-based cooking. In Pondicherry, in addition to the mid-day meal (MDM), Rajiv Gandhi Breadfast Scheme provides for a glass of hot milk and biscuits. In Bihar, Bal Sansad (Child Cabinet) is actively involved in the orderly distribution of MDM. In Uttaranchal, mothers are appointed as Bhojan Mata and Sahayika in primary schools. In Gujarat, Chhattisgarh, and Madhya Pradesh, children are provided micronutrients and deworming medicines under MDMS.

Source: Eleventh Five Year Plan (2007-2012), Government of India

National Nutritional Anemia Prophylaxis Programme

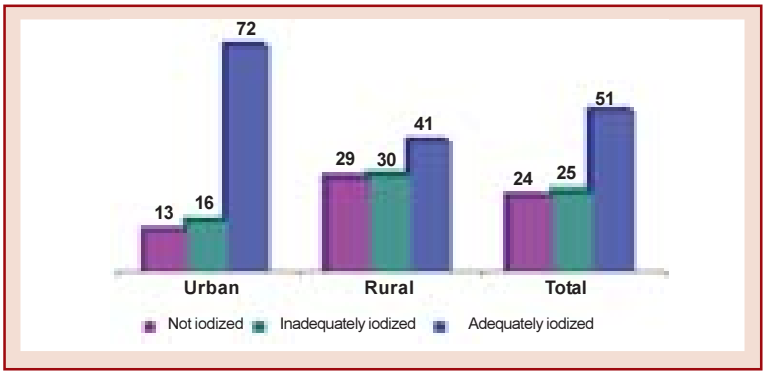
India was the first developing country to take up a National Nutritional Anaemia Prophylaxis Programme (NNAP) in 1972 to prevent anaemia among pregnant women and children. However, coverage under the programme needs improvement as only 22.3% of pregnant women consumed iron and folic acid

for 90 days and only 50.7% had at least three antenatal visits for their last child birth (NFHS-3, 2005-06).The current strategy, included as part of RCH Programme under NRHM, recommends that pregnant and lactating women, 6-12 months infants, school children, 6-10 year olds, and adolescents (11- 18 year old) should be targeted in the NAPP as per the recommended dosage.

National Iodine Deficiency Disorder Control Programme (NIDDCP)

The Indian National Goitre Control Programme (NGCP) was started in 1962 with a focus on the goitre belt in the country. However, the programme of universal iodization was introduced only in 1984, when all edible salt in the market was required to offer 30 ppm (parts per million) iodine at the production level. Since 1992, the NIDDCP is the new name given to the erstwhile NGCP. This change has been effected with a view to cover the wide spectrum of iodine deficiency such as mental and physical retardation, deaf-mutism, and cretinism under the programme. In May 2006, the Government of India imposed a ban on sale of non-iodized salt for human consumption throughout the country. The goal of universal iodized salt consumption has yet to be achieved even in 2005 where it was found by NFHS-3; only 51% of the households are consuming iodized salt in our country with urban rural differences (Figure 4.15).

Figure 4.15 : Percentage of Households using Iodized salt by Residence



Source: NFHS III

National Vitamin A Prophylaxis Programme for Prevention of Blindness

This was initiated by the Government of India in 1970. Under the short term strategy of the programme, children between 6 months to 3 years (and now extended to 5 years) receive oral prophylactic doses of Vitamin A linked with the universal immunization programme. The programme is implemented through PHCs and Sub-centers in conjunction with ICDS. Only a quarter of the children aged 12 -36 months received a Vitamin A supplement in the six months preceding the survey (NFHS 3).

Convergence of Nutrition and NRHM

NRHM promotes integration of nutrition and health; it urges ASHA to work in strong coordination with AWW. It promotes AWC to be the focal point for all health and nutrition services. Village health and nutrition days are to be organized under this coordinated effort. It aims to promote health awareness generation, and nutrition education. It also brings opportunities to link pregnant and lactating mothers, newly married women with health system. States have developed models of this synergy between two strongly inter-related sectors of health and nutrition. One such example is discussed in the Box 4.4.

Box 4.4 : Madhya Pradesh " Bal Shakthi Yojana" Scheme.

Bal Shakti Yojana aimed at addressing severely malnourished children, i.e., children who come under grade 3 & 4 of malnutrition. They are identified in the villages and are taken to Nutritional Rehabilitation Centers (NRCs) in district hospitals, along with their mothers / guardians. Training and counseling in nutrition, hygiene, and health care and other necessary supports, including intensive observation and medical treatment are provided under the guidance of pediatricians and nutritionists. Noticeably, apart from the stay arrangements, the transport cost for travel to the centre and the loss of wage earnings for the mother/ guardian accompanying the child are also covered by the government, to encourage access to this scheme. A follow up card is made through which the ANMs and AWWs carry out 6 months follow up to ensure sustainability. At present 40 NRCs are operational and it is planned to increase the number to 100 by the end of 2008.

Source: NRHM Coomon Review Mission, November 2007.

IV. Prevention and Control of locally endemic diseases

India has an enormous challenge to combat with numerous Communicable Diseases prevailing in the country. India has achieved success in reducing the magnitude of many such diseases and has been able to eradicate Small Pox and Guinea worm disease with elimination has been achieved for leprosy and yaws. Major Disease burden estimation in India due to communicable diseases is depicted in Table. 4.6

Table 4.6 : Disease Burden Estimation, 2005

Communicable Diseases	Estimate of Cases/lakh	Projected number (2015) of Cases/lakh
Tuberculosis	85 (2000)	NA
HIV/AIDS	51(2004)	190
Diarrhoeal Diseases Episodes per year	760	880
Malaria and other Vector Borne Diseases	20.37 (2004)	NA
Leprosy	3.67 (2004)	Expect to be Eliminated
Otitis Media	3.57	4.18

Note : NA - not available

Source: NCMH

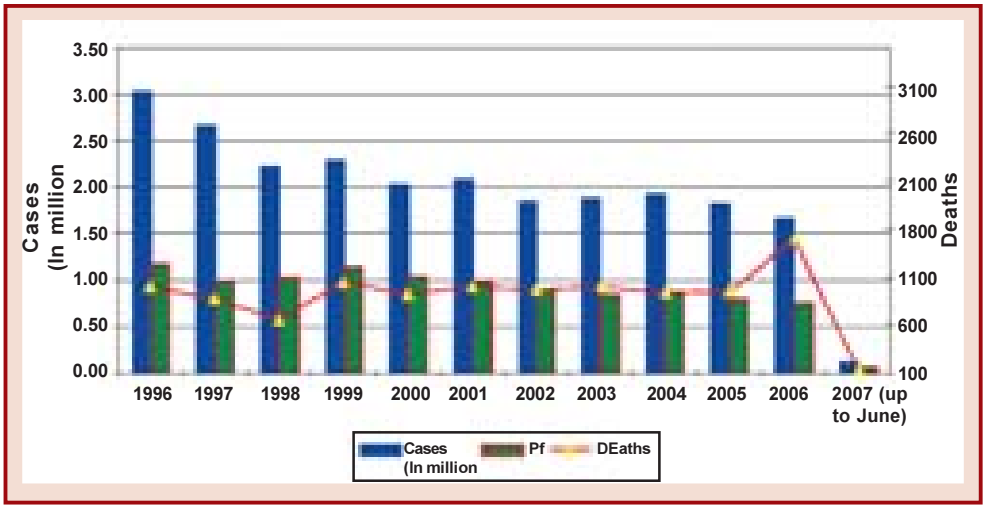
Malaria

Malaria is an endemic disease all over India except at very high altitudes and in some coastal areas. The National Malaria Control Programme (NMCP) implemented before the Alma Ata Declaration (1953-58), emphasized on indoor residual spraying with DDT. The program saw huge successes with the malaria incidence dropping sharply from 75 million cases in 1953 to 2 million cases in 1958. The strategy was subsequently changed to eradication, and the Government of India launched the National Malaria

Eradication Programme in 1958. However, after initial successes, there was a resurgence of malaria by the mid 70s due to the resistance of the Plasmodium species to drugs and of mosquitoes to insecticides.

In 1978, the implementation of malaria control was placed within the context of the primary health care strategy, wherein anti-malarial activities, including drug distribution was to be carried at the peripheral level. The Modified Plan of Operation focused on selective indoor residual spraying in areas with API greater than 2. The situation had stabilized by 1985 with only 2 million cases of malaria being recorded. Since 1997, with assistance from the World Bank, the Enhanced Malaria Control Project (EMCP) is being implemented in 100 districts of eight states and 19 towns of ten states, and there has been a 45% decline in reported cases during the period 1997 to 2004 in these areas and 58% decline in malaria deaths in project areas.(MOHFW, GOI) Overall in the country, the reported incidence of malaria in the past decade has been between 2 to 3 million per year. During 2006, the reported figure indicates total of 1.66 million malaria cases and 0.75 million Plasmodium falciparum (Pf) cases with 1487 deaths. During the year 2007, up to May, 0.32 million cases and 0.16 million Pf cases with 335 deaths have been reported.(MOHFW) The cases and deaths due to Malaria from 1996- May 2007 are shown in Figure. 4.16 Presently the malaria control activities are under National Vector Borne Disease Control Programme (NVBDCP) which also looks after other vector borne disease problems in the country viz. Filaria, Japanese Encephalitis, Dengue, Kala azar and Chickungunya.

Figure 4.16 : Malaria Cases, Pf & Deaths (1996 - 2007)



Source: Annual Report (2007-08) MoHFW, GOI

Malaria control strategies presently include apart from early case detection and prompt treatment, vector control strategies comprise of indoor residual spraying and use of insecticide treated bed nets (ITN). Guidelines on use of bednets have been developed and issued to states. 60,10,000 bed nets have been supplied free or at highly subsidized rates to the high-risk areas of endemic states. (MoHFW) The priority beneficiaries are below poverty line population in rural and tribal areas. From the primary health care approach, the success of malaria is contingent upon community involvement for vector control, which needs to be revived through inter-sectoral planning and implementation under NRHM.

Tuberculosis

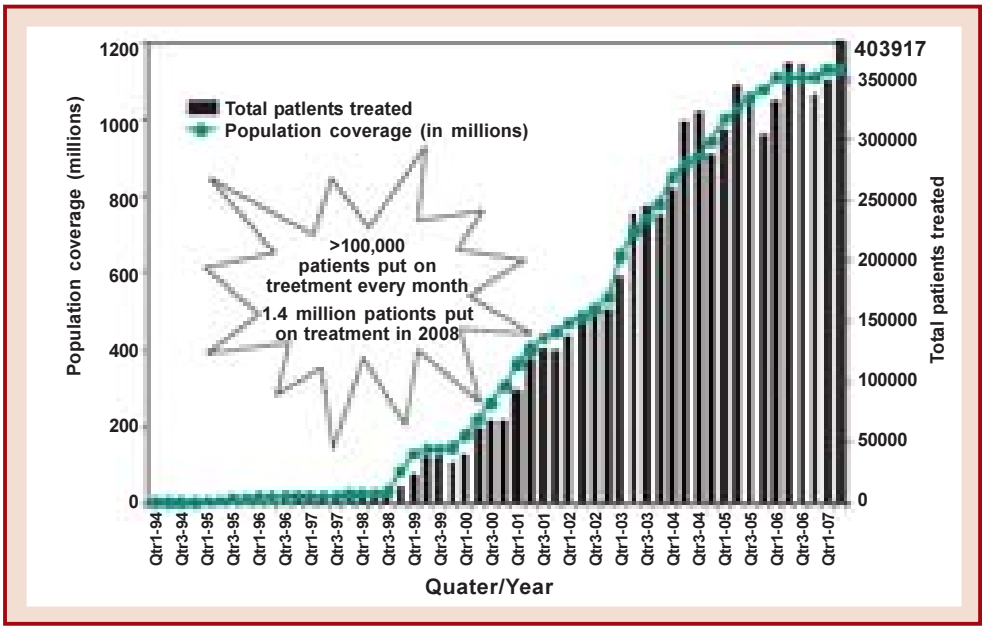
Tuberculosis is a major public health problem in India. The burden of TB in India (prevalence) as in year 2000 was 8.5 million total cases of which 3.8 million were bacillary pulmonary cases, 3.9 million abacillary cases and 0.I8 million extra pulmonary cases. Globally one-fifth of new TB cases are from

India every year. As per the latest estimates, every year there are approximately 1.8 million new cases in the country of which approximately 0.8 million are new smear positive infectious cases. Annual Risk of becoming infected with TB is 1.5% and once infected there is 10% lifetime risk of developing TB disease. Two persons die from TB in India every three minutes; more than 1,000 people every day and almost 3, 70,000. (TB Status Report, 2007.)

Though the National Tuberculosis Control Programme was launched in 1962, the Revised National Tuberculosis Control Programme (RNTCP) was piloted in 1993 and subsequently scaled-up, after a review of the national TB programme revealed inaccuracy in diagnosis of the disease and incomplete treatments by patients as major hindrances to achieving positive outcomes. The revised programme has been implemented for close to a decade now, with more than 6.7 million patients being put on the Directly Observed Treatment - Short Course (DOTS). Nation-wide coverage was achieved in March 2006, and treatment success rate has been over the 85% global target (MoHFW, GOI). Population covered under DOTS and total TB patients put to treatment is shown in 2006 is shown in Figure 4.17. Mortality due to TB have reduced from over 0.5 million annually at the start of the program to 0.37 million currently. However, the emergence of HIV infection as well as multi-drug resistant TB and now development of extensively drug resistant TB (X-DR) is expected to complicate the TB scenario in the country

Presently, RNTCP is in second phase. The thrust presently is given to accelerate efforts towards HIV-TB coordination, management of MDR -TB and external quality control assurance. India has innovated in development of weight bandboxes for management of Pediatric TB cases.

Figure 4.17: Population covered under DOTS and total TB patients put on treatment in each quarter



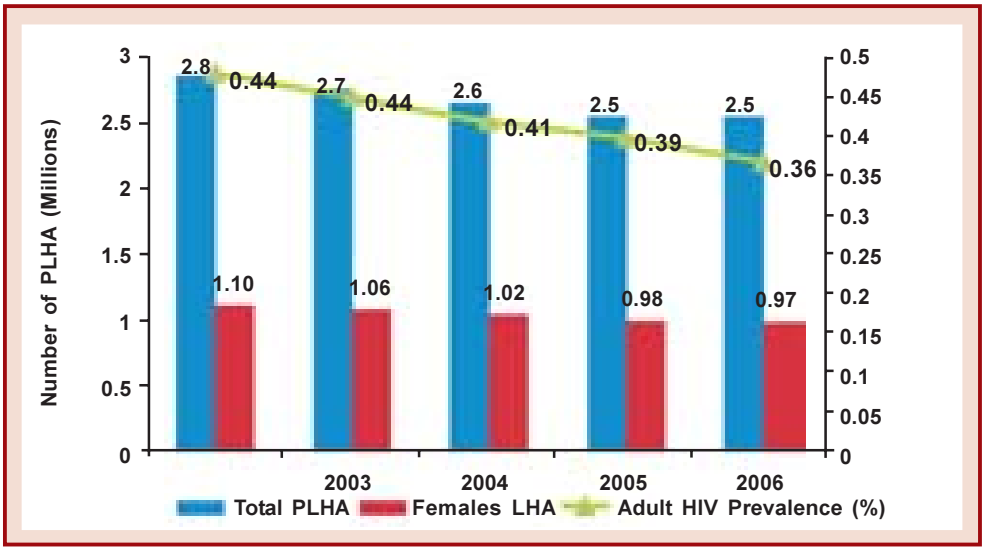
Source: Annual Report (2007-08) MoHFW, GOI

HIV/AIDS

HIV/AIDS is a serious epidemic in India, and the latest estimates (NACO 2007) indicate that between 2 million to 3.1 million people are infected with HIV, with an adult prevalence of 0.36% (Figure. 4.18). Trends of HIV infection in 2006 indicate a mixed response in the country. While there is increase in some areas, it has shown decline in other areas. India continues to be in the category of concentrated epidemic. A total of 1,82,787 AIDS cases have been reported since 1986 till 31st July 2007, out of which 31% are women and 4.9% are children. 86.3% of the infections were transmitted through the sexual route and peri-natal transmission accounted for 4.34% of infections, 1.8% and 1.9% of infections were acquired through injecting drug use and contaminated blood and blood products respectively.

A total of 11,682 deaths due to AIDS have been reported till 2006. Responding to the immense challenge of the HIV/AIDS threat, the NACO has articulated a clear and effective response to increase access to services and communicate effectively for behavior change.

Figure 4.18 : Adult HIV Prevalence in India



Source: National AIDS Control Organization, MOHFW, GOI.

National AIDS Control Programme in India

The first HIV infection was detected in India in 1986, subsequent to which a high-powered National AIDS Committee was established to strategize a response against the disease. The initial interventions focused on IEC activities, introduction of blood screening for transfusion purpose and conducting surveillance activities in the epicenters of the epidemic. In 1990, a Medium Term Plan (1990-1992) launched targeted IEC and surveillance activities in four states and four metropolitan cities of India.

The National AIDS Control Programme - I (NACP I) was launched in 1992 for a seven year period with the objective of slowing the spread of the

disease. During this period, an autonomous National AIDS Control Organization (NACO) was set up to implement the programme, and programme management capacities were reinforced through state AIDS control societies, technical advisory committees, and empowered committees. The programme achieved substantial success despite uneven performance across states-condom use among high-risk groups swelled from 10% to between 50-90%; awareness about HIV prevention reached between 54-78%; screening of donated blood became nearly universal; syndromic approach for STD management was concretized; and surveillance capacity increased tremendously. HIV sero-prevalence in the adult population of India was estimated at about 0.7 percent in 1998.

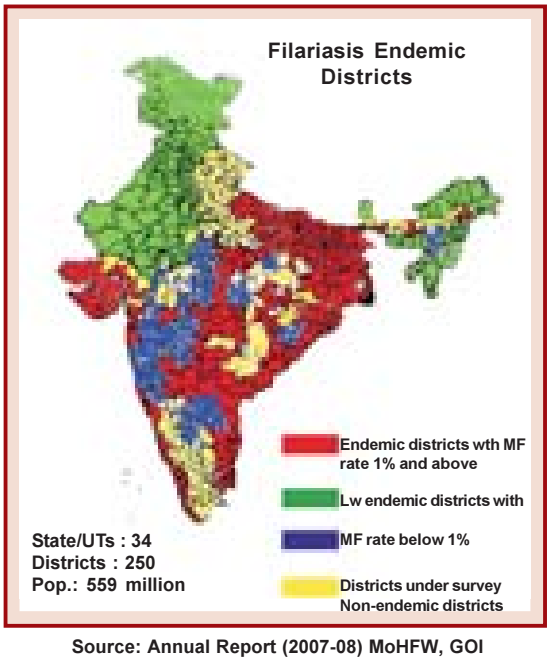
The second phase of the NACP was launched in 1999 focusing on behavior change rather than awareness generation, decentralization of implementation at the state level, and greater involvement of NGOs. Two key objectives of the programme were to reduce the spread of the infection, and to enhance India's capacity to respond to the disease in the long run. The end of the project (2005), NACO revealed that HIV prevalence seems to be stabilizing, and in fact declining in some states. NACP III was launched in 2007 through wide stakeholder consultations with the goal of halting and reversing the epidemic in India over a period of 5 years through integration of prevention, care, support and treatment programs.

One of the most important components of the NACP III is the Targeted Intervention (TI) projects that aim to interrupt HIV transmission among highly vulnerable populations. These populations are at a greater risk of acquiring and transmitting HIV infection due to more frequent exposure to HIV, higher levels of risky behavior and insufficient capacity or power to decide to protect themselves. Such population groups include- commercial sex workers, injecting drug users, men who have sex with men, truckers and migrant

workers.NACO also works in partnership with NGOs, CBOs and other agencies to reach these groups with non-judgmental information and services that are sensitive to their special needs. 764 TI projects are operational in various states and UTs in the country. Saturation of all high risk groups through 2100 TIs and development of TIs into CBOs is the target under NACP-III.

Filariasis

Figure 4.19



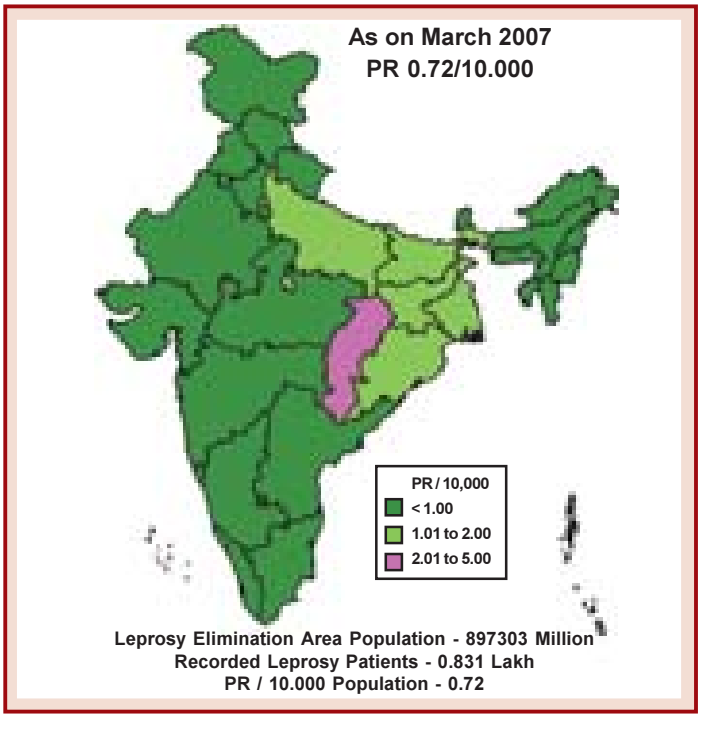
Source: Annual Report (2007-08) MoHFW, GOI

Lymphatic filariasis is an endemic disease of public health importance in India. Despite the National Filaria Control Programme being in existence since 1955, India accounts for 41% of global lymphatic filariasis. The disease is endemic in about 250 districts in 20 states and Union territories (Fig. 4.19). The population at risk for disease is over 500 million. There are concerns about the manifold increase in filariasis during the past four decades, which reflect on the ineffectiveness of the filariasis control programme. It was implemented in rural areas through the primary health care system after 1982. A revised program was launched in 97-98 in 13 districts of seven endemic states, and mass multi-drug (DEC) administration is a key strategy has been initiated in 2004 for containing the spread of the disease. Global Elimination of this disease by the year 2020 has been envisaged and GOI is also signatory to the world health assembly resolution in 1997 for global elimination of lymphatic filariasis.

Leprosy

Achievement of the goal of elimination of leprosy as a public health problem within the mandated time limit of 2005, as set out in the national health policy, has been one of the public health successes of India. Around the period of the Alma Ata Declaration, the prevalence of leprosy was as high as 57 per ten thousand population (1981), with approximately four million cases undergoing treatment for leprosy. These high prevalence levels led to the relaunch of the implemented National Leprosy Control Programme (NLCP, 1955) with revised strategies through the National Leprosy Eradication Programme (NLEP, 1983). In March 2007, prevalence levels had fallen to 0.72 per ten thousand population (Figure 4.20).

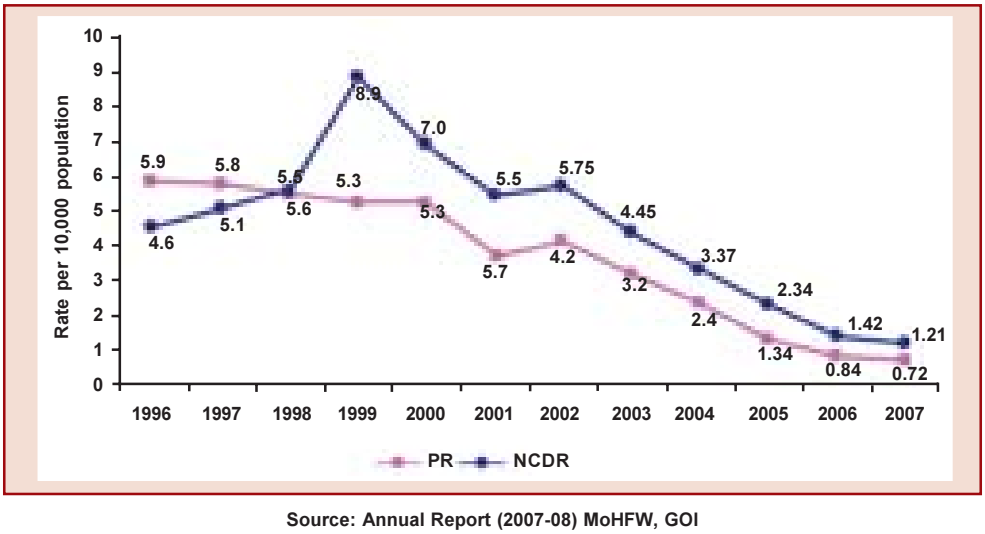
Figure 4.20 : Status of Leprosy Prevalence in states of India



Source: Annual Report (2007-08) MoHFW, GOI

The steady decline in prevalence rates has been largely attributed to the implementation of Multi-drug therapy (MDT). Efforts to integrate NLEP activities with the general health delivery system were initiated since 2000-2001, wherein lepros services are available through general health care workers only. As on March 2007, 28 states/ UTs achieved the status of leprosy elimination. Remaining 7 states/ UTs have PR>1/10,000 and contribute to 27.80% of the country's caseload. These are Bihar, Jharkhand, West Bengal, Chhattisgarh, Delhi, Chandigarh and Dadar and Nagar Haveli. During 2006-07, a total of 1.39 lakhs new leprosy cases were detected out of which 45% were Multi bacillary cases, 10% were visible deformity cases. The leprosy prevalence and annual new case detection rate (ANCDR) / 10,000 populations have shown a substantial declining trend as can be seen in Figure 4.21. Sustaining efforts through the existing primary health care system as well as containing the disease in high prevalence areas will be key to absolute elimination.

Fig. 4.21 : Leprosy Prevalence Rate (PR) and New Case Detection Rate (NCDR) per 10,000 population India, 1996 - 2007

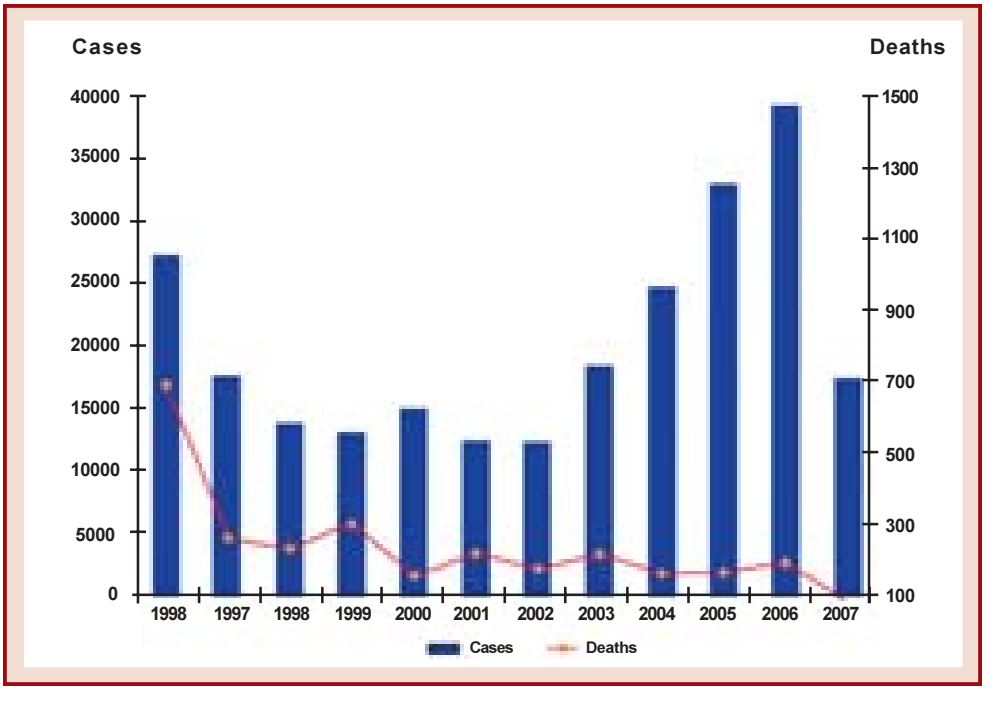


Source: Annual Report (2007-08) MoHFW, GOI

Kala-Azar

It is endemic in 48 districts in the states of Bihar, Jharkhand, Uttar Pradesh and West Bengal with an estimated population of 165 million being at risk of contacting the disease. The Government of India launched a programme for control of Kala-Azar in 1990-91 through three major strategies - vector control by DDT, early diagnosis and treatment, and IEC activities. Available reported data indicates a 76% decline in incidence and 85% decline in deaths due to Kala-Azar from the inception of the program to 2003 (NVBDCP). Buoyed by the success, the National Health Policy - 2002 committed to the goal of Kala-Azar elimination by 2010. However, in the past few years, the number of reported cases has gone up significantly from 18,214 in 2003 to more than double in 2006 (Fig. 4.22). Similarly, the number of people dying due to Kala-Azar has also not reduced during this time period.

Figure. 4.22 : Trend of Kala Azar cases & dealths 1996-2007



Source: Annual Report, 2007-08, MoHFW, GOI

V. Treatment of common illness and injuries

One of the essential components of the primary health care approach is the appropriate treatment of common illness and injuries at the peripheral level. An ANM manning the sub-center is provided with prophylactic (Kit A)[1] and essential drugs (Kit B)[2] to manage commonly occurring illnesses and basic injuries in the community. ARIs and diarrhea are the two leading causes of childhood morbidity and mortality in India, which are treated at the community level. Peripheral health staff is trained to diagnose and treat ARIs with oral cotrimoxazole, and prevent children from dying. Yet, in rural India, only one in ten children with symptoms of ARI is appropriately treated with antibiotics (NFHS 3). Deaths due to dehydration caused by acute diarrhoea can be prevented by prompt administration of oral rehydration salt (ORS) solution. The oral rehydration therapy (ORT) programme has been one of the important child survival programs in India, which focused on making this low-cost intervention available at the community level, and mothers being oriented to prepare and use the ORS solution at home when her child has diarrhea. ORS packets are available with the ANM, AWW, and ASHA. The low osmolarity ORS advocated by WHO-UNICEF was introduced in June 2004. India was the first country in the world to launch the low osmolarity formulation. Zinc tablets use as an adjunct to ORS use is being promoted in children presenting with diarrhoeal illness. However, despite more than two decades of the programme, treatment for diarrhea, only 43% children with diarrhea receive any ORT or increased fluids and 26% children do not receive any treatment at all (NFHS 3).

In the NRHM programme, the community level link worker (ASHA) is trained to deal with generic ailments at the village / hamlet level and is

[1] Kit A - IFA (large and small), Vitamin A solution, Cotrimoxazole tablets, ORS packets, isposable delivery kit;

[2] Kit B - Methyl ergometrine Maleate tablets / Injection, Paracetamol tablets, Tab. Mebendazole,Tab Dicyclomine, Chloramphenicol eye ointment, Ointment Povidone Iodine, Cetrimide Powder, cotton and bandages

provided with a drug kit (including AYUSH drugs) to deliver first-contact health care. The IMNCI is a step forward to follow standard operating procedures at the field level to manage neonatal and childhood morbidities. Syndromic-based diagnosis and management of reproductive tract infections / sexually transmitted infections (RTI / STI) is also practiced at the field level by health workers. Recently, syndrome specific STI treatment kits have been formulated to smoothen the treatment delivery of RTI / STIs.

The Ministry of Health and Family Welfare, in collaboration with the Armed Forces Medical college and the WHO has developed a set of standard treatment guidelines to be used for common medical conditions and also undertaken its costing. Certain states like Rajasthan, Chhatisgarh, Karnataka and Maharashtra have also developed treatment guidelines at primary care level.

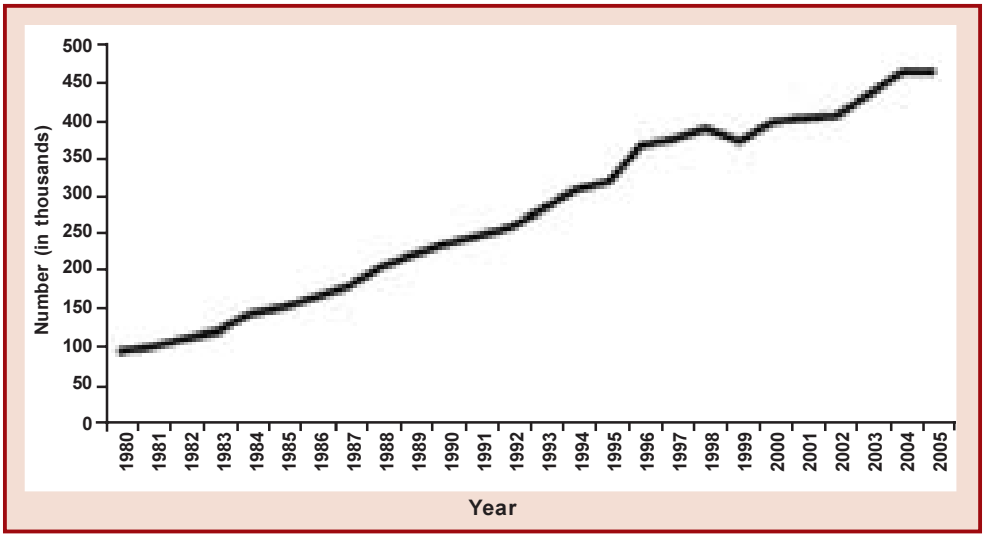
Injuries

India is passing through a major sociodemographic, epidemiological, technological and media transition. The political, economic and social changes have altered the health scenario. In the past two decades, India has witnessed rapid urbanization, motorization, industrialization and migration of people resulting from socioeconomic growth and development. With mechanization and revolution in technology, traditional ways of living and working are being altered. Injuries are a major public health problem in India.

Data available from the National Crime Records Bureau (NCRB), Government of India, indicate that deaths and injuries increased by nearly 2 (50 700 to 98 254) and 4 times (109 100 to 465 282) during the period 1991-2005, respectively15 (Figure 4.23). According to the NCRB 2005 data among the 28 states of India, the mortality rate per million population due to Road Traffic Injuries varied from as low as 20 in Nagaland to as high as 216 in

Tamil Nadu. States with rapid and high growth in motorization had a higher number of deaths. Nearly half the total road fatalities were in the 4 states of Tamil Nadu (14.5%), Andhra Pradesh (11.4%), Maharashtra (11.1%) and Uttar Pradesh (10.2%).

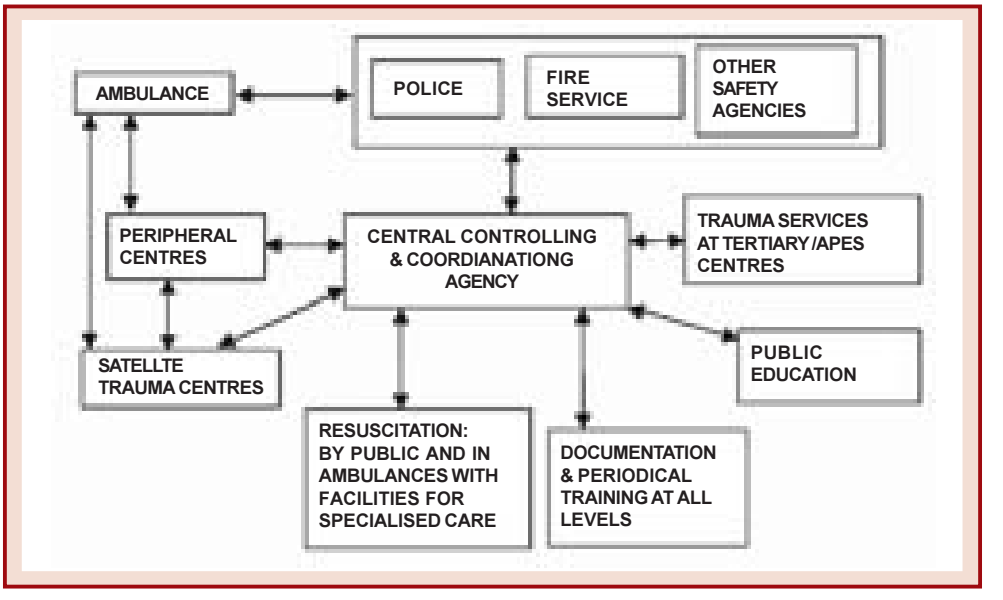
Figure 4.23 : Road Traffic Injuries in India 1980-2005



Source: National Crime Reference Bureau

In view of the injuries largely due to road traffic accidents, trauma and accident care services are to be provided to people. Government of India has given due attention to establish trauma care services and apex centers for trauma care. A conceptual model of such a system for Delhi has been prepared which optimizes utilization of available facilities and prevents wastage of scarce resources due to duplication of efforts. (Figure 4.24)

Figure 4.24 : Schematic Module for Trauma Services in Delhi.



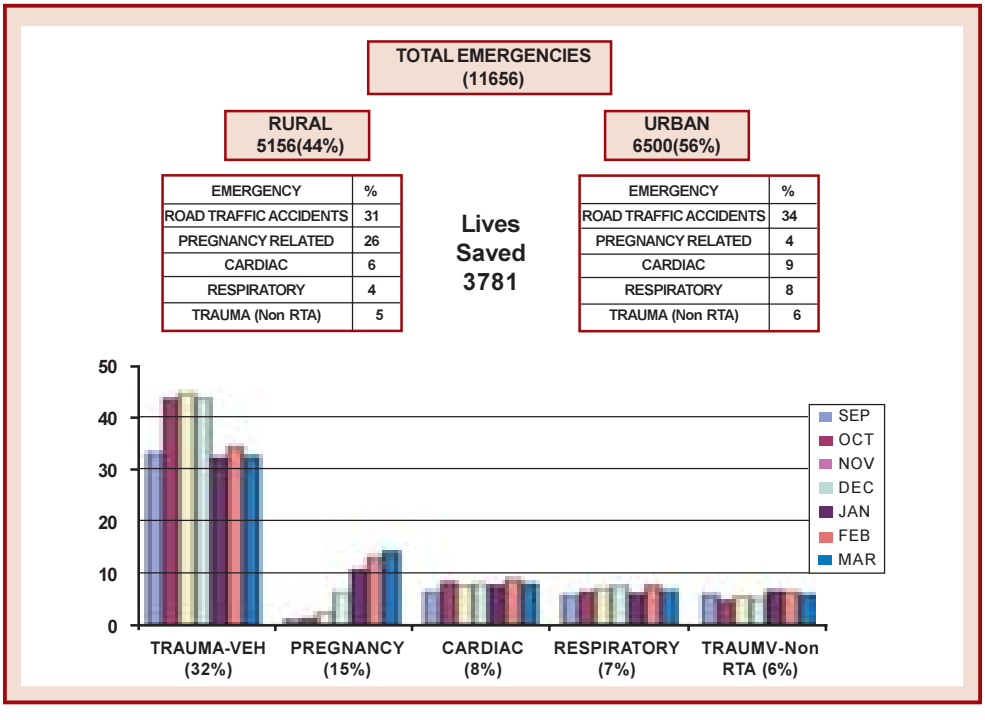
Source: Tenth Five Year Plan (2002-07), Government of India

The NRHM also promotes creation of transport facilities during emergency situations to shift the patients to nearby appropriate health and trauma facilities. These ambulances can be utilized for multiple purposes ranging from injury related need to pregnancy related need for reaching health facilities. During transfer provision for first aid facility and pre-hospital management care can be provided in these ambulances. States like Gujarat and Andhra Pradesh have successfully initiated this model.

Emergency Management Research Institute (EMRI) is a non-profit organization based on the Public Private Partnership (PPP) model in Gujarat. The service is currently available in parts of Gujarat through the toll free number 108. By end of August 2008, 400 ambulances will serve the whole state. The pre hospitalization emergency care provided by EMRI is free and the patient is admitted to a hospital of his or her choice. More than 400 hospitals in the state collaborating with EMRI to stabilize the patient brought

in, free of charge. Massive capacity building has been done to improve services. Emergency Medical Service (EMS) authority and EMS act has been set. The performance of EMRI in Gujarat from September 2007 to March 2008 is shown in Figure. 4.25

Figure 4.25 :Performance of EMRI in Gujarat from September 2007 to March 2008



Source: www.mohfw.nic.in/nrhm

VI. Provision of Essential Drugs

Access to essential drugs that meet the priority health needs of the population is one of the key components of the primary health care approach. As per 60th round of NSSO (2004), average cost of medicine was around Rs 2000/- both in rural and urban area in private sector. In public hospital, it was Rs 976/- and Rs 886/- in rural and urban areas repectively. The often irrational pricing of drugs adds to the burden at the consumer end. The price

of a drug of the same strength manufactured by two different companies can vary from two to twenty times; with the costlier drug selling more because of more aggressive marketing by the drug manufacturer (Srinivasan 2006). The NCMH reports that 10 of the most-selling drugs in India are "non-essential, irrational, or hazardous," with important implications for price-control, quality-regulation, and patent-regulation. Mayalankar et al compared the allocation for medicines in PHCs with other government organizations (Railways, Employee State Insurance Corporation. etc), and found that per capita medicine allocation for employees working in these government organizations was 10-1000 times higher than the allocation for medicines to the common person using the primary health care system of the country (Mayalankar 1999). Another key issue related to the provision of essential drugs is poor logistics and inventory management, which often results in stock-outs in some areas and excess stocks in other places. A study of the primary health care system in Andhra Pradesh by European Commission revealed that erratic availability of drugs was of great concern to all levels of paramedical staff. Sub-centers were supplied with drug kits (Kit A and Kit B) every six months, but most of the drugs did not last beyond 6-8 weeks. This resulted in even minor conditions being referred to PHCs or CHCs due to inadequate supplies at the community level [DoFW (GOI) and European Commission (2004)] . Inadequate funding for drugs coupled with inefficient procurement and logistics mechanisms makes access to essential drugs one of the weakest links in the primary health care system of the country.

National Health Policy 2002 emphasized the need for basing treatment regimens, in both the public and private domain, on a limited number of essential drugs of a generic nature. This was considered prerequisite for cost-effective public health care. In the public health system, prohibiting the use of proprietary drugs, except in special circumstances would enforce this.

The need for periodic review of essential drugs was also emphasized. To encourage the use of only essential drugs in the private sector, the imposition of fiscal disincentives would be resorted to. The production and sale of irrational combinations of drugs would be prohibited through the drug standards statute. To assure uninterrupted supply of vaccines at an affordable price and to minimize the danger arising from the volatility of the global market, and thereby to ensure long-term national health security, NHP-2002 envisaged that not less than 50% of the requirement of vaccines/ sera be sourced from public sector institutions. NHP-2002 affirmed to address health security in the country, in the post-TRIPS era.

During the Eleventh Five Year Plan period (2007-2012), GOI plans to lay emphasis for developing essential drug lists for all levels of institutions; making good quality drugs available in adequate quantities in all government health facilities and increasing efficiency, economy and transparency in drug procurement, warehousing, distribution and including all essential drugs under a system of price monitoring. It promotes initiating strategies in coordination with professional and consumer bodies to ensure safe and rational use of drugs. It also urges implementing and reinforcing the concept of standard treatment guidelines in the in-service and pre-service training programmes of the doctors and health workers.

NRHM promotes rational use of drugs. Indian Public Health standard at different facilty level have devised the list of essential medicines. In long run, it envisages to procure drugs in a decentralized manner at the district level. It urges states to follow good models of rational use of drugs with efficient mechanisms of procurement and distribution of drugs. Tamil Nadu Medical Service Corporation (TNMSC) and Delhi Model of use of rational drugs are examples of good practices in this regard. The details of TNMSC Model are shown in Box 4.5.

Box 4.5 : Essential Drug Supply - Tamil Nadu Experience

Activities

Finalizing list of Essential Drugs selected from the model list by the WHO

Ensuring adequate funds and human resources for supply of drugs form its warehouses to various points of health care delivery

Testing drugs for quality

Supplying drugs only in strips and blister packing

Selecting drugs on the basis of disease pattern, safety, effectiveness, and cost including only generic drugs

Making proper arrangements for storage of drugs in modern warehouses

Training the pharmacists regarding storage and distribution of drugs

Revising store keeping procedures and storing drugs according to the first come-first out basis and according to their generic name

Achievements

Preparation of the Essential Drugs list, catering to varying needs of different levels of health care

Provision of good quality, generic drugs

Provision of drugs specific to the need and level of health care

Rational use of drugs

Availability of accurate up to date stock information on the computer

Linkage of all warehouses telephonically with the TNMSC headquarters in Chennai

Source : Eleventh Five Year Plan (2007-12), GOI

Economic globalization also affects the health sector. With the adoption of Trade Related Intellectual Property Rights (TRIPS), and the subsequent alignment of domestic patent laws consistent with the commitments under TRIPS, there will be a significant shift in the scope of the parameters regulating the manufacture of new drugs / vaccines. Global experience has shown that the introduction of a TRIPS-consistent patent regime for drugs in a developing country results in an across-the-board increase in the cost of drugs and medical services.

VII. Safe Water and Basic Sanitation

Provision of clean drinking water, sanitation, and a clean environment are vital to improve the health of population and to reduce incidence of diseases and deaths.

The status of **provision of water and sanitation** has improved slowly. According to Census of India (1991), 55.54% of the rural population had access to an improved water source. As on 1 April 2007, the Department of Drinking Water Supply's figures show that out of a total of 15,07,349 rural habitations in the country, 74.39% (11,21,366 habitations) are fully covered and 14.64% (220165 habitations) are partially covered. As on 31 March 2004, about 91% of the urban population has got access to water supply facilities. However, this access does not ensure adequacy and equitable distribution, and the per capita availability is not as per norms in many areas. (Eleventh Five-Year Plan 2007-2012)

Access to Toilets: As per the latest Census data (2001), only 36.4% of the total population has latrines within or attached to their houses. However in rural areas, only 21.9% of population has latrines within or attached to their houses. As on November 2007, sanitation coverage in the country at about 49%-an estimate based on the number of individual household toilets constructed under the Total Sanitation Campaign programme (Eleventh Five Year Plan 2007-2012)

Sewerage and Sanitation: As on 31st March 2004, 63% of the urban population has access to sewerage and sanitation facilities (47% from sewer and 53% from low cost sanitation). As a consequence, open defecation is prevalent widely in rural areas but also significantly in urban areas too. (Eleventh Five Year Plan 2007-2012)

Water Supply and Sanitation Programmes in India

The GoI's major intervention in water sector started in 1972-73 through the Accelerated Rural Water Supply Programme (ARWSP) for assisting States/UTs to accelerate the coverage of drinking water supply. In 1986, the entire programme was given a mission approach with the launch of the Technology Mission on Drinking Water and Related Water Management. This Technology Mission was later renamed as Rajiv Gandhi National Drinking Water Mission (RGNDWM) in 1991-92.

In 1999,"Total Sanitation Programme" was launched by restructuring the Central Rural Sanitation programme. . A "demand driven approach" was adopted with increased emphasis on awareness creation and demand generation for sanitary facilities in houses, schools and for cleaner environment. Incentives were planned to the poorest of the poor households for constructing individual household latrine units. Rural School Sanitation was a major component and an entry point for wider acceptance of sanitation by the rural people. Technology improvisations to meet the customer preferences and location specific intensive IEC Campaign involving Panchayati Raj Institutions, Co-operatives, Women Groups, Self Help Groups, NGOs etc. were important components of the Strategy. The strategy addressed all sections of rural population to bring about the relevant behavioral changes for improved sanitation and hygiene practices and meet their sanitary hardware requirements in an affordable and accessible manner by offering a wide range of technological choices. To increase the implementation of the campaign, Government of India has separately launched an award scheme called the "Nirmal Gram Puraskar" for fully sanitized and open defecation free Gram Panchayats, From a mere 40 village/ block panchayats from six States that received the award in 2005, the number of awardees has gone up to 4959 from 22 States in the year 2007. Maharashtra, which got 13 awards in 2005, received 1974 awards in 2007- a significant achievement-followed by Gujarat

with 576 awards. One of the Success story from Maharashtra is presented in Box 4.6.

Box 4.6 : How Suravadi Panchayat in Phaltan Block in Satara District of Maharashtra won the Nirmal Gram Puraskar (NGP)

This panchayat that has a population of 2891 people has 412 households out of which 112 are BPL households. The Panchayat has a village primary school, an anganwadi centre, and a primary health centre five km away. There was no community toilet facility in the village. Men, women, and children used to defecate in the open. Out of 47 individual toilets 34 were not in use (used only for other purposes). Village was always highly stinking, no drainage, many ill wth diseases like jaundice, flu, cholera, etc. Sereral village meetings were held for stoppage of open defecation. It looked like a Herculean task in the beginning, as people were not coming forward for construction of toilets.

Things began to change when Sant Gadge Baba Gram Swachhata Abhiyan started in year 2000 and motivational campaign and meetings were organized by Panchayat. The school teachers and students were involved in this campaign. Sanitation campaign started with making a 28-seater complex and few individual units. Persons still going for open defecation were penalized with no distribution of wheat and kerosene from Public Distribution System. It was also decided to give Rs.500 to every family to construct its own latrine. Construction of toilets geared up slowly but taken up in later stages by community participation.

The Gram Panchayat and youth group of the same village monitored the sanitation programme.

Everybody is using toilets in the village today. Recognition of community is shown by painting all houses using toilets in pink colour. With the campaign, people also gained knowledge on bio-gas plants and about conservation of sources. The scheme was also linked with and benefited through other rural developmental schemes like Yaswant Gram Samruddhi Yojana.

To sustain the programme women and children get regular knowledge on cleanliness though school. Extra classes have been organized for students on promotion of sanitation and hygiene activities in the schools. The village now has a better school facility and the Panchayat is fully involved, as it had initiated this campaign. There is a feeling of pride with their becoming the first village in the entire State to get the NGP award.

Present sanitation status in the village is as follows:

Number of Households:	412
Status of Toilets:	100% using toilets
	Community Complexes (20 users)
	10 Gobar gas plants linked to toilets.

Source: Eleventh Five Year plan (2007-2012), Government of India

VIII. Health Education

Improving access to information through a range of health education strategies has been a significant component of all the national health programs in India. This includes dissemination of treatment protocols such as for TB, diarrhea, leprosy; information about immunization schedules; communication for behavior changes to prevent HIV/AIDS and other life-style diseases, etc. The Pulse Polio Immunization Programme and the Leprosy Control Programme have been cited as having successful social mobilization components utilizing several innovative approaches for effective communication. However, despite funding for IEC interventions in all health programs, criticism remains that these strategies rely heavily on mass media, and that the contextual needs of the population are not addressed. National Health Policy - 2002 acknowledges the limited accountability of existing health education programs given the difficulties in evaluating the effectiveness of such interventions. A World Bank review (1999) of health care in India suggests that IEC as one area of health programming remains relatively neglected and that government IEC programs are often not well implemented. It recommends using a client-centered approach to formulate messages, training health workers in interpersonal communication and training, carefully researching campaigns, and monitoring the impact of IEC interventions.

The NRHM promotes health education on a sustained basis in multiple ways. It urges ASHA, ANM, AWW and VHSCs in coordination to organize village health and nutrition days. Many states have organized Health Melas (Fairs) to spread health awareness to masses.