HEALTH AND NUTRITION IN MAHARASHTRA

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HEALTH AND NUTRITION

Wellbeing of the people is reflected not only in their levels of income but more importantly in their health and nutritional status. Maharashtra has one of the highest per capita incomes in the country and is considered a prosperous state. While the health and nutritional outcomes may average better than the country as a whole, they are not commensurate with the level of economic development. Kerala outperforms Maharashtra and so do other states like Punjab, Gujarat and Tamil Nadu on a number of health indicators. This is largely due to two sets of factors. First, regional disparities across Maharashtra are sharp. And second, most of the wealth in the state is due to the financial and industrial sector, whereas in terms of employment and geographical area agriculture is the dominant sector. The consequence of these factors is small concentrated pockets of wealth and economic development on one hand, like the urban agglomerations of Mumbai, Thane, Pune, Pimpri-Chinchwad, Kolhapur, Sangli, Nagpur etc. and a large expanse of area and population with inadequate access to physical and social infrastructure spread across the length and breadth of the state. Thus, health and nutrition must be contexualised in this framework to understand meaningfully their outcomes.

Health and Healthcare: An Overview

Healthcare services in Maharashtra, as elsewhere in the country, have certain peculiar characteristics and it is important to state them at the outset. Health infrastructure and facilities in rural and urban areas are both quantitatively and qualitatively different. There is a wide gap. Urban areas have both, a concentration of hospitals and nursing homes as well as qualified doctors (Tables 1 and 2). This is as much true of the public sector as it is of the private sector. Most of the public hospitals are in the cities, district and sub divisional towns. Similarly over 80% of beds in public hospitals are in urban areas where 40% of the population resides. In the private sector the situation is no different with hospital and beds being located mostly in cities and towns. This is in sharp contrast to Punjab and Kerala where hospital services in rural areas are in reasonable numbers with no significant inequities between rural and urban areas. And this could be one reason why both these states do better than Maharashtra in terms of health status (Tables H2 and H 37). Within Maharashtra, apart from the rural-urban differentials, there is wide variation across districts and regions with Mumbai, Pune, Wardha and Nagpur having better population to facility ratios. (Table H 3 & H 4). A positive feature of development of health services in Maharashtra was very early decentralisation through Zillah Panchayats (see Box 1).

Table 1: Availability of Medical Care Facilities in Maharashtra

	Number per lakh population		
Type of Facility	Total	Rural	Urban
Allopathic hospital (1995) [1]	5.9	1.0	13.2
Allopathic Dispensaries (1995) [1]	9.9	2.6	21.3
Ayurved, Unani, Homeopathy institutions [1]	2.4	NA	NA
Beds (1995) [1]	153.9	44.7	324.7
Doctors - Allopathic (2000) [2]	72.5	23.7	139.8
All System Doctors (2000) [2]	167.6	77.75	290.3
Nurses (2000) [2]	140.5	65.4	244.3

Source: [1] Based on data in Government of Maharashtra (2000)
[2] Supplied by Directorate of Economics and Statistics, Government of Maharashtra, Mumbai.
The rural-urban distribution for doctors and nurses in 2000 provided by respective medical councils, are on the basis of the 1991 census distribution ratios.

Box 1

Decentralisation of Primary Healthcare

One special feature of Maharashtra's health organisation system is the early devolution of primary health care implementation to the Zillah Parishads. Right from the start of the state in 1961 primary health care, school education and other social sector programs/schemes have been given to the Zillah Parishads to implement. The Zillah Parishads get grant in aid as establishment and purposive grants under section 183 and 182, respectively, of the Maharashtra Zillah Parishad and Panchayat Samiti Act, 1961 for carrying out the following health activities:

- Vaccinations
- School health clinics
- Primary health centres
- Primary health units
- Mobile health units
- Allopathic dispensaries
- Mobile launch units in Panshet/Mulshi dam areas
- Construction and upgradation of PHCs and sub-centres (plan grants under section 187)
- Examination of ashram school children
- District local board schemes under section 183

This early devolution process helped Maharashtra to gain an early lead among states to expand the rural healthcare infrastructure. Maharashtra was one of the first states to establish the norm of one PHC per 30,000 population and one sub-centre per 5000 population in the early eighties itself.

Table 2: Health Infrastructure in Maharashtra 1981-1995

	1981	**1986**	**1991**	**1995**
Hospitals	968	1545	2104	4912
Urban %	89.87	89.06	83.60	88.27
Private %	67.97	72.55	62.69	61.23
Dispensaries	3139	7259	9202	8320
Urban %	63.58	90.22	91.34	83.89
Private %	47.4	79.47	82.36	90.14
Beds	71294	93938	113838	129229
Urban %	91.51	91.69	88.96	82.27
Private %	37.40	38.38	34.13	47.82

Source: CBHI, various years, and Government of Maharashtra 2000

Private health sector data is not easily available but whatever data is there clearly shows that Maharashtra's private health sector apart from being one of the largest in the country is also the most developed (Table 2 and H 5). Some of the largest and most well known private hospitals in the country are located in Maharashtra, especially in Mumbai. What is peculiar about these large private hospitals is that they are all registered as trusts, that is not-for-profit institutions. One does not find such a character of the private health sector elsewhere in the country, at least in such large numbers as is found in Maharashtra. And if one looks closely these hospitals are no different from the large private hospitals found elsewhere in India. They are as expensive and as sophisticated – only the rich can afford to use their services. Legally, in lieu of tax benefits such hospitals get, they are supposed to provide services to 20% to 30% of their clients free of charge but due to lack of monitoring and regulation of these hospitals, such benefits for the public do not accrue to them. Thus the poor on one hand do not get access to these services, which by law should be available to them, and on the other hand the state loses out on revenues, which could have been used for strengthening public health services.

The public health sector in Maharashtra, when compared with other developed states, shows that availability of health services in Maharashtra is not in keeping with its economic position. (Tables H 6 and H 7). While the overall public health infrastructure in comparison to a number of other states is inadequate, it is the intra-state differences that are a cause for greater concern. The urban areas, especially in and around Mumbai and in southwestern Maharashtra are well endowed but the rest of the state lags behind in health infrastructure. Maharashtra comparatively does have an adequate rural infrastructure of PHCs and SCs as per the defined norms but they are not adequately supported by inputs needed to run a proper health care system. Public investment and health expenditures are not only inadequate but have also been declining in the nineties. Maharashtra's position relative to other states has also worsened (Table H 14). Box 2 provides a brief assessment of public health facilities in Maharashtra.

Box 2

Assessment of Healthcare facilities in public sector

Analysing the facilities available in selected public health care institutions in the state gives us a brief idea about the functioning of the public health care system. The RCH Facility survey (1999-2000) undertaken by Ministry of Health and Family Welfare, has reviewed all public health care facilities available in selected districts in each state. A total of 13 districts were covered in Maharashtra state and facilities required for proper functioning of district hospitals, first stage referral units, community health centres and primary health centres were evaluated. (see Tables H 30-H 35)

Physical Infrastructure and Medical Equipment

The district hospitals and most of the Community Health Centres (CHC's) seem to be self sufficient in terms of water, electricity, vehicle and operation theatre facilities. Two of the district hospitals and majority of first stage referral units lacked separate aseptic room and any linkage with blood bank facility. Availability of these facilities is inadequate in CHCs and PHCs. Though the district hospitals were having most of the essential medical equipment, severe shortage of these facilities was seen in FRU's and CHC's. More than 50 % of FRU's and CHC's were not having even a Boyle's apparatus, oxygen cylinder, high-pressure steriliser and ECG Machine.

Medical personnel

Almost all the public health care units were having General duty doctor, Staff nurse and Lab technicians. But majority of them were not having the services of specialist doctors like obstetrician and gynaecologist, paediatrician, RTI/STI specialist, pathologist and anaesthesiologist. Majority of the PHC's were not having laboratory technician as well as women medical officers.

Contraceptives and Vaccines

The PHCs and the district hospitals had adequate stocks of contraceptives and vaccines but the FRUs and CHCs were not as well stocked. Vitamin A was deficient in all the institutions.

Overall Inputs

The share of public health care units that were having at least 60 percent of the critical inputs shows a mixed picture. While most district hospitals had problems with supplies the FRUs, CHCs and PHCs suffered shortages of staff and the first two also of supplies and equipment.

The private health sector in contrast has expanded rapidly in the last decade, but except for a few micro studies there is not much data available to show the character of this growth. These studies show that the private health sector in the state has penetrated to the remotest of areas, though the providers may not necessarily be qualified or certified. Because of the poor penetration of the public health sector as well as inadequacies within it, the private health sector market has cut across classes and even the poor use these services in large numbers – this is clearly demonstrated by

both micro studies and national surveys (Table H 38). Thus the poor have to bear an unnecessary economic burden by being forced into the healthcare market to seek medical care.

Trends in Health Status Indicators

The levels and trends of health status in Maharashtra are reflected in infant mortality and life expectancy at birth, which has shown substantial improvements over the years. The infant mortality rate in the state has come down from 105 per thousand population in 1971 to 48 per thousand population presently. Though the sex differentials of IMR are marginal the rural - urban differentials are very marked and the gap has worsened over the years. (Table 3) Infant mortality rate is presently 58 and 31 in rural and urban areas, respectively. Similarly there is wide variation across various districts with Mumbai, Pune, Thane, western Maharashtra having better IMRs as compared to districts of north Maharashtra and Vidharbha. (Table H 9)

Table 3: Trends in Infant Mortality Rate by residence and sex, Maharashtra

		Residence		Sex	
Year	Combined	Rural	Urban	Male	Female
1971	105	111	88	NA	NA
1981	79	90	49	82	75
1991	60	69	38	60	59
1999	48	58	31	48	49

Source: RGI 1999; RGI 2001.

Further, when we look at details of infant and child mortality data we find a declining trend but the large rural-urban gap is again worrisome, especially in case of neo-natal deaths for which easy access to medical care is critical (Table 4). During the eighties when the public health infrastructure expanded rapidly in the rural areas we do see a narrowing down of the rural - urban gap but in the nineties reduced investments in the public health sector have resulted in this gap increasing again.

Table 4: Trends in child mortality indicators by place of residence Maharashtra *(per 1000 live births)*

	1981			1991			1997		
Indicators	Rural	Urban	Combined	Rural	Urban	Combined	Rural	Urban	Combined
Infant mortality rate	90.1	49.3	78.9	69	38	60	56	31	47
Neonatal mortality rate	62.8	30.6	53.9	44.8	23.1	38.2	40	20	33
Post-natal mortality rate	27.3	18.7	25.0	24.5	14.9	21.6	19	10	16
Peri-natal mortality rate	52.4	26.0	45.2	44.8	29.2	40.1	40	26	35
Still birth rate	9.8	4.4	8.3	11.2	11.8	11.4	11	8	10
Child (0-4) death rates	33.3	16.3	26.2	18.3	11.5	16.3	15	9	13

Source: RGI 1999.

The state has also made considerable improvements in life expectancy at birth. Between the period 1970-75 and 1992-96, the life expectancy at birth has increased from 54.5 years to 63.8 years for males and from 53.3 years to 66.2 years for females. (Table 5) As in the case of regions having higher life expectancy, in Maharashtra also the life expectancy at birth has become more favorable for females than males overtime and this differential is expected to widen in future. The rural - urban differentials in mortality remain marked and this is reflected in life expectancy. Life expectancy at birth in urban and rural areas according to latest estimates is 67.7 years and 61.7 years for urban and rural males, respectively, and 71.2 years and 63.9 years for urban and rural females, respectively. While the widening male-female gap in favour of women is understandable, the large rural-urban gap is a cause for concern. The latter is closely associated with better availability and access of public health services in urban areas, especially medical care, in contrast to rural areas.

Table 5: Trends in life expectancy at birth by residence and sex, Maharashtra

Year	All			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1970-75	53.8	54.5	53.3	51.9	51.1	52.8	58.8	58.8	58.8
1976-80	56.3	55.6	57.1	54.0	53.4	54.7	62.2	60.9	63.7
1981-85	60.7	59.6	62.1	59.0	58.5	59.7	64.0	62.0	66.4
1986-90	62.6	61.2	63.5	60.7	59.7	61.7	66.6	64.3	68.5
1991-95	64.8	63.5	65.8	62.5	61.5	63.7	69.1	67.4	70.9
1992-96	65.2	63.8	66.2	62.8	61.7	63.9	69.4	67.7	71.2

Source: RGI 1999

Reported morbidity profile is also useful in understanding health status. It is a subjective phenomenon whose reporting is not only influenced by actual burden of illness but also by education, exposure to health care services, health expectations and even by recall period used in the survey. Table 6 below shows a morbidity rate for a two week recall period of 52 per thousand population in rural areas and 48 in urban areas. The rate of hospitalisation in the state for a recall of one year was 26 per thousand in urban areas and only 19 per thousand population in rural areas. The large difference in the latter is a function of access to hospitals which as we have seen in Table 1 and 2 above is vastly different for rural and urban areas. As regards gender differentials the rural population does not show any difference but in urban areas the male-female differences are significant with females reporting a higher morbidity for acute ailments.

Table 6: Prevalence of ailments and hospitalisation per thousand persons in Maharashtra, 1995-96

Prevalence of	Rural			Urban		
	Total	Male	Female	Total	Male	Female
(a) ailments during last 15 days prior to the survey						
Acute ailment	37	37	38	35	33	38
Chronic ailment	15	14	15	13	13	13
Any ailment	52	51	52	48	45	51
(b) Hospitalisation during last one year prior to the survey	19	20	18	26	27	25

Source: NSSO 1998a.

Table 6 (a): Prevalence of ailments and hospitalisation in by MPCE fractile group and social group, Maharashtra 1995-96

	MPCE* fractile group								Social Group		
	0-10	10-20	20-40	40-60	60-80	80-90	90-100	all	ST*	SC*	Others
Rural											
Acute ailment	34	19	30	33	38	50	60	37	32	33	39
Chronic ailment	4	17	7	9	20	20	25	15	7	16	16
Any ailment	37	36	37	41	57	70	84	52	40	49	55
Hopitalisation	10	9	11	14	19	34	40	19	15	20	20
Urban											
Acute ailment	31	27	34	38	35	35	40	35	26	40	35
Chronic ailment	10	6	12	11	12	21	14	13	7	10	13
Any ailment	41	34	46	48	47	56	53	48	33	49	48
Hopitalisation	17	20	22	24	22	33	39	26	29	28	26

*MPCE = Monthly Per Capita Consumption Expenditure; ST = Scheduled Tribes; SC = Scheduled Castes
Source: NSSO 1998

When we desegregate the data across consumption classes and social groups (Table 6(a)) the importance of access factors in defining morbidity gets further support. Thus, the poorer classes and the tribals, whose access to healthcare services is restricted due to lack of purchasing power, report lower morbidity rates, especially for hospitalisations and chronic ailments. Further, across these groups one sees lower differentials in reported morbidity in urban areas in contrast to rural areas because the former have better access to public health services.

While data on overall mortality is available, like crude death rates (7.4 per 1000 in 1996) and age/sex-specific death rates (see chapter on Demography), the cause of deaths is not very well documented. Registration of deaths is incomplete netting about 70% and of the latter one-third are medically certified. Hence using such data can give a distorted picture - for example the 1993 medical certification data shows that of all such deaths in Maharashtra 10.05% were due to Tuberculosis. (RGI 1998) This happens because deaths due to serious ailments is more likely to be reported. To fill this gap the SRS carries out regularly the Survey of Causes of Death but this is for rural areas alone.

Table 6 (b) Percentage distribution of Deaths by Major cause groups in Rural Maharashtra (excluding senility) 1981-1994

	1981	1991	1994
Causes of Death			
Coughs	31.3	25.7	25.4
Causes peculiar to infancy	21.1	19.4	16.7
Disorders of circulatory system	8.2	12.8	13.7
Fevers	3.7	3.8	2.3
Other clear symptoms	9.2	12.8	16.4
Digestive disorders	10.4	4.8	4.6
Accidents and injuries	8.3	13.4	13.5
Diseases of central nervous system	4.7	5.7	6.5
Child birth and pregnancy	1.1	1.6	1.0
Others	2.0	--	
Total	100	100	100

Source: RGI, respective years

One sees a changing pattern in the mortality profile, the main highlights being declining trends in deaths due to digestive disorders and causes peculiar to infancy and increasing proportion of the share of circulatory disorders, accidents and injuries. (Table 6(b)) When we look at specific symptoms we find that Bronchitis ad Asthma has seen a major surge reflecting the deteriorating environment conditions for human health. Also heart attacks are on the increase (Table 6 (c)).

Table 6 (c) Percentage distribution of deaths (excluding senility) due to Ten major causes in rural Maharashtra, 1997

Selected cause of death	1994	1997
Bronchitis and Asthma	14.2	24.5
Heart Attacks	8.8	10.8
Tuberculosis of lungs	5.3	4.4
Paralysis	4.2	4.9
Cancer	6.0	4.9
Pneumonia	5.4	3.1
Anemia	3.8	3.0
Suicides	2.2	1.6
Vehicular accidents	4.1	3.0
Prematurity	11.5	@
Other Causes	34.5	39.8
Total	100.0	100.0

@not given separately - is included in other causes
Source: RGI, respective years

Healthcare Delivery and Utilisation

The public health care delivery system is organised on the basis of a system of population and geographical entitlements and is structured as follows. At the apex are the tertiary institutions or teaching hospitals. These are located in Mumbai and other larger cities like Pune, Solapur, Nagpur, Thane, Aurangabad etc.. Presently there are 11 such hospitals owned and run by the state government and in addition there are two run by the Central government and four by Municipal Corporations. The next level is the district headquarters, which have what are called Civil Hospitals, and these are usually 100-500 bedded hospitals having most basic specialties (some of the larger ones are used as teaching hospitals). In Maharashtra there are 21 civil hospitals with 5910 beds. (other districts either have a teaching hospital or other general hospitals) These hospitals are core centres for referral medical care for the rural areas, apart from catering to the district town. Many taluka and other towns have smaller hospitals or sub-divisional hospitals, which are often run by local government bodies. In the rural areas at the 30,000-population level (20,000 for tribal and hill areas) there are Primary Health Centres (PHCs) and subcentres with two health workers per 5000 population. These health centres have one doctor with six beds and paramedic staff, which provide the first contact care to villagers. Presently there are 1762 PHCs, 167 PHUs, 61 mobile health units and 9725 subcentres. In the eighties as part of expansion of the rural health infrastructure, under the Minimum Needs Program, Rural Hospitals or Community Health Centres were set up by upgrading some of the older PHCs. This was with the idea of making first referral care available to the rural population closer to where they live. These are 30 bedded hospitals with 4 basic specialties – Medicine, Surgery, Obstetrics and Gynecology, and Pediatrics. Maharashtra has 345 Rural Hospitals,

each reaching out to about 150,000 population (one per 5 PHCs). In some cities urban health centres on the pattern of PHCs are being set up under the India Population Project supported by the World Bank and other similar projects. (see Table 7)

With regard to the private health sector, there are also teaching hospitals (a number of them dependent on public hospitals for infrastructure support), large tertiary hospitals, most of which operate as Trusts and smaller private hospitals and nursing homes. Even though information on the private health sector is incomplete, still its share for hospitals is 87%, for dispensaries 88% and for beds 47%. This large and increasing share of the private health sector is initself evidence of the weakened public health services. The fact that an increasing number of private medical colleges are being set up not only reflects a greater commercialisation of the health sector but it is also at the cost of the public health sector because 9 district hospitals for about Rs. 10 lakhs each have been leased in by such medical colleges, which in effect amounts to privatisation of public provision.

Table 7: Healthcare Facilities in Mumbai, Rural and Urban Maharashtra by Public and Private Sector

	Public Facilities (Govt. + Local Body)				Private Facilities			
	Mumbai	Other urban	Rural	Total Public	Mumbai	Other urban	Rural	Percent private
Teaching Hospital	4	13	--	17	1	16	--	50
General Hospital	76	192	--	268	1416			
Rural Hospital	--	--	345	345	--	2849		87
PHC/PHU/ HP	176	206	1990	2372	--	--	--	--
Sub-centre	--	--	9725	9725	--	--	--	--
Dispensary	235	507		742	1832	3914		88
Hospital beds	20700	29288	20862	70850	23202	38827		47

Source: *The data in this table has been worked out from the Performance Budgets (2001-2002 Budget) for state government for the year 1999 and from the Statistical Abstract for Local bodies and private sector for 1995 (Government of Maharashtra, 1998). However Mumbai data has been compiled from the records of the BMC for 1999, and hence totals do not match with the Statistical Abstract since the latter does not record complete information. The private sector data is an under-estimate and also refers to 1995, except for Mumbai where it is based on a survey by CEHAT.*

Medical Care

Household based national surveys by the National Sample Survey Organisation and the National Council for Applied Economic Research provide information on utilization for medical care (Table 8). These surveys show a declining trend in public facility use in Maharashtra over the years. The NSSO surveys reveal that use of public hospitals for inpatient care has declined from 45% of the cases in 1987 to 31% in 1996 and for ambulatory care the use of public facilities has dropped from 26% to 18% during the same period. The urban areas have marginally higher utilization rates in the public sector as compared to rural areas. The declining use of public health facilities in the context of high levels of poverty is a symptom of the deterioration of the public health system. This is clearly evident from the

assessment of public health facilities done by the government themselves and presented here in Box 2, as well as from the declining trends in investment and expenditures on public healthcare as discussed in a later section.

Table 8: Utilisation of Public and Private Facilities in Rural and Urban Maharashtra

	Inpatient Care				Outpatient care			
	Rural		Urban		Rural		Urban	
	Public	Others	Public	Others	Public	Others	Public	Others
NSSO 1986-87	43.6	56.4	46.2	53.8	26.3	73.7	25.0	75.0
NCAER 1993	30.5	69.5	58.8	41.2	43.8	56.2	32.5	67.5
NSSO 1995-96	31.2	68.8	31.8	68.2	18.0	82.0	18.1	81.9

Source: NSSO 1992; Sundar 1995; NSSO 1998a

Box 3

Private Healthcare – evidence through utilization studies

Organised documentation about the private health sector is very scarce. Whatever little is available is due to some basic statutory requirements like registration of doctors with their Councils and of hospitals with local governments. The central and state governments in their statistical reports, which invariably are plagued by incomplete reporting, report these. The professional associations of doctors and hospitals have not shown any concern for documenting basic information about their profession and institutions and making this information public.

Data from government statistical reports shows that two-thirds of the hospitals and over 40% of hospital beds are in the private sector. The incompleteness of this data, especially on the private sector, makes it difficult to substantiate the growth that is taking place with regard to the private health sector. Hence the only evidence available on the working, size, character of the private health sector is household studies of healthcare seeking behaviour. At the national level we have the NSSO surveys from the 42nd and 52nd Rounds and the NCAER studies. Besides this there are smaller micro studies at the state or district levels. (Table H 38)

The two NSSO surveys clearly show that between 1987 and 1996 private health sector utilisation in Maharashtra increased from 56% to 68% in rural areas and from 54% to 68% in urban areas for inpatient services. In case of outpatient care the private health sector was already accounting for three-fourths share in 1987 and this increased marginally to 77% in 1996. This period coincides with the declining investments by the State in public healthcare. The NCAER studies also tell more or less the same story. The smaller studies done at different points of time in Maharashtra also indicate a very large and growing share of the private health sector.

Given the large size of the private health sector there are two major concerns, which need to be addressed. First is the issue of quality and minimum standards for the services it provides. While studies of public institutions have shown complacency, long waiting time, non-availability of doctors and medicines etc. as its ills, the study of private institutions and providers have shown the absolute absence of any minimum standards, both physical and clinical, irrational drug use, etc.

Secondly the private health sector operates in an absolutely unregulated environment. The professional medical bodies have not shown any concern in setting up basic rules of the game. While the government does have some regulations they are not implemented. Both these issues are acquiring some concern today both at the level of policy makers as well as in the profession. In Mumbai there is an initiative called Forum for Healthcare Standards to help set up an accreditation system which would help set up basic norms and monitor its practice by accrediting institutions for providing quality care. Also the state government has undertaken an initiative to bring in a drastically amended Medical and Clinical Establishment Act to regulate quality and minimum standards in healthcare provision.

Preventive and Promotive Care

Information on utilisation of various services is also available from recent national level surveys (National Family Health Surveys and Reproductive and Child Health- Rapid Household Survey), which were largely confined to

information on reproductive and child health services (Table 9). The latter also gives data at the district level (Table H 13).

Table 9: Percent users of public health facilities in Maharashtra #

Type of Services	Rural	Urban	All
1. Inpatient care services [3]	31.2	31.8	
2. Outpatient care services [3]	16.0	17.0	
3. Ante natal care services [2]	53.0	39.6	48.8
4. Pregnancy complications [2]	50.0	29.8	40.0
5. Delivery care [2]	53.3	43.2	48.7
6. Post delivery complications [2]	36.3	36.7	36.5
7. Contraceptive methods [1]			
(a) Pill	28.6	10.6	18.1
(b) IUD	*	28.1	29.8
(c) Condom	27.3	14.4	19.9
(d) Female Sterilisation	89.9	69.4	82.3
(e) Male Sterilisation	96.4	77.0	93.1
(f) All Modern Methods	85.5	59.1	75.2
8. Immunisation of children [2]	89.1	67.1	82.7
9. Diarrhoea & Pneumonia [2] (for children)	13.6	10.0	12.5

[#] The figures are percent using public facilities from amongst all users. The balance users used private facilities

[1] IIPS and ORC, Macro 2000; [2] IIPS 2000; [3] NSSO 1998a

* number using IUD in rural areas are very few

These studies reveal that over 48 per cent of the women had availed antenatal care services from public sector (53% rural and 40% urban) and for pregnancy complications 40 percent (50 percent in rural areas and 30 percent in urban areas). From those who had delivered babies in institutions 49% had used public facilities (53.3 percent rural and 43.2 percent urban). Among the women who experienced post-delivery complications around 36 percent had sought treatment from public sector.

Public sector is also a major provider of contraceptives in the state accounting for 75.2 per cent of all acceptors of modern methods. Level of utilisation of contraceptives from public sector varied from 18.1 percent for the oral pill to 93.1 per cent for male sterilisation. The level of utilisation for female sterilisation from the public sector was also high (82.3 percent), while 29.8 percent and 19.9 percent of users had availed IUD and condoms, respectively, from public sector.

The role of the public sector in providing immunisation services to children was even much higher as we can see that 83 percent of children were immunised in public health care facilities. The proportion of children who were immunised from public sector ranged from 89 percent to 67 percent in rural areas and urban areas, respectively.

In the case of outpatient care services only a small proportion of children were taken to public health services for treatment if they were suffering from diarrhoea and pneumonia. The levels of utilisation of public sector for treating

these ailments was 13.6 percent, 10.0 percent and 12.5 percent in rural areas, urban areas and combined, respectively. This is much lower than the NSSO data for treatment of general morbidity in the public sector.

The above analysis clearly indicates that of all healthcare services the public sector is dominates only in delivering contraceptive and immunisation services. A sizeable proportion of the population was found to be depending on public sector for reproduction related services, and for inpatient care services. And there is clear evidence of declining trends in use of public facilities for medical care and other health services. Over all the utilisation pattern seems to be closely associated with government policy with a larger emphasis on reproductive and child health issues.

Box 4

ACCREDITATION INITIATIVE IN MUMBAI

A stakeholder based, "Health Care Accreditation Council" has been recently formed in Mumbai. Uniquely, the Council includes a range of stakeholders - representatives of hospital owners, professional bodies, consumer organizations and NGOs. The council has been an outcome of a research study undertaken by CEHAT, Mumbai in 1997-98, to assess the need, views and willingness of various stakeholders and evolve a framework for an accreditation system.

Presently, the council is in the process of developing standards for small private hospitals with a focus on certain key aspects which include structural design, equipment, wards, labor rooms, operating theaters, essential drugs, reception rooms, consulting rooms, medical records and waste management among other aspects. It is examining systems and process related issues, including grading, method and periodicity of assessment and financing of the body as well as other areas (e.g. Indicators). Subsequently the forum plans to develop standards and indicators for specialties and super specialties.

The Council is being registered as a non-profit body and the founding members have contributed the initial funds for establishing the body. This initiative is an attempt to create a more positive environment within the established private health sector by involving them more meaningfully with other stakeholders in a quality assurance mechanism. This should help begin a process of ending a number of ills prevailing in the private health sector and lead towards some form of accountability towards the users of such services.

Disease Control Programs

Since communicable diseases like tuberculosis, malaria, leprosy still account for a major share of morbidity and mortality, efforts continue to be directed towards prevention and control of diseases. With the introduction of vaccines for a number of diseases crude death rates have declined faster. However, morbidity due to communicable diseases continues to be high and in fact has seen resurgence in recent years, including increased mortality. Poor sanitation and solid waste management, and inadequate infrastructure and investment for controlling and treatment of these diseases are some of the reasons for rising prevalence. Since complete epidemiological profiles are not available one has to rely on occasional sample surveys for prevalence data. (Table 10).

With the exception of leprosy the prevalence of other diseases is still very high and one does not see any declining trends. Learning from the experience of leprosy, the management of these programs have been modified. The program management is being vested in district level societies for autonomous functioning of these disease programs.

Malaria: During 1998-99, 16 districts viz., Raigad, Ahmednagar, Thane, Dhule, Jalgaon, Nasik, Pune, Nanded, Yeotmal, Chandrapur, Amravati, Bhandara, Ghadchiroli, Nagpur, Wardha and Mumbai were classified as high risk Districts for malaria. District Malaria Control Societies have been established and registered for each tribal district in the state.

NFHS surveys recorded prevalence of malaria for a period of three months prior to the survey and over the two periods of the survey there has been a substantial increase in incidence from 3742 (1992-93) to 4098 (1998-99) per lakh population. The RCH survey around the same period as NFHS-2 recorded a lower incidence of 3526. While the incidence of malaria, as per the NFHS surveys, in urban areas has nearly doubled over the same period, it has shown a decline in rural areas. The RCH survey also records a higher rural morbidity.

An audit report on the malaria program by the Comptroller and Auditor General (CAG) lists some reasons why the National Malaria Eradication Programme failed to make a significant dent on the incidence of malaria. Delay in treatment, failure to provide treatment, sub-standard anti malarial drugs for treatment and use of sub-standard insecticides, shortage of staff as per prescribed norms and entomological surveys were not carried out during 1992-93 and 1995-97. But this is only as far as the government program goes wherein the major emphasis is on prevention. Since an overwhelmingly large proportion of care is provided by the private health sector a large responsibility for the failure of tackling malaria lies on the shoulders of the private providers. Malaria as a disease has a simple regimen of treatment at one level and at another needs a sanitary environment through prevention and promotive programs. Both have failed.

Leprosy: Leprosy is one program that is a success story. There are many facets to this but the most important fact is that leprosy as a disease is handled almost wholly by the public sector. It continues to be a vertical program, has been allocated adequate resources over the years and has used innovative methods in management of the program. To improve efficiency and effectiveness district leprosy societies had been set up and this strategy has helped improve the performance of the program substantially.

Table10: Prevalence of Selected Diseases in Maharashtra

Malaria (3 month prevalence) per 100,000 population

	Total	Male	Female	Rural	Urban
NFHS-1 1992-93	3742	3630	3850	5100	1800
NFHS-2 1998-99	4098			4509	3551
RCH-RHS 1998	3526	3356	3707	3800	2943

Leprosy (point prevalence) per 100,000 population

	NFHS-1 1992-93	NCAER 1994	RCH-RHS 1998
Urban	30		28.24
Rural	100	65	81.56
Total	72		64.45

Tuberculosis (point prevalence) per 100,000 population

	NFHS-1 1992-93	NFHS-2 1998-99	NFHS-2 1998-99 (Medically Treated TB.)	RCH-RHS 1998
Rural	330	236	191	255
Urban	250	342	282	169
Total	293	282	230	228

Blindness (point prevalence) per 1000 population NFHS-I

	Total	Male	Female	Rural	Urban
Partial Blindness	32.1	28.5	35.9	36.5	26.1
Complete blindness	3.2	2.7	3.7	4.1	3.2

Source: Sundar 1995; PRC and IIPS 1995; IIPS 2000; IIPS and ORC Macro 2000

Maharashtra has historically had one of the highest endemicity rates of leprosy in the country but over the last decade has been a leader in reducing endemicity, as well as providing successful treatment of cases. The multi-drug treatment has contributed significantly to the sharp decline in leprosy prevalence. Evidence supporting the comprehensive coverage of the NLEP is provided by the NFHS and RCH surveys (Table 10). The estimate of leprosy prevalence generated through these surveys is comparable to the performance figures under the government program. This fact verifies our understanding that the success of this public program has been due to the relative non-involvement of the for-profit private health sector; of course, a large number of NGOs have also been active and working in collaboration with the public health program. These surveys also reveal that rural prevalence is nearly three times that of urban prevalence. So while the NLEP comes out with flying colours it has to tackle the slower progress in the rural areas.

Tuberculosis: There are 29 District TB centers and 1995 peripheral health institutions, which include Rural Hospitals, Cottage Hospitals, Primary Health Centres, Nagar Parishad Dispensaries, etc. where the program is implemented through Multipurpose Health Workers of the primary health care program. To control TB more effectively, a Revised National Tuberculosis Control Program (RNTCP) is being implemented since 1998-99. The operational objective of RNTCP is to cure 85% newly detected sputum positive cases through Directly Observed Treatment Short Course Chemotherapy (DOTS). To facilitate this a State TB Society was formed and registered in 1998 to implement the program effectively. District TB Societies have also been formed in Raigad and Pune (Rural) Districts and Mumbai, Pimpri-Chinchwad and Pune Municipal Corporations.

TB is the biggest challenge among the spectrum of infectious diseases. Although prevalence rate appears to have declined (Table 10), greater efforts are required to reduce it further. The overall prevalence of TB across the two NFHS rounds has been nearly constant at 293 per lakh population (NFHS-1) and 282 (NFHS-2). This makes for a caseload of over 260,000 TB cases at any point of time. Again the rural urban differences are wide but here it is expectedly the urban areas that bear the brunt. Between the two rounds the picture has reversed. Surprisingly the RCH survey, which shows near identical overall prevalence of TB, shows a reversed rural-urban picture with the rural areas having a higher prevalence.

The inadequate performance of the TB programme is late detection. Most of this happens because the private doctors treat TB patients in the earlier stages of the disease for cough and other respiratory infections and this leads to delayed diagnosis, and consequently the worst cases end up under public domain. Studies have shown not only the incapacity of the private health sector in handling TB but also their contribution to drug resistance due to misuse of drugs (Uplekar, M and S Rangan, 1996). Further, with the rising threat of HIV/ AIDS, tuberculosis becomes an even greater danger.

AIDS: The National AIDS Control Program is a 100 per cent centrally sponsored scheme. In phase I the project was sanctioned for the period September 1992 to March 1999. Going by the success of the leprosy program, which has managed the program through autonomous societies, the phase II project is being implemented in the State (except Mumbai) through the Maharashtra State AIDS Control Society (MSACS) set up in 2000. It is responsible for planning, coordination, implementation and monitoring of AIDS prevention and control programs at the state level. For implementation of NACP in the city of Mumbai, the BrihanMumbai Municipal Corporation has set up Mumbai District AIDS Control Society (MDACS).

The entire focus of the NACP is awareness campaigns and education, and surveillance of specific groups of population. For instance, surveillance is done through screening of blood sample from STD clinic patients and women seeking antenatal care. The surveillance data collected from various sites (STD clinics and ANC clinics) shows wide variations across sites but given the poor scientific basis of the data it is difficult to explain this. (Tables H 22). The treatment component is as yet absent in this program. As regards awareness and education a wide array of groups like high school and college students, truck drivers, sex-workers, eunuchs, street children, migrant workers etc. are targeted, as is the general public through the mass media. A lot of this is done through NGOs.

Blindness: Blindness is a major problem in Maharashtra with over 3.5% of the population having either partial or complete blindness. Cataract is the main reason for blindness and 80% of the blindness in the state is attributed to cataract as per the Performance Budget report of the government of Maharashtra. Since 1994, to expedite cataract surgeries, World Bank assistance of Rs. 83 crores has been pumped into this program. To effectively implement the project and to reduce the backlog of cataract blind people in the state, District Blindness Control Societies have been set up in each district.

NFHS-1 is the only source which provides survey based data on bindness. It reveals that the overall prevalence of partial blindness was 32 per 1000 and that of complete blindness was 3 per 1000 (Table 10). The prevalence of both partial and complete blindness is higher among women and in rural areas.

Water Supply and Sanitation

Access to safe drinking water and sanitation facility is one of the significant determinants of health status in the population. Available data shows that 54 percent rural and 91 percent urban households in 1991 had safe drinking

water facilities.(Table H 40) NFHS data shows that the drinking water situation between 1992 and 1999 has shown little improvement (see table below).

Percentage of households having drinking water and sanitation facilities in Maharashtra

	1992-93	1998-99
Drinking water from pump/pipe	78.5	81.9
Any toilet/latrine facility	40.8	45.9

Source: IIPS 1995; IIPS and ORC Macro 2000.

Sanitation too has a major public health impact and here both urban and rural areas are both inadequately provided. Though around 75 percent of households in urban areas are having latrine, drainage system and garbage disposal (Table H 40), the public health consequences of inadequate sanitation facilities are more in densely populated urban areas where 32 percent of the population is residing in slums (RGI, 2001).

Family Welfare Program

The family welfare program is a high profile and high priority program of the Ministry of Health and Family Welfare. Under this program as revealed by the assessment survey (Box 2 and tables H 30-35) supplies are reasonably good and hence the share of the public sector in services provided under this program is very high. Even investments and expenditures under this program have maintained a certain level. The revised program redesignated as the reproductive and child health (RCH) program has introduced the element of quality of care in the services under this program for women and children. The achievements of Maharashtra state in terms of selected RCH indicators is presented in Table 11. It can be seen that 55 percent of women received full antenatal care, 57 percent of the deliveries were in medical institutions, 61 percent of deliveries were safe deliveries, 58 percent of ever married women were using family planing methods and that 80 percent of children were fully immunised. Differentials between rural and urban areas were very sharp for safe/institutional deliveries as well as for ANC coverage but in the case of contraceptive use and immunisation of children the rural areas measured up to the urban areas. In the case of differentials across social groups and type of housing (proxy for socioeconomic class) the SC/ST group and those staying in katcha houses showed markedly lower utilisation of such services with the gap being least for contraceptive use.

Table 11: Differentials in level of key indicators of RCH by selected background characteristics, Maharashtra 1998-99 (figures are percentages)

	Residence		Social Group		Type of house			Total
	Rural	Urban	SC /ST	Others	Katcha	Semi Pucca	Pucca	
Full ANC coverage	52.2	59.0	48.2	57.8	46.2	56.8	61.5	54.8
Institutional Deliveries	41.2	84.8	41.8	63.0	34.6	59.7	78.8	57.1
Safe Deliveries	47.1	86.3	45.5	67.5	39.9	64.1	81.9	61.2
Contraceptive Use	59.5	56.5	56.4	59.2	55.8	58.5	60.2	58.3
Full Immunisation of children	80.0	78.7	73.8	82.3	74.5	80.3	85.0	79.7

Source IIPS 2001.

From 'Target-free Approach' to 'Self-determined strategy'

The Government of India abolished the method specific approach in 1996 where targets for all activities were fixed at national level. The State adopted a self determined strategy, where expected levels of contraceptive use for each district were estimated using criteria based on birth rates and death rates, and targets were drawn by the district level officers. Under the old approach, the program was geared to meet the set targets and in the bargain, quality of services and health care facilities were neglected. The emphasis of the current approach is on need for better quality of service. Training for PHC staff has been initiated and includes previously neglected topics like quality of care, informed choice and the assessment of community needs.

The outcome of the program between 1993 and 1998 (MOHFW, 2000) suggests a slight decline in contraceptive use. A similar trend is observed in Performance Budgets. This may actually reflect a decline in overstated reporting of contraceptive use. However, NFHS surveys suggests an increase in CPR from 53.7 (1992-93) to 60.9 (1998-99). This could possibly be due to increased number of users not using public contraceptive services. Female sterilisation dominates the contraceptive use and spacing methods are not widely used.

Child Survival and Safe Motherhood Programme (CSSM) to Reproductive and Child Health (RCH)

CSSM is an integrated package of interventions for improving the health status of women and children so as to reduce IMR and MMR, and it includes services:

a) To sustain and strengthen the ongoing programme of immunisation, Oral Rehydration Therapy (ORT), Vitamin A prophylaxis, Iron Folic Acid supplementation.
b) To expand the coverage of antenatal care, professionally attended deliveries, and the Acute Respiratory Infections (ARI) Control Programme and care of the new born.

This program is now renamed as the reproductive and child health (RCH) program and includes the various components discussed below.

Immunizations

The Expanded Programme on Immunization (EPI) was initiated in India in1978 to immunize children against preventable killer diseases such as tuberculosis, polio, diphtheria, pertusis (whooping cough), tetanus and measles. This was modified as the Universal Immunization Programme in 1985 - 86 in order to achieve 100 per cent immunization.

The service statistics do not indicate the level of coverage so we have to rely on NFHS surveys. It is clear that coverage of different vaccinations is increasing but it has yet to reach the 100% target. The proportion of children who have received no vaccines fell from 8 per cent to 2 per cent over the six-year period between the two NFHS rounds, and fully immunized increased from 64 per cent (NFHS-1) to 78 per cent (NFHS-2) (Table H 25). Across districts and regions Konkan, Nagpur and Pune divisions are the better performers. The best districts are Ratnagiri, Sindhudurg,

Satara, Chandrapur, Mumbai and Wardha and the worst are Aurangabad, Bid, Parbhani, Nashik, Dhule, Nanded and Amravati (Table H.10).

Antenatal Care

Proper antenatal care is crucial for the good health of both the mother and the child. There have been some improvements in the coverage of ANC services over the six-year period from NFHS-1 to NFHS-2. (Table 11 (a)) There is also an increase in institutional deliveries and deliveries supervised by trained health professionals (PRC and IIPS, 1995; IIPS and ORC Macro, 2000). This facilitates in ensuring safe delivery and better health of the mother and child. The differentials across regions and districts are similar to that for immunizations. Konkan, Pune and Nagpur did better than the state average for ANC's and the former two for institutional deliveries. As expected, Mumbai topped for both ANC's and institutional deliveries, followed by Sindhudurg, and the worst districts were Nashik, Dhule and Parbhani for ANCs and Gadchiroli, Bhandara and Jalna for institutional deliveries (Table H 10).

Table 11 (a) Percentage receiving selected antenatal care services in Maharashtra

	NFHS -1[1]			NFHS –2 [2]		
	Rural	Urban	Total	Rural	Urban	Total
Received 2 or more doses of Tetanus Toxoid	65.4	79.8	71.0	72.0	79.4	74.9
Received iron and folic acid tablets or syrup	69.6	72.2	70.6	82.3	88.6	84.8
Received antenatal check-up outside home from:						
1.Doctor	45.3	85.7	61.0	55.3	89.6	68.7
2. Other Health Professional	11.8	2.8	8.3	24.7	4.4	16.8

Source: [1] PRC and IIPS 1995; [2] IIPS and ORC, Macro 2000.

Childhood Diarrhoea

The Oral Rehydration Therapy Programme was initiated in Maharashtra since 1986-87 in a phased manner, to prevent deaths due to Diarrhea among children below five years of age. All districts were covered under this scheme by 1989-90. The main activities of this programme include training, health education and supply of ORS packets. The percentage of children who had diarrhoea showed an increase in NFHS-2 as compared to NFHS-1. This may be due to the seasonal variations during data collection, which affects the prevalence of diarrhoea. Knowledge of ORS packets has increased from 47 per cent to 65 per cent. Percentage of children who were given ORT had also increased over the same period indicating improvements in the use of ORS packets for the treatment of diarrhoea. (Table H 26)

Reproductive Tract Infections (RTI)

This is a recent initiative under this program but as of present not much information is available in the performance budgets except that there is a World Bank and Central government supported RCH program for which in 2001-2002 an allocation of Rs. 68 crores has been made and 97% of this is for materials and supplies, mostly for contraception and immunization services. At the health care delivery level there is no evidence of any substantial inputs into dealing with RTI's for which the recent RCH survey clearly revealed that 27% of women and 10% of men in the state reported

having had atleast one such episode in 'last three months'. Across districts there was a lot of variation with Akola (43%), Nanded(38%) and Jalna(37%) reporting high prevalence for women and Bhandara (17%), Yavatmal and Wardha (14%) and Nanded (13%) for men. (Table H 29) So, there is a large potential demand for such services that needs addressing.

Public Expenditures on Health

The share of health expenditure in the government budget has decelerated sharply over the years, more so after the structural adjustment policies in 1991, which curtailed the government spending to reduce its fiscal deficit. (Table 12) This will have an adverse impact on long-term growth and may lead to further human deprivation, especially given the fact that user-charges are being introduced and/or increased in public health facilities.

Table 12: Public Expenditure (in Rs. million) on Healthcare in Maharashtra

States	1980-81	1985-86	1990-91	1995-96	1998-99
Total Public Health Expenditure	1307	2767	4976	9061	11855
Per capita (Rs.)	39.94	63.73	63.04	105.95	131.07
Percent to revenue expenditure	6.53	5.97	5.68	5.18	4.5
Percent of NSDP	0.9	1.0	0.8	0.7	0.6

Source: Finance and Revenue Accounts, Govt. of Maharashtra, various years. Population and income data used from Statistical Abstract of India.

Health expenditure, for the present analysis includes expenditure borne by ministries of health and family welfare and therefore, excludes water supply and sanitation. It thus includes curative care i.e., hospitals and dispensaries, preventive and promotive programmes such as control of diseases, family planning, immunisation, medical education, Employee State Insurance Scheme (ESIS), Food and Drug Administration etc.

Maharashtra, despite its achievement in overall economic development, has failed to give the required significance to health and health care, given the fact that health expenditure as a percentage of NSDP at current prices has declined from the levels of 1.0 per cent in the 80s to 0.6 per cent in 1998 – 99, and as a proportion to total government spending from over 6% in the 80's to 4.5% in 1998-99 (Table 12 and Table H 14). Revenue expenditure on health as a share of total government expenditure shows a declining trend reflecting the inadequate commitment of the state towards increasing health care demands of the population. This is despite the fact that health is a state subject. Excessive attention is given to curative care in urban areas at the cost of neglecting such healthcare needs of rural population. Expenditure on hospitals and dispensaries as well as Medical Education, Training and Research has shown a slight increase since 1985-86.

Expenditure on National Disease Control programmes also shows a declining trend. This is partly due to the structural adjustment policies. The impact of this was a decrease in central financial transfers to the states. Since then, there has been an increase in non-plan expenditure (mainly on account of salaries) and a decline in plan expenditure. Further desegregation of expenditure on National Disease Programme shows that spending on Malaria, Leprosy, TB and

Blindness control programmes accounts for nearly ninety percent of the total disease program expenditure. Among the four, the share of Malaria (50% to 70%) and Leprosy (15% to 30%) is very high. In 1998-99 the share of Malaria touched a whopping 71% because of the flow of funds from World Bank Assisted Malaria Control project. It is also revealed that over the years there is a rapid increase in the share of salary component and a decline in the share of non-salary component (Table H18, H 20, H21).

Expenditure on family welfare programme has been increasing steadily and in 1995-96 stood at 14.8% of the total government expenditure. Spending on maternal and child health (MCH) during the same period showed the same upward trend. This is when Child Survival and Safe Motherhood (CSSM) programme was introduced to reduce maternal and child mortality. The emphasis on family welfare is on rural welfare services, but here too the bulk of expenditure is on salaries.

It is clear from the above analysis that the state has reduced the share of the health sector, reflected in the declining share of health expenditure in the total budget. Increasing proportion of health expenditure on salaries, leaving very little for non-salary components such as materials and supplies, maintenance, diet, travel etc. has created allocative inefficiencies that have drastically affected the performance of various programs. This has implications on utilisation of public health services, and data from national surveys clearly reveal a declining share of public services in healthcare (Table 8). And this also means increased burden in out-of pocket expenditures for health care. Between the two NSSO rounds out-of pocket costs have increased three-fold for inpatient care and by about 50% for outpatient care. The increases are even higher for those using private health care. And rural users are spending significantly larger amounts on both inpatient and outpatient services, but this gap has reduced over the two NSSO surveys perhaps reflecting the decline of public services in urban areas also and/or the increase in user fees in public health facilities (Table 13). Other surveys also show similar patterns and trends in out of pocket expenses (Table H-38).

Table 13: Average out of pocket medical expenditure on treatment of an ailment in outpatient care and inpatient care units, Maharashtra 1986-87 and 1995-96 (*figures in Rupees)*

Source of	1986-87 [1]		1995-96 [2]		1986-87 [1]		1995-96 [2]	
Treatment	Rural	Urban	Rural	Urban	Rural	Urban	Urban	Rural
	Inpatient Care				Outpatient care			
Public	439	400	1529	1439	52	84	73	91
Others	901	1928	3836	5345	99	153	161	175
All	842	1498	3089	3997	87	132	140	163

Source: [1] NSSO 1992; [2] NSSO 1998.

Nutrition

Evidence from national level sample surveys indicate that Maharashtra's nutritional status does not correspond with its economic development position in the country. The available data shows that more than 50 percent of households in Maharashtra fall below standard nutritional norms and there has even been a decline in nutritional status of the population in the state in the nineties (Table 14). It is seen that 57.4 percent of households in rural areas and 54.8

Box 6

Health Sector Reforms?

Maharashtra's public health sector, until SAP, was viewed with a great deal of pride by the bureaucracy and politicians. Pressures to privatise were strongly resisted from within. We think this was largely due to the history of social reforms and progressive public actions discussed elsewhere in this report. The first assault came via GR No. HFR-1087/3653/8-9 dated 2-2-1988, which suggested user charges at the district hospitals. The rationale they used were the findings of the NSS 42nd Round, which revealed that even the poor used private health care services and therefore there was willingness to pay. (Government of Maharashtra 1997) The immediate impact of this resolution was reflected in the Performance budget report of the subsequent years, which showed drastic declines in OPD and inpatient users at most district hospitals. After this "bad experience" most hospitals began to ignore the GR and it was never seriously implemented and this brought back the patients to the district hospitals. The user charges collected have varied from 0.1% to 0.18% of the total public health expenditure from 1989 to 1996. Post-SAP things began to change rapidly. In the name of public-private partnership public facilities were extended for use to private health providers. For instance CHCs were given to private opthalmologists for surgical camps, public sector patients were referred to private institutions for sophisticated investigations like CT Scans and MRIs, often when the concerned public institutions would have their own such facility. Nine district hospitals have been leased out to private medical colleges in the state for as small a sum as Rs. 10.8 million a year. The government spends the same amount to train 10 graduate doctors! The point here is not as much about privatisation as the fact that the people, especially the poor, lose out when such actions are taken.

In Mumbai the Bombay Municipal Corporation has agreed on a policy initiative to privatise all peripheral hospitals and maternity homes, that is 42 institutions with nearly 6000 beds. However local protests have prevented any such action. The BMC has however successfully privatised non-clinical services and a study shows that while the unit costs went down the quality deteriorated (Bhatia and Mills, 1997). Again in Mumbai, the Maharashtra government has entered into partnership with a multinational pharma major to run one of its hospitals and this is perhaps a backdoor entry for privatization of premier hospitals.

The Maharashtra government, following in the footsteps of AP, Punjab and W Bengal too has taken up a health systems development project supported by the World Bank to improve secondary hospitals, that is CHCs, sub-divisional hospitals and district hospitals. The broad objectives of this are:

- To improve the systems performance and quality of health care services in secondary health care institutes
- To narrow current coverage gaps by increasing access to health care delivery and
- To improve the efficiency in the allocation and use of health resources

Since the project is very recent no impact assessment is possible but issues like user-charges, privatisation of non-clinical services, supporting private hospitals in blocks which do not have CHCs, extension of honorary system to district hospitals and CHCs etc.. are being considered. Other features include strengthening a referral system so that secondary hospitals do not have to deal with first contact care, supporting hospitals with specialty facilities to becoming training centres for private and public doctors to facilitate CME since now re-registration is compulsorily linked to a definite number of hours of CME etc.. While the Health Systems Development Project may have a number of positive features, it lacks the teeth to bring about structural reforms. The strategy is basically to make piecemeal changes and not structural changes. Serious reforms imply structural changes. When we look at budgetary allocations we do not find an encouraging picture. Despite the World Bank supported initiative budgetary support to the public health sector is declining. What is possibly happening is that the secondary institutions will have improved infrastructure and their capacities will be enhanced using external assistance but with states overall declining support to public health services there is all likelihood that these upgraded institutions will pass into private hands like some of the district hospitals have been given to private medical colleges for a paltry annual fee.

percent in urban areas receive an intake of less than 90 percent of the required level of 2700 calorie per consumer unit per diem. And only about 25 percent and 28 percent of households in rural and urban areas, respectively, belong to the

average calorie intake level of 90-110 percent (2700 Calories ± 10 %). Between the two rounds of NSSO (1983 and 1993) the situation in urban areas has improved somewhat but has worsened for the rural population (Table 14). Data on percapita production of food grains also reflects this decline from 172 Kg's per capita in 1986 to 140 Kg's percapita in 1999. (Government of Maharashtra, 2001).

Table 14: Per thousand distribution of persons by calorie intake level for Maharashtra and India

	50th round July 1993-June 1994				38th round Jan-Dec 1983			
	Less than adequate	Adequate	more than adequate	All	less than adequate	Adequate	more than adequate	All
				Rural				
Maharashtra	574	253	172	1000	444	267	289	1000
India	420	284	296	1000	409	242	349	1000
				Urban				
Maharashtra	548	280	171	1000	571	244	185	1000
India	488	281	232	1000	520	251	229	1000

Note: Intake levels: Adequate means 10% + or - of 2700 Kcal, less than adequate is more than -10% and more than adequate is more than +10%
Source: NSSO 1997.

The impact of this low level of food intake is reflected in the nutritional status of women and children in the state. Nearly half the ever-married women aged 15-49 years in the state were suffering from anemia (Table 15). Prevalence of anemia was marginally higher in rural areas (51.2 percent) than in urban areas (44.8 percent). The proportion of women who were suffering from mild anemia, moderate anemia and severe anemia were 31.6 percent, 14.1 percent and 2.9 percent respectively.

Table 15: Anemia among women aged 15-49 years and children under three years (6-35 months) in Maharashtra, 1998-99.

	Percentage having anemia					
	Ever married women			Children under 3 years		
	Urban	Rural	Total	Urban	Rural	Total
No anemia	55.2	48.8	51.4	30.1	26.4	27.8
Mild anemia	29.2	33.2	31.6	25.8	24.4	24.9
Moderate anemia	14.0	14.2	14.1	39.7	45.6	43.4
Severe Anemia	1.6	3.8	2.9	4.4	3.6	3.9
Total Anemic	44.8	51.2	48.6	69.9	73.6	71.2

Source: IIPS and ORC, Macro 2000.

In the case of children under 3 years in the state 71.2% were suffering from anemia. Anemia levels were comparatively higher in rural areas than in urban areas. The proportion of children who were having mild anemia, moderate anemia and severe anemia were 24.9 percent, 43.4 percent and 3.9 percent respectively.

NFHS-2 (1998-99) also gives additional information on nutritional status based on age, height and weight of women and children in the state (Tables 16 & 17). Average height of an ever-married woman in 15-49 age group in

Maharashtra was 151 centimeters, which was similar to the average height of an Indian woman. Chronic energy deficiency is usually indicated by body mass index (BMI) of below 18.5 Kg/m^2. About 40 percent of the women in Maharashtra have a BMI of below 18.5 Kg/ m^2. As in the case of women a large proportion of the children in state were also under-nourished. It can be seen that the percentage of children under 3 years who were found to be under nourished in terms of nutritional status indices weight for age, height for age and weight for height in the state were 50 percent, 40 percent and 21 percent respectively.

Table 16 Nutritional status of ever married women aged 15-49 years, 1998-99

	Maharashtra	India
Height		
Mean height (cm)	151.4	151.2
% below 145 cm	11.9	13.2
Weight for height		
Mean Body Mass Index (BMI)	20.2	20.3
% with BMI below 18.5 Kg/m^2	39.7	35.8
% with BMI 25.0 Kg/m^2 or more	11.7	10.6
% with BMI >= 30.0 Kg/m^2 or more	2.9	2.2

Source: Source: IIPS and ORC, Macro 2000.
Body mass index (BMI) is ratio of weight in kilograms to square of height in meters.

Table 17 Nutritional status of children under 3 years 1998-99.

	Maharashtra	India
Weight for Age (percentage under weight)		
Percentage below -3 SD	17.6	18.0
Percentage below –2 SD	49.6	47.0
Height for Age (percentage stunted)		
Percentage below -3 SD	14.1	23.0
Percentage below –2 SD	39.9	45.5
Weight for Height (percentage wasted)		
Percentage below -3 SD	2.5	2.8
Percentage below –2 SD	21.2	15.5

Source: IIPS and ORC, Macro 2000.
Each index is expressed in standard deviation units (SD) from median of the international reference population. Children who are more than two SD's below reference median are considered to be under nourished and those who fall more than 3 SD from reference median are considered to be severely under nourished.

The government of Maharashtra's efforts to improve nutritional status of women and children in the state through the Integrated Child Development Services Schemes (ICDS) have met with some success. Under the ICDS schemes the state government has made provisions for supplementary nutrition to children under six years of age, pregnant women and nursing mothers belonging to poor families enrolled at Anganwadis. Service statistics (Table 18) shows that about 2.4 lakhs pregnant women, 2.5 lakhs of nursing women and 31.3 lakhs of children benefited from these schemes in the month of March 2001. But the proportion of eligible women/children who got enrolled and benefited from ICDS

schemes varied between 55-68 percent. Perhaps the overall nutritional status of the state would have been better than the one observed above if there had been a wider coverage of the ICDS schemes.

Table 18 Number of beneficiaries under supplementary Nutrition Programme (ICDS) in the month of March 2001, Maharashtra

	Eligible	Enrolled	Benefited
Pregnant Women	424444	301708 (71.1)	238158 (56.1)
Nursing Women	451078	319811 (70.9)	250823 (55.6)
Children (6 months- 1year)	583561	434143 (74.4)	381421 (65.4)
Children (1 - 3years)	1789458	1232126 (68.9)	1033356 (57.7)
Children (3 - 6years)	2519275	2085307 (82.8)	1710555 (67.9)
Total children	4892294	3751576 (76.7)	3125332 (63.9)

Figure in brackets denotes percentage enrolled/benefited.

Source: Provided by Bureau of Economics and Statistics, Government of Maharashtra.

Box 5

The People's Health Campaign In Maharashtra and Improvement in Health Services

The People's Health Campaign is a unique grassroots-to-global movement for *'Health for All'*, a campaign for better health.. This innovative campaign has been active since July 99, to enquire into the current state of health services and to demand better health care. In Maharashtra, over sixty health and science related organisations, womens' groups, and other organisations of diverse backgrounds have come together as a broad front to highlight health as a vital social and political issue affecting the life of every citizen. The background to this campaign is a global wake-up call being given to governments around the world, reminding them of their promise and pledge made in 1978 to provide 'Health for All by 2000 AD'. India took the lead in this campaign and over 2000 health, science, womens' and other organisations and NGOs, including 19 national networks, in 20 states are involved in the Peoples Health Assembly (PHA) process.

The People's Health Campaign in Maharashtra

The main objectives of the campaign in Maharashtra has been to demand basic improvement in public health services, social regulation of the private medical sector and asking for health services to be more sensitive to womens' needs.

Health Dialogues- *'Health Dialogues'* were carried out at the grassroots level, in about 40 talukas of 15 districts - Pune, Beed, Osmanabad, Thane, Kolhapur, Nashik, Nanded, Raigad, Ahmednagar, Chandrapur, Satara, Sangli, Gadchiroli, Wardha and Ratnagiri. An 'enquiry' was conducted into the status of health services using a standard checklist of 15 mandatory health related services. Following this 'enquiry', people approached the block level health authorities and conducted a dialogue with them, asking for specific improvements in various services found lacking, while also offering their cooperation. The response of the health authorities and private doctors to these initiatives was mixed, ranging from defensive to supportive. Various different forms were used in the process, such as Kalajathas, Poster exhibitions, street plays and even mass demonstrations to demand better health services. Similarly in urban areas like Mumbai and Pune people documented the poor state of public dispensaries and hospitals. Some of the districts like Osmanabad, Nashik, Beed and Pune organised district PHA conventions and had a dialogue with district level authorities.

People's Monitoring Of Health care Services-One of the important tools used in this process is the "Health-Calendar." This is a specially prepared blank monthly calendar, which is to be displayed at some prominent place in the village. It shows the planned visits to the village by ANMs, MPWs etc. Since the people know when the health worker is coming, they can stay in the village on that day to avail of the services of these health workers. When these health workers actually visit the village, they would sign on this calendar, so that the visit is publicly recorded. Experience shows that this simple tool has increased the visit and utilization of health services and has helped to bridge the gap between the people and the health-services.

Realising the dream of Health For All- Making Health care a fundamental right, enacting a social legislation to ensure minimum standards in the private medical sector, doubling the public budgetary allocations for health and initiating a scheme for a village based health care provider are some of the issues being raised through this platform at the State and National levels.. The People's Health Campaign is an unprecedented global movement, which has the

potential to generate both the much needed political will and people's initiative necessary to convert Humanity's dream of Health for All into a tangible reality. (*contributed by Dr. Anant Phadke, CEHAT, Pune*)

Conclusions

Table 19 pools together critical health indicators to present an overview across rural and urban areas over time. Some trends are very clear, like the universal rural – urban disparities with the former clearly neglected. This does not imply that urban health services are good. Urban health services are also considerably strained under the impact of the new economy. This is compounded by the inter-regional disparities with a clear pattern of districts in Vidharbha, Marathwada and North Maharashtra at a considerable disadvantage in terms of the existing health resources in these regions as compared to Mumbai and Western Maharashtra. Other trends indicate that improvements in inputs have definitely made a positive impact overall in outcomes. In case of preventive care the public health services continue to play a lead role and this has been critical to overall improvements in health outcomes. During the eighties when the public health infrastructure expanded in rural areas one even saw the rural-urban and inter-regional gap in health outcomes reduce substantially but presently the reduction in public health investment and expenditures has slowed further gains, especially in rural areas. There is a clear need for more resources for healthcare in the public domain to achieve better equity in health outcomes. Only such a strategy will strengthen the public health sector and benefit the people of Maharashtra, especially the poor and deprived sections of the population. To support strengthening of public health services the Peoples' Health Assembly initiative was started in early 2000 and through this campaign it is hoped that the interest in peoples' health and healthcare in the public domain will be back on the government's agenda. (see Box 5).

Table 19: Overall Inputs and Outcomes of Health Sector in Maharashtra in Rural & Urban Areas

	1981			1986			1991 / 1992			Latest Year (1994 - 1998)		
Indicators	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Input Indicator												
1. Beds /lakh population	13.52	306.69	116.22	17.51	328.45	132.78	26.05	332.51	144.64	44.70	324.70	153.90
2.Doctors / lakh popn.			65.43						62.72	72.5	139.8	23.7
3.Percent Beds Private			37.40			38.38			34.13			47.82
4.Health Exp. % NSDP			0.90			1.0			0.8			0.7
5. Health Exp. % Budget			6.53			5.97			5.33			5.18
6. Health Exp. Percapita			19.94			38.95			75.63			102.26
Outcome Indicator												
7. Crude Death Rate	10.6	7.4	9.6	9.7	6.1	8.4	9.3	6.2	8.2	8.6	5.4	7.3
8. Total Fertility Rate	4.0	3.0	3.6	4.0	3.0	3.6	3.3	2.3	2.9	3.3	2.5	2.9
9. Infant Mortality Rate	90.10	49.30	78.90	73	44	63	69	38	60	58	31	48
10. Life Expectancy	54.0	62.2	56.3	59.0	64.0	60.7	60.7	66.6	62.6	62.8	69.4	65.2
11. % Using Public OPD				26.32	25.02	26.00				17.98	18.09	18.00
12. % Using Public IPD				43.57	46.23	44.00				31.20	31.80	31.40
13. % No ANC							21.8	9.8	17.2			9.6
14. % Fully Immunised.							65.6		52.8	76.8	80.4	78.2
15. % Inst. Deliveries	10.9	69.5	26.5	20.2	72.0	33.7	20.9	75.9	34.3	34.3	80.9	52.8
16. % Inadequate Calorie Intake				44.4	57.1					57.4	54.8	

Source: RGI 1999; PRC and IIPS 1995; IIPS and ORC Macro 2000; CBHI 1998; IIPS 2001; NSSO 1992; NSSO 1998a; NSSO 1998b; Government of Maharashtra (*Finance and Accounts* various years); CSO 2000.

Annexure Tables

Table H 1: Trends in availability of health facilities in Maharashtra

		Population served per facility			
Type of facility		1961	1971	1981	1991
Hospitals		104167	128205	62500	37453
Beds		1430	1347	860	690
Dispensaries		50505	50251	17921	8554
PHC		128205	89286	94340	29326
Sub Centres	*		12484	10020	5152
Doctors	*		2208	1528	1594
Nurses		4344	2558	1851	2056

Source: Duggal *et al, 1995a.*

Table H 2: Number of hospitals, beds and dispensaries per lakh population across States and by rural and urban areas

	Hospitals			Beds			Ref	Dispensaries			As on
	Rural	Urban	Total	Rural	Urban	Total	Year	Rural	Urban	Total	
Andhra Pradesh	1.7	10.6	4.2	19.8	189.8	65.5	1.1.94	0.4	0.4	0.4	1.1.93
Gujarat	0.6	15.1	5.6	24.3	422.5	161.7	1.1.95	8.2	31.2	16.1	1.1.95
Haryana	0.1	1.5	0.4	4.0	152.8	40.6	1.1.96	0.3	4.1	1.2	1.1.93
Karnataka	0.1	1.7	0.6	10.4	233.5	79.4	1.1.96	1.8	1.6	1.7	1.1.94
Kerala	6.5	7.5	6.7	198.0	414.2	255.1	1.1.94	6.4	6.4	6.4	1.1.94
Maharashtra	0.9	8.3	3.8	20.7	219.7	97.7	1.1.93	0.7	24.4	9.9	1.1.93
Punjab	1.8	2.2	1.9	62.9	156.2	90.4	1.1.96	7.7	3.6	6.5	1.1.96
Tamil Nadu	0.2	1.7	0.7	11.8	232.9	87.5	1.1.90	0.4	1.9	0.9	1.1.90
West Bengal	0.2	1.4	0.5	11.7	237.0	73.7	1.1.96	0.8	0.7	0.7	1.1.96
All India	0.7	4.3	1.6	19.4	212.7	69.1	1.1.96	1.7	6.7	3.0	1.1.96

Source: Based on CBHI ,1998

Table H 3: District wise number of medical institutions and beds per one lakh population, Maharashtra

	Medical Institutions					Beds				
	1961	1971	1981	1991	2000	1961	1971	1981	1991	2000
Raigad	1.1	1.7	2.1	4.1	3.5	55	36	80	61	53
Ratnagiri	0.9	1.6	1.3	5.2	4.8	19	42	50	90	139
Thane	0.7	1.1	1.5	2.2	1.7	29	113	155	89	77
Ahmednagar	0.7	1.0	1.4	3.5	3.0	7	15	74	75	63
Dhule	0.9	1.2	1.8	4.1	3.9	12	22	56	75	68
Nandubar										
Jalgaon	0.6	1.2	1.4	3.5	3.1	12	33	53	57	57
Nashik	0.5	1.2	1.6	3.4	3.3	34	34	74	70	71
Pune	0.9	1.3	1.7	3.1	2.6	174	208	226	214	177
Satara	0.8	1.3	1.6	3.6	3.3	47	19	70	57	51
Solapur	0.8	1.4	1.5	3.3	2.9	39	52	111	87	75
Kolhapur	0.4	1.2	1.3	2.8	2.7	32	40	58	59	52
Sangli	0.7	1.0	1.3	3.5	3.1	81	44	104	90	79
Sindudurga				5.6	5.7				86	49
Aurangbad	0.3	1.3	1.2	2.7	3.1	5	50	67	77	87
Beed	0.9	0.8	1.2	3.1	2.8	45	40	67	69	60
Jalna				3.0	2.7				50	27
Nanded	1.0	1.1	1.2	3.4	3.0	59	17	62	77	67
Latur				3.3	2.8				44	28
Osmanabad	0.3	1.1	0.5	4.2	3.6	13	17	20	65	250
Parbhani	0.6	1.1	1.0	3.0	2.8	18	15	37	45	50
Hingoli										
Akola	1.2	1.6	1.8	3.3	3.1	47	56	84	90	118
Washim										
Amravathi	1.9	1.8	2.3	4.5	4.1	48	105	158	156	141
Buldana	1.9	2.1	2.2	3.3	3.1	47	44	56	62	56
Yavatmal	2.0	1.9	2.0	3.8	3.5	52	42	69	79	71
Bhandara	1.3	1.5	1.4	3.8	3.8	38	33	61	66	64
Gondia										
Chandarpur	0.8	1.5	1.3	4.5	3.8	11	25	58	104	126
Gadchiroli				6.4	6.2				71	46
Nagpur	1.8	1.9	2.0	2.7	2.3	106	177	211	177	147
Wardha	2.0	2.2	2.4	4.2	3.8	98	81	187	244	220
State Total *	1.0	1.4	1.6	3.4	3.1	47	60	98	94	84

Source: Supplied by Bureau of Economics and Statistics, Government of Maharashtra. *excludes Mumbai. The declining numbers in most cases are due to incomplete reporting from the private sector.

Table H 4a: Health care services in Maharashtra, 2000.

	No of hospitals & dispensaries	Popn. Per hospital & dispensary	No of PHC's	Popn served per PHC	No of Sub centres	Popn served per sub centre	No of Beds	Popn served per bed
Raighad	76	28668	54	32010	277	6240	1157	1882
Ratnagiri	81	12320	67	13299	374	2382	1383	722
Thane	125	57442	77	24223	470	3968	5519	1298
Ahmednagar	121	33592	89	37590	485	6898	2580	1575
Dhule	119	25641	90	26646	431	5564	2058	1478
Nandubar	0							
Jalgaon	118	32961	80	33569	397	6765	2157	1754
Nashik	156	30390	100	29216	530	5512	3364	1400
Pune	182	38144	86	38940	501	6684	12306	564
Satara	94	30686	71	35435	309	8142	1472	1960
Solapur	112	34626	68	40866	329	8446	2926	1325
Kolhapur	96	36435	72	35271	371	6845	1829	1912
Sangli	81	32474	59	33751	270	7375	2052	1270
Sindudurga	50	33286	38	40474	246	6252	808	2060
Aurangbad	66	30683	47	46228	248	4437	1751	1158
Beed	60	36216	47	37160	253	6903	1298	1674
Jalna	47	37037	37	45556	171	13260	738	3698
Nanded	88	33289	64	35019	374	5993	1976	1482
Latur	59		46	45266	234	11408	946	3571
Osmanabad	55	6261	42	36216	204	1453	862	400
Parbhani	69	35136	51	35474	351	5154	1200	2019
Hingoli	0							
Akola	82	31950	55	32751	326	5525	3095	847
Washim	0							
Amravathi	106	24126	56	29631	320	5194	3610	708
Buldana	70	32556	52	34201	265	6711	1282	1775
Yavatmal	84	28979	62	31934	374	5294	1728	1408
Bhandara	92	26944	72	28925	427	4877	1539	1562
Gondia	0							
Chandarpur	80	18861	68	36766	336	2305	1900	793
Gadchiroli	58	27138	45	20842	372	3868	730	2173
Nagpur	92	13602	48	29252	300	4680	5902	680
Wardha	46	26316	27	32575	180	4886	2682	494
State Total *	2565	32759	1761	32071	9725	5807	70852	1186

Source: Supplied by Bureau of Economics and Statistics, Government of Maharashtra. *excludes Mumbai

Table: H4b Availability of health care infrastructure facilities in Maharashtra by districts

	Population served per					% in public sector		% in Urban areas		
	Hospitals[@]	Dispensaries[@]	ISM[#]	All Medical Inst.	Beds	Hospitals[@]	Dispensaries[@]	Hospital[@]	Dispensaries[@]	Beds
Ahmednagar	25691	12892	31940	6766	838	7.8	7.8	87.7	99.6	60.7
Akola	22815	8619	47492	5528	833	11.7	2.4	92.2	92.2	76.8
Amravathi	11064	7557	7812	2851	418	16.8	10.3	94.7	87.9	71.9
Aurangabad	21350	2502	2E+05	2212	757	27.7	100.0	72.5	26.5	73.1
Beed	26973	36134	23355	9297	1469	18.6	11.4	88.7	100.0	56.7
Bhandara	52755	79132	29154	15176	1458	22.5	5.5	61.9	47.2	51.4
Buldhana	27533	12957	17089	5813	1124	16.1	7.8	93.1	94.8	76.3
Chandrapur	20027	9701	16630	4692	856	7.6	4.2	81.7	67.2	64.7
Dhule	14809	12227	63466	6058	1385	15.9	2.9	95.0	100.0	69.0
Gadchiroli	48659	22357	22357	9090	1020	11.3	23.1	47.1	56.8	14.8
Greater Mumbai	13764	5251	65617	3593	355	8.0	100.0	100.0	100.0	100.0
Jalgaon	6742	17453	63224	4516	665	7.9	6.3	71.7	95.3	76.8
Jalna	25152	477897	89606	18864	1086	19.7	13.8	82.5	66.7	75.3
Kolhapur	36544	14755	42470	8426	1155	24.4	3.8	84.9	3.8	39.7
Latur	28896	440670	62953	18954	1157	12.8	2.5	93.4	100.0	73.5
Nagpur	9624	41130	29279	6159	471	22.8	100.0	44.7	84.3	69.9
Nanded	27212	17876	44528	8685	1058	16.0	5.7	98.1	61.9	93.4
Nashik	21192	8144	44975	5203	837	18.3	13.2	87.8	100.0	69.3
Osmanabad	38320	47900	41912	14118	1316	17.8	12.4	92.1	99.4	76.8
Perbhanai	23672	21192	42792	8865	1284	25.7	10.7	80.0	100.0	55.3
Pune	11163	17257	3E+05	6631	373	19.7	100.0	90.4	100.0	67.9
Raighad	20192	12296	2E+05	7378	1062	18.1	5.9	96.5	96.4	99.2
Ratnagiri	34529	324577	3E+05	28472	1234	15.7	10.7	88.4	95.5	66.0
Sangli	11438	12093	22542	4662	618	10.0	17.6	74.5	100.0	68.5
Satara	13703	184016	1E+05	11710	615	33.7	11.6	95.1	99.5	83.4
Sindhudurg	20337	7110	9016	3325	694	22.0	47.5	79.3	100.0	81.8
Solapur	19631	26124	2E+05	10514	575	8.6	100.0	14.0	3.3	35.8
Thane	21468	3720	73562	3040	662	42.9	47.2	97.1	50.8	90.9
Wardha	27354	19009	86270	9925	438	19.4	7.3	96.9	99.5	91.8
Yavatmal	26303	19492	41191	8803	1011	64.7	43.2	85.4	52.5	53.4
Maharashtra	16891	9972	40811	5435	642	13.4	8.9	86.7	90.2	61.7

Source: Computed on the basis of information in Statistical Abstract of Maharashtra State 1993-94 & 1994-95, Mumbai: Directorate of Economics and Statistics, Government of Maharashtra.

[@] includes only allopathic medical institutions

[#] includes Ayurvedic, Unani and Homeopathic institutions.

Table H 5: Number of hospitals, beds and dispensaries per lakh population according to ownership

	Hospitals				Beds				Dispensaries			
	Government	Local Bodies	Private & Vol Org.	Total	Government	Local Bodies	Private & Vol Org.	Total	Government	Local Bodies	Private & Vol Org.	Total
Andhra Pradesh	0.2	0.0	4.0	4.2	5.2	0.0	60.3	65.5	0.1	0.0	0.3	0.4
Gujarat	0.7	0.1	4.8	5.6	49.6	9.7	102.4	161.7	0.5	0.5	15.2	16.1
Haryana	0.3	0.0	0.1	0.4	28.6	0.0	12.0	40.6	1.0	0.0	0.2	1.2
Karnataka	0.4	0.1	0.1	0.6	57.6	1.6	20.2	79.4	1.7	0.1	0.0	1.7
Kerala	0.5	0.0	6.3	6.7	93.0	0.0	162.1	255.1	0.2	0.0	6.3	6.4
Maharashtra	0.5	0.1	3.1	3.8	41.8	9.2	46.8	97.7	0.2	0.8	8.9	9.9
Punjab	0.8	0.0	0.2	1.0	72.8	0.5	16.9	90.1	6.4	0.1	0.1	6.5
Tamil Nadu	0.5	0.0	0.2	0.7	67.8	1.1	18.7	87.5	0.4	0.4	0.1	0.9
West Bengal	0.3	0.0	0.2	0.5	63.8	0.9	9.0	73.7	0.3	0.3	0.1	0.7
All India	0.5	0.0	1.1	16.0	41.4	2.2	25.4	69.1	1.0	0.2	1.8	3.0

Source: Based on Health Information of India 1995-96 (CBHI, 1998)

Table H 6: Number of Hospitals, Dispensaries, Beds, Doctors and Nurses per 1,00,000 population in selected states 1981-1995/1997

Year		Andhra Pradesh	Gujarat	Haryana	Karnataka	Kerala	Maharashtra	Punjab	Tamil Nadu	West Bengal	All India
Hospitals											
1981		1.14	2.43	0.66	0.63	2.98	1.6	1.51	0.78	0.75	0.99
1986		1.03	3.78	0.52	0.61	1.2	2.18	1.44	0.78	0.67	1.02
1991		1.75	4.34	0.48	0.64	7.02	2.67	1.14	0.73	0.61	1.32
1995	(N)	4.1	5.6	0.4	0.6	6.6	3.6	1.0	0.7	0.5	1.6
		(2950)	(2528)	(79)	(293)	(2040)	(3115)	(220)	(408)	(399)	(15097)
Dispensaries											
1981		1.32	1.38	1.93	3.85	2.95	5.58	8.85	1.38	0.77	2.45
1986		1.32	9.47	1.6	3.68	5.48	10.3	9.69	1.29	0.9	3.38
1991		0.27	15.2	1.32	1.88	6.04	11.7	7.12	0.92	0.81	3.25
1995	(N)	0.4	16.1	1.2	1.7	6.4	9.5	6.6	0.9	0.7	3.1
		(303)	(7255)	(217)	(830)	(1951)	(8143)	(1462)	(512)	(551)	(28225)
Beds											
1981		63.7	97.7	62.3	86.3	176	116	119	85.2	88.9	73.6
1986		61.2	111	51.3	86.6	220	133	120	86.4	87.2	77.8
1991		64.6	146	45.4	78.3	263	145	102	88.2	80.1	78.7
1995		78.5	175.7	60.2	112.8	283.3	148.5	113.2	103.5	92.3	94.4
(N thousands)		(56)	(72)	(11)	(55)	(87)	(127)	(37)	(61)	(68)	(870)
Doctors											
1981		43.1	43	*	51.1	46	65.4	128	65.7	60.2	31.9
1991		49.7	53	*	98.6	56.7	62.7	135	81.9	61.4	47.2
1997	(N)	36.9	61.2	4.9	94.5	81.5	75.3	127.9	95.0	61.2	51.84
		(27541)	(28415)	(925)	(50576)	(25644)	(66477)	(29170)	(5905)	(47358)	(507313)
Nurses											
1981		20.3	14.5	14	13.9	37.5	54	94.6	51.8	16.2	22
1991		23.3	59	20.7	52.2	78.4	48.6	116	60.5	25.3	36.9
1997	(N)	58.1	146.6	22.8	100.2	79.2	112.9	138.0	132.5	45.6	63.59
		(42659)	(68045)	(4344)	(50371)	(24914)	(99676)	(31487)	(79881)	(34701)	(607396)

Source: Duggal *et. al,* 1995; CSO 2000.

Table H 7: Average population covered by PHC, CHC & Sub Center

	Average population covered by a (as on 31-3-1991)			Average population covered by a (as on 30-6-1999)		
	Sub-centre	PHC	CHC	Sub-centre	PHC	CHC
Andhra Pradesh	6175	37995	10.5	4949	31972	2.2
Gujarat	3793	30888	1.8	4116	30964	1.4
Haryana	5400	31427	3.0	6303	36136	2.3
Karnataka	3988	27430	2.1	4201	20409	1.4
Kerala	4204	23509	4.0	4384	23212	2.8
Maharashtra	**5167**	**29379**	**1.7**	**5401**	**30913**	**1.7**
Punjab	5012	7022	2.1	2693	32978	1.5
Tamil Nadu	4234	25721	5.0	4494	27168	5.4
West Bengal	6269	31966	5.7	6878	44287	5.6
India	4753	28011	3.2	5164	30854	2.4

Source: Computation based on data from Rural Health Statistics (1992 and 2000) and Expert committee on population projection (1996)

Table H 8: Rural-Urban differentials in availability of medical manpower, Maharashtra, 1981 and 1991

	1981				**1991**			
	No of	Number per lakh population			No of	Number per lakh population		
Category of medical manpower	Personnel	Total	Rural	Urban	Personnel	Total	Rural	Urban
1. Physcians and Surgeons	61932	99	47	195	91795	116	84	216
Allopathic	28967	46	15	106	36315	46	22	96
Ayurvedic	5776	9	7	14	7973	10	9	17
Homeopathic	2300	4	3	5	7358	9	9	15
Unani	496	1	0	2	1787	2	2	4
Dental Surgeons	1280	2	0	5	2072	3	1	6
Veternarians	3177	5			5090	6	10	7
Pharmacists	15034	24	11	48	16864	21	14	42
Dietcians ans Nutritionist					159	0	0	0
Public Health Physcicians	2997	5	4	7	5109	6	6	10
Phy & Surg n.e.c.	1808	3	2	4	9068	11	11	18
2. Nursing & Medical Health Professionals	70327	112	50	227	129376	164	133	290
Vaccinators, Innoculatots, Medical assistants	5696	9	8	11	7058	9	12	11
Dental Assistants	185	0	0	1	474	1	0	1
Veterinary Assistant	1971	3	3	3	2290	3	5	2
Pharmaceutical Assistant	1270	2	1	4	4714	6	5	11
Nurses	26892	43	14	97	46599	59	40	112
Midwives and HV's	4953	8	11	2	3522	4	4	8
X-Ray Tech.	1367	2	1	5	2072	3	1	6
Optometrists and Opticians	258	0	0	1	999	1	1	2
Physio/Occu Therapists	228	0	0	1	334	0	0	1
Nursing, Sanitary, other medical and health technicians.	32509	52	41	71	61314	78	65	136

n.e.c.= not elsewhere classified

Source: Census of India 1981 (B series, table B-18) & Census of India, 1991 (*B Series* table B-19)

Table: H 9 District wise variations in Fertility and Child Mortality Indicators, Maharashtra 1991

	TFR	IMR (rate per 1000 popn)	Child Mortality (rate per 1000 Popn)
Greater Bombay	3.0	37	50
Thane	3.39	46	54
Raigarh	3.75	63	87
Ratnagiri	3.66	75	90
Sindhudurg	3.28	70	87
Nashik	4.14	79	88
Dhule	4.22	73	95
Jalgaon	3.89	71	84
Ahamadnagar	3.81	47	60
Pune	3.21	52	70
Satara	3.3	51	61
Sangli	2.95	41	53
Solapur	3.48	68	83
Kolhapur	2.94	55	74
Aurangabad	4.62	56	81
Jalna	4.47	76	94
Parbhani	4.54	50	95
Bid	4.37	52	80
Nanded	4.58	68	87
Osmanabad	3.87	70	96
Latur	4.32	57	71
Buldana	4.47	82	97
Akola	4.59	101	115
Amravathi	3.95	94	114
Yavatmal	3.86	124	143
Wardha	3.49	88	104
Nagpur	3.51	75	101
Bhandara	3.77	81	115
Chandarpur	3.81	96	137
Gadchiroli	3.96	106	144
Maharashtra	**3.72**	**74**	**91**

Source: RGI, 1997.

Table H 10: District level and regional variations in selected reproductive and child health Indicators, 1998-99

Region/District	% girls Married below 18 years	% of Births of order 3 and above	% who received complete ANC	% of institutional Delivery	Total unmet need for contraception (%)	Percent current user of contraception (%)	% using Spacing methods	% of children receiving complete Immunisation
Mumbai	**8.0**	**29.9**	**81.3**	**93.1**	**13.8**	**63.2**	**16.0**	**90.5**
Thane	19.7	34.9	57.4	71.1	23.4	56.3	10.3	84.8
Raigarh	15.9	28.7	63.2	55.9	22.5	56.9	6.0	87.3
Ratnagiri	13.0	32.3	71.0	51.7	12.4	58.3	1.8	94.1
Sindhudurg	3.8	28.0	78.9	76.6	27.9	48.4	4.4	92.5
Konkan division	**17.1**	**33.0**	**61.6**	**66.3**	**22.1**	**56.1**	**8.1**	**87.0**
Pune	30.4	27.1	56.0	75.0	9.2	65.7	7.8	74.3
Satara	21.9	28.1	60.0	60.9	5.9	69.1	3.3	92.5
Solapur	41.8	38.8	48.6	57.0	8.6	63.1	3.1	84.1
Sangli	25.6	20.7	65.3	68.7	17.0	63.4	4.0	87.3
Kolhapur	18.40	18.80	59.80	73.70	18.50	65.30	4.0	76.20
Pune division	**28.7**	**27.2**	**57.0**	**68.5**	**11.3**	**65.3**	**5.1**	**80.8**
Dhule	40.0	37.2	33.7	31.0	11.9	58.3	4.3	69.4
Jalgaon	46.0	35.7	40.9	44.1	21.1	62.4	7.6	78.5
Nashik	32.1	35.9	30.0	54.5	9.9	56.5	9.5	68.6
Ahmadnagar	40.8	33.9	52.0	60.0	10.9	64.6	6.8	89.7
Nashik division	**39.1**	**35.6**	**39.0**	**49.0**	**13.2**	**60.3**	**7.4**	**76.5**
Aurangabad	50.9	42.2	39.7	49.6	30.5	50.0	10.4	59.2
Jalna	55.6	44.0	40.2	27.9	13.2	51.7	6.0	78.3
Bid	59.4	41.6	40.3	42.7	26.4	55.8	6.1	63.0
Latur	58.1	39.5	43.9	40.7	10.3	60.0	4.9	89.3
Nanded	63.7	43.5	46.8	29.9	30.5	52.0	9.2	71.3
Parbhani	46.6	47.0	38.0	32.3	26.3	55.7	6.4	67.2
Osmanabad	46.5	35.6	47.5	36.4	10.0	58.2	4.1	79.3
Aurangabad division	**54.8**	**42.3**	**42.2**	**37.6**	**22.8**	**54.4**	**7.2**	**71.1**
Amravati	10.2	36.6	46.6	52.9	9.2	63.8	9.3	71.5
Akola	38.2	41.4	59.1	49.3	24.8	57.5	7.5	81.5
Buldana	33.5	43.9	47.2	43.9	13.8	55.3	9.1	78.7
Yavatmal	27.1	37.9	53.1	37.1	19.9	59.3	5.5	74.3
Amravathi division	**27.1**	**39.8**	**51.7**	**46.0**	**17.0**	**59.1**	**7.8**	**76.5**
Nagpur	11.3	29.8	52.0	67.2	14.2	63.8	4.6	76.0
Bhandara	9.3	38.0	43.7	24.6	8.5	59.6	1.9	78.9
Wardha	12.3	24.1	64.1	62.8	6.5	69.7	5.2	90.3
Gadchiroli	26.8	35.9	67.7	16.4	23.5	58.2	2.8	85.7
Chandrapur	25.7	31.1	62.1	41.0	16.9	65.8	4.6	92.7
Nagpur division	**15.2**	**31.7**	**55.0**	**47.6**	**13.4**	**63.4**	**3.9**	**82.4**
Maharashtra	**28.8**	**33.9**	**54.5**	**58.5**	**16.0**	**60.4**	**7.7**	**80.3**
Maharashtra (excluding Mumbai)	**31.8**	**34.5**	**50.7**	**53.6**	**16.3**	**60.0**	**6.5**	**78.8**

Source: Based on CORT (1998 & 1999), RCH-RHS Survey reports, various district reports

Table H 11: Profile of Utilisation and Expenditure in Public Hospitals in Maharashtra 1999-2000.

	District hospital @	Women Hospitals	Cottage/ other hospitals	Rural Hospitals (CHC)	Primary Health Centres
No of units	23	6	23	345	1752
No of beds	6501	883	1019	10350	10512
Outpatient Care					
Total no. of OPD patients	4676639	524869	1615959		19026000
Avg. no. of OPD patients per day in a hospital	678	292	234		36
Total exp. On medicine	69397888	5706398	13222912		
Avg. expd. On medicines per patient	15	11	8		
Inpatient care					
Total inpatients registered in an year	688710	168081	168253		
Total inpatient days in an year	2513390	531294	323134		
Avg. no. daily indoor patients per hospital	313	243	39		
Total exp. On medicines (in Rs.)	115685728	15220034	1338992		
Avg. daily exp. on medicines per patient	46	29	40		
Total expenditure on diet	15684356	3770149	1729097		
Avg. daily expenditure on diet per patient	15	21	15		
Total exp. On linen (in Rs)	11423476	1395819	1989492		
Avg. daily expenditure on linen (per patient)	5	3	6		
Other expenditure on inpatients (in Rs)	85850018	9066893	7763464		
Avg. daily other expenditure (per patient)	34	17	24		
Avg. exp. On inpatients excluding salaries	91	55	76		
Combined					
Total exp. On salaries and allowances	665294216	111505740	118325329		
Total exp. On Hospital including establishment and hosp. Exp.	946460902	144146914	152838348		
Total patients treated during the year	6927041	2086393	1954072	10832000	
Avg. daily exp. per patient	137	136	78		

Note: @Data for inpatient pertains to 22 district hospitals.
Source: Government of Maharashtra, Performance budget 2001-2002

Table H 12: Percentage distribution of medical expenditure in public health care sector by selected line items, in Maharashtra, 2000-2001.

Expenses on item.	*District hospital*	Women's hospital	Cottage/ other hospitals	Dispensaries
Medicine	19.56	14.52	17.18	4.87
Diet	1.66	2.62	1.13	NA
Linen	1.21	0.97	1.30	NA
Salaries, TA etc	70.29	77.36	77.42	76.40
Other	8.49	5.51	4.27	18.73
Total expenses	100.00	100.00	100.00	100.00

Source: Government of Maharashtra, Performance budget 2001-2002

Table H 13 : Percent utilising health care services from private sector for selected RCH services by districts, Maharashtra, 1998-99

District	Ante natal care	For delivery[#]	Pregn-ency complicat ions	Post delivery compli - cation	Side effects of sterilisati on	Treat-ment of RTI/STI	Immuni zation	Diarrhea	Pneumoni a
Ahamadnagar	44.4	69.7	82.2	67.2	81.7	83.7	11.1	68.8	80.8
Akola	32.7	47.3	61.4	61.6	63.0	70.8	14.7	71.0	71.0
Amaravathi	28.2	43.4	50.0	64.6	53.0	66.3	23.3	71.0	61.1
Aurangabad	30.1	49.7	68.5	73.4	98.8	74.5	13.9	59.3	65.0
Beed	23.5	45.5	51.5	59.6	42.4	38.9	12.2	58.8	58.6
Bhandara	21.7	21.1	66.1	69.4	63.7	68.6	24.2	40.0	50.3
Buldana	30.9	45.2	66.1	69.4	57.8	84.9		51.9	67.1
Chandarpur	31.8	43.9	60.3	58.0	100	59.0	11.6	51.4	63.7
Dhule	22.6	44.8	60.4	69.0	--	67.7	13.3	47.7	55.5
Gadchiroli	8.9	19.5	30.7	32.2	32.0	36.5	23.4	31.7	35.3
Gr Mumbai	53.6	51.7	62.5	60.7	50.0	83.9	33.2	79.6	90.9
Jalgaon	32.6	59.3	73.4	74.5	72.0	75.6	12.4	74.1	67.9
Jalna	24.8	59.6	61.6	75.1	58.1	74.1	25.9	62.3	61.0
Kolhapur	58.2	63.6	74.7	75.7	50.0	75.2	9.5	69.8	78.9
Latur	35.0	57.1	77.7	68.5	65.8	85.7	29.8	52.0	58.2
Nagpur	32.1	31.8	50.2	39.3	56.3	68.9	17.6	69.6	69.7
Nanded	26.3	53.8	58.6	61.2	66.0	61.1	15.8	60.7	70.1
Nashik	33.2	54.5	69.3	71.4	65.7	78.8	14.8	66.6	73.6
Osmanabad	30.9	39.2	69.2	67.5	65.4	73.6	17.0	52.1	64.1
Parbhani	27.2	46.0	62.7	62.2	55.4	72.9	12.4	68.0	62.9
Pune	50.0	57.6	61.5	64.3	65.1	76.3	25.1	68.6	79.3
Raigarh	37.8	56.4	60.9	64.0	58.3	60.8	22.7	67.0	72.5
Ratnagiri	41.4	55.8	64.7	65.1	57.1	77.1	8.1	61.4	54.7
Sangli	46.9	60.3	73.3	63.9	68.5	73.2	3.4	76.3	75.0
Satara	53.4	62.1	68.5	64.4	72.2	81.2	8.5	62.9	66.6
Sindhudurgh	26.3	32.2	37.1	43.7	41.6	69.6	4.1	55.5	65.4
Solapur	44.3	65.3	76.2	73.9	63.6	83.3	26.0	63.8	76.5
Thane	47.8	61.0	63.3	60.5	69.3	67.4	30.5	68.1	48.8
Wardha	38.5	31.7	62.1	51.9	68.1	78.1	20.9	37.2	54.4
Yavtmal	23.8	34.0	62.1	63.8	67.1	82.6	10.5	64.1	76.6
Maharashtra*	38.3	51.3	63.8	63.8	59.6	67.4	17.4	65.3	68.5

Source: Based on CORT (1998 & 1999), RCH-RHS Survey reports, various district reports

*figures based on phase one survey

Only institutional deliveries were considered

Table H 14: Total health expenditure (in millions) and per capita expenditure on health and health expenditure as a percentage of NSDP, Maharashtra

State	Item	1980-81	1985-86	1990-91	1995-96	1998-99
Punjab	Health Expenditure	533.00	906.37	1696.78	2604.29	5183.12
	Per capita health exp.	29.60	55.37	83.66	117.96	221.80
	Health exp as % of NSDP	1.2	1.1	1.0	0.7	
Haryana	Health Expenditure	395.00	641.90	871.07	1666.96	3079.72
	Per capita exp.	28.45	60.05	52.91	91.29	156.80
	Health exp as % of NSDP	1.3	1.1	0.7	0.7	
Gujarat	Health Expenditure	875.00	1517.51	2524.03	4708.85	NA
	Per capita exp.	22.74	44.45	61.10	104.75	
	Health exp as % of NSDP	1.3	1.3	1.0	0.9	
Kerala	Health Expenditure	818.00	1279.15	2219.90	4172.08	5751.13
	Per capita exp.	29.76	45.36	76.29	135.86	179.30
	Health exp as % of NSDP	2.1	2.0	1.8	1.6	
Tamil Nadu	Health Expenditure	1106.00	1964.44	3895.14	7182.95	11667.14
	Per capita exp.	20.99	47.57	69.93	121.83	189.94
	Health exp as % of NSDP	1.5	1.4	1.4	1.2	
Karnataka	Health Expenditure	714.00	1507.80	2495.82	5133.77	NA
	Per capita exp.	17.00	34.24	55.49	105.33	
	Health exp as % of NSDP	1.3	1.5	1.2	1.1	
West Bengal	Health Expenditure	1409.00	2098.13	4600.04	6298.94	11495.35
	Per capita exp.	24.25	37.54	67.57	85.47	146.78
	Health exp as % of NSDP	1.5	1.2	1.5	1.0	
Andhra	Health Expenditure	1228.0	193.67	3297.95	6061.22	10401.75
Pradesh	Per capita exp.	20.59	39.08	49.59	84.92	138.67
	Health exp as % of NSDP	1.7	1.4	1.1	0.9	
Maharashtra	Health Expenditure	1306.98	2766.47	4976.25	9061.10	11854.90
	Per capita exp.	39.94	63.73	63.04	105.95	131.07
	Health exp as % of NSDP	0.9	1.0	0.9	0.7	0.6

Source: Finance and Revenue Accounts, respective states, various years.

Table H 15: Maharashtra Government Expenditure on Health

Amount in Rupees Million	1980-81	1985-86	1988-89	1992-93	1995-96	1998-99
Total Health Expenditure (% of NSDP)	1306.98 0.9	2766.47 1.0	4000.79 1.0	6356.23 0.8	9061.10 0.7	11854.90 0.6
Capital Expenditure on Health	54.93	71.78	220.95	198.06	162.87	255.65
Revenue Expenditure on Health	1252.05	2694.69	3779.84	6158.17	8898.23	11599.25
% of Total Govt. Revenue Expenditure	6.53	5.97	5.78	5.33	5.18	4.5
Per Capita Expenditure on Health (In Rupees)	19.94	38.95	50.71	75.63	102.26	128.24
Expenditure on National Disease Program (NDP)	192.0	431.95	582.27	726.98	1011.08	1435.68
% of Total Revenue Expenditure on Health	15.33	16.03	15.4	11.81	11.36	12.38
Per Capita Expenditure on NDP (In Rupees)	3.08	6.24	7.81	8.93	11.62	15.87
Expenditure on Hospitals &Dispensaries (H&D)	355.0	673.52	950.43	1638.31	2447.46	3390.11
% of Total Revenue Expenditure on Health	28.35	24.99	25.14	26.60	27.50	29.23
Per Capita Expenditure on H&D (In Rupees)	5.7	9.74	12.75	20.12	28.13	37.48
Expenditure on Medical Training Education & Research	105.0	169.15	244.46	477.77	635.72	1255.89
% of Total Revenue Expenditure on Health	8.39	6.28	6.47	7.76	7.14	10.83
Expenditure on Family Welfare	128.0	469.23	493.34	826.31	1315.34	948.16
% of Total Revenue Expenditure on Health	10.22	17.41	13.05	13.42	14.78	8.17
Expenditure on Maternal & child Health	4.0	14.05	42.38	130.45	381.02	157.16
% of Total Revenue Expenditure on Health	0.32	0.52	1.12	2.12	4.28	1.35
Expenditure on Health Administration	178.0	467.24	556.19	1154.55	1621.96	2566.37
% of Total Revenue Expenditure on Health	14.22	17.34	14.71	18.75	18.23	22.13

Sources: 1. Data for years 80-81 & 85-86 -Comptroller & Auditor General of India, GOI, " Combined Finance & Revenue Accounts" respective years. 2. Data for years 85-86 Onwards- Govt. of Maharashtra, Finance and Revenue Accounts, various years.

T**able H 16: Expenditure on National Disease Programme and Public health**

Year	Expenditure on Disease Programme (Rs. Millions)	Expenditure on Public Health (Rs. Millions)	% of Disease Programme to P.H.
1988 – 1989	582.27	1498.08	38.87
1989 – 1990	547.86	1704.83	32.14
1990 – 1991	622.48	1888.85	32.96
1991 – 1992	630.14	2161.38	29.15
1992 – 1993	572.60	2489.81	22.91
1993 – 1994	787.59	2649.94	29.72
1994 – 1995	1056.07	3175.20	33.26
1995 – 1996	1011.08	3600.15	28.08
1996 – 1997	1218.85	4169.46	29.23
1997 – 1998	1154.26	4583.52	25.18
1998 – 1999	1435.68	4806.33	29.87

Source: Finance Accounts, Govt. of Maharashtra, respective years

Table H 17: Expenditure on selected diseases program (as percentage to expenditure on Disease Programs)

Year	Malaria	T.B	Leprosy	Blindness	Total (in Rs. Millions)
1986-87	54.65	9.20	18.03	.65	520.67
1988-89	55.58	6.77	19.12	.77	582.23
1990-91	59.84	10.00	20.91	.71	622.47
1991-92	60.36	6.75	22.01	.63	630.16
1992-93	57.14	7.43	24.63	.65	727.40
1995-96	46.71	10.90	18.97	.69	1164.76
1996-97	53.03	18.43	18.52	.00	1230.69
1997-98	58.40	5.68	26.44	.73	1154.41
1998-99	71.11	4.47	15.44	.69	1435.68

Source: Performance Budgets, Govt. of Maharashtra, respective years

Table H 18: Expenditure on Malaria Control Programme by line items (in percentage)

Year	Salaries	Travel	Drugs	Others	Total (in Rs. Millions)
1988 – 1989	61.08	3.58	2.14	33.2	323.65
1992 – 1993	84.09	.00	15.91	.00	415.62
1995 – 1996	80.89	2.11	7.51	9.49	544.01
1998 – 1999	87.28	1.16	7.72	3.84	1005.21

Source: Performance Budgets, Govt. of Maharashtra, respective years

Table H 19 Indices of Endemicity of Malaria in Maharashtra

Year	ABER	A.P.I	S.P.R	pf%	Deaths (Reported)
1986-87	12.8	0.8	0.64	39	5
1987-88	12.7	1.15	0.9	32	8
1988-89	12.7	1.65	1.3	31	6
1989-90	12.9	1.51	1.2	32	3
1990-91	12	1.87	1.55	37	12
1991-92	12.6	2.5	1.97	30	2
1992-93	12.6	3	2.4	28.7	16
1993-94	13.3	3.3	2.5	29.6	9
1994-95	14.1	4.26	3	36	233
1995-96	15.1	3.6	2.4	26	111
1996-97	16.7	3.8	2.3	25.8	
1998-99	18.6	2.0	1.1	31.5	
1999-00	19.8	1.7	0.8	25.5	
2000-01					

Annual blood examination rate (ABER) = $\frac{\text{Number of Blood Smears examined in a year}}{\text{Population}} \times 100$

Annual Parasite Incidence (API) = $\frac{\text{Total Number of Positive cases detected in a year}}{\text{Population}} \times 100$

Slide Positivity Rate (SPR) = $\frac{\text{Total Number of Positive cases detected}}{\text{Number of Blood Smears examined}} \times 100$

P. Falciparum (pf) %) = $\frac{\text{Total Number of P.Falciparum cases detected}}{\text{Total Positive cases}} \times 100\ (\%)$

Source: 1) Performance Budget, Dept. of Public Health, Govt. of Maharashtra, Mumbai, respective years
2) Health Directory Maharashtra, DGHS, Maharashtra

Table H 20: Expenditure on Leprosy Control Programme by line items (in percentages), Maharashtra

Year	Salaries	Travel	Drugs	Diet	Others	Total (in Rs. Millions)
1988 – 1989	72.29	9.21	4.83	0.31	13.36	111.32
1992 – 1993	NA	NA	NA	NA	NA	179.20
1995 – 1996	53.80	3.49	3.76	.06	38.89	220.96
1998 – 1999	76.52	7.03	3.63	0.59	12.23	221.68

Source: Performance Budgets, Govt. of Maharashtra , respective years

Table H 21: Expenditure on National Tuberculosis Control Programme by line items (in percentages), Maharashtra

Year	Salaries	Travel	Drugs	Diet	Others	Total (in Rs. Millions)
1988 – 1989	51.43	2.71	34.24	3.29	8.33	90.55
1992 – 1993	NA	NA	NA	NA	NA	128.79
1998 – 1999	66.57	2.80	22.37	2.42	5.84	209.59

Source: Performance Budgets, Govt. of Maharashtra , respective years; Note: N.A: Break-up not available

Table H 22: District wise number of AIDS cases reported and Deaths reported in Maharashtra, August 1986-February 2001

Surveillance	AIDS Cases			AIDS Deaths		
Centre	Male	Female	Total	Male	Female	Total
Raighad	57	10	67	4	1	5
Ratnagiri	14	5	19	0	0	0
Thane	79	16	95	5	2	7
Ahmednagar	9	12	21	1	1	2
Nashik	4	1	5	1	1	2
Dhule	1	1	2	0	1	1
Jalgaon	12	9	21	1	1	2
Pune	216	159	375	14	29	53
Satara	280	100	380	24	2	26
Solapur	8	5	13	1	1	2
Kolhapur	231	83	314	81	32	113
Sangli	1461	616	2077	198	69	267
Sindhudurg	5	2	7	3	1	4
Aurangabad	30	10	40	0	0	0
Beed	9	0	9	0	0	0
Jalna	7	1	8	0	0	0
Nanded	1	0	1	0	0	0
Qsmanabad	0	0	0	0	0	0
Latur	4	2	6	1	1	2
Parbhani	6	0	6	0	0	0
Akola	78	14	92	0	0	0
Amravathi	2	0	2	0	0	0
Buldhana	3	0	3	1	0	1
Yavatmal	1	1	2	0	1	1
Bhandara	0	0	0	0	0	0
Chandrapur	95	21	116	0	0	0
Gadchiroli	1	0	1	0	0	0
Nagpur	7	3	10	5	3	8
Wardha	0	0	0	0	0	0
Mumbai	2432	520	2952	164	36	200
Total	5053	1591	6644	504	192	696
Other state	248	57	305	17	9	26
Foreigner	4	3	7	2	2	4
Grant total	5305	1651	6956	523	203	726

Source: Supplied by Bureau of Economics and Statistics, Government of Maharashtra.

Table H 23: Percentage expenditure of different heads under family welfare

	1988-89	1995-96	1998-99
Direction & Administration	6.67	6.12	14.84
Rural Family Welfare Services	30.23	17.66	30.63
Urban Family Welfare Services	5.90	4.73	6.74
Maternity and Child Health	8.59	28.97	16.75
Transport	2.35	0.61	0.90
Compensation	24.96	8.79	12.11
Other Services & Supplies	13.90	12.13	9.92
Training & Mass Education	4.32	4.56	7.9
Selected Areas Program	-	16.09	-
Other Expenses	3.09	0.35	0.20
Total (in Rs. Millions)	493.34	1315.34	948.16

Source: Performance Budgets, Family Welfare Department, Government of Maharashtra, various years

Table H 24: Percent Expenditures across Line items under Family Welfare Program

Rural Family Welfare Services	Salaries	Travel expenses	Material & Supplies	Others	Total (in Rs. Millions)
1988 – 89	66.08	4.38	-	29.54	149.13
1998 – 99	91.16	0.59	-	8.25	290.41

Source: Performance Budgets, Family Welfare Department, Government of Maharashtra, various years

Table H 25: Immunization Profile of Maharashtra

	Number of beneficiaries [1.]						
	1981	1991	1995	1997	NFHS –1 (1992-93) [2.]	NFHS-2 (1998-99) [3.]	Adjusted total from NFHS-1
Tetanus for expectant mothers	787002	1625322	1983774	1982608	NA	NA	NA
D.P.T	971559	1873842	2070786	2064522	80.1	89.4	83.1
Polio	91935	1960192	2093203	2074154	79.1	90.5	81.8
B.C.G	NA	1946212	2193184	2166942	84.6	93.7	86.9
Measles	NA	1694152	1909292	1956750	58.2	84.3	78.2
All*					52.8	78.2	64.3

Sources: [1.] MOHFW (various years) .[2] IIPS and PRC 1995 [3] IIPS and ORC, Macro 2000

Table H 26: Selected district wise child health indicators, Maharashtra 1998-99.

	Percentage of children			
	of children anemic	Given colostrum	Having diarrhea	breathing problem
Ahamadnagar	16.2	28.2	44.6	24.9
Akola	--	43	25.1	54.2
Amaravathi	9.6	37.5	15.9	56.5
Aurangabad	--	31.3	19.6	48.5
Bhandara	4.8	32.7	20.4	50.9
Bid	--	42.7	22.5	44.7
Buldana	8.2	23.6	25.5	44.6
Chandarpur	--	47.3	28.3	58.9
Dhule	7.2	32.4	27.1	24.4
Gadchiroli	--	46.3	25.6	48.2
Gr Mumbai	16.9	68.4	29.2	5
Jalgaon	--	29.2	26	52.9
Jalna	2.8	17.5	34.3	34
Kolhapur	--	47	30.1	60.8
Latur	2.5	29	24	36.8
Nagpur	--	61.9	26.6	61.3
Nanded	--	40.5	29.9	46.1
Nasik	10.6	31	31.9	32.5
Osmanabad	6.2	22.8	37.5	38.5
Parbhani	--	43.8	17.9	36.9
Pune	18.7	37.1	37.9	22.2
Raigarh	--	50.6	23.8	44.7
Ratnagiri	9.6	34.5	34.4	19
Sangli	--	36.2	21	43.8
Satara	9.8	29.3	26.6	18
Sindhudurgh	--	44	18.7	49
Solapur	8.5	29.1	32	33.4
Thane	--	63.6	36.6	48.1
Wardha	5.3	37.9	22.8	55.1
Yavtmal	--	33.8	32.5	58.7

Source: Reproductive and child health- Rapid Household Survey 1998-99
-- information on anemia not collected in districts which were covered in Phase-I

Table H 28: Prevalence of diarrhoea and percentage given ORT in Maharashtra

Percentage of children who had diarrhea in previous 2 weeks	NFHS-1	NFHS-2
Rural	10.2	22.4
Urban	8.8	28.8
Male	10.8	24.4
Female	8.5	25.6
Total	9.7	24.9
Percentage of children who were given any ORT	NFHS-1	NFHS-2
Rural	40.7	49.0
Urban	43.5	54.6
Male	41.3	49.3
Female	42.2	53.9
Total	41.7	51.5

Source: PRC and IIPS, (1995); IIPS and ORC Macro (2000)

Table 29: Percentage of males and females having at least one of RTI/STI symptoms, Maharashtra

District	Female	Male
Maharashtra		
Akola	43.40	11.70
Aurangabad	29.50	8.50
Bid	23.60	7.30
Chandrapur	34.80	13.70
Gadchiroli	34.10	13.90
Jalgaon	27.60	8.40
Kholapur	16.70	10.60
Nagpur	27.90	8.80
Nanded	37.60	13.20
Parbani	24.80	11.90
Raigarh	17.70	9.00
Sangli	19.00	4.90
Sindhudurg	19.70	5.80
Thane	25.10	9.60
Yavatmal	28.40	14.60
Ahmadnagar	21.1	6.4
Amravati	32.1	14.7
Bhandara	28.1	16.8
Buldana	28.1	11.7
Dhule	24.5	9.2
Greater Bombay	22.0	4.2
Jalna	36.5	9.2
Latur	23.9	7.0
Nashik	25.5	7.6
Osmanabad	26.0	7.4
Pune	21.8	8.9
Ratnagiri	23.0	3.6
Satara	18.9	4.9
Solapur	20.3	5.9
Wardha	31.8	14.8
Maharashtra	27.1	10.2

Refers to three months prior to the survey

Source: Reproductive and Child Health Project Rapid Household Survey - Phase- I and Phase-II

Table H 30: Health care manpower availability in rural areas of Maharashtra as on 30-6-1998

	In Position	Sanctioned	% in Position
Female ANMs	11590	11915	97.3
Health Worker /MPW (M)	7978	12440	64.1
Health Assistant (F)	1698	1536	110.5
Health Assistant (M)	3691	4549	81.1
Doctors at PHC	2993	3068	97.6
Specialists ((surgeons, Obstratecians ad Gynecologists, Physicians and Pediatricians)	753	1207	62.4
Radiographer	330	414	79.7
Pharmacist	1839	2080	88.4
Lab Technician	1350	1480	91.2
Nurse Midwife	3121	3386	92.2
Block Extension Educator	292	320	91.3

Source: DGHS 2000.

Table H 31 Availability of selected physical infrastructure facilities in District Hospitals, First Stage Referral Units (FRU's), Community Health Centers (CHC's) and Primary Health Centres (PHC's), Maharashtra, 1999-2000.

Type of infrastructure	No of District Hospitals having	% of FRU's having	% of CHC's having	% of PHC's having
Tap/well water facility	10	98	96	79
Tank and Pump facility	8	88	76	--
Electricity (in all parts of hospital)	9	96	100	98
Generator	9	98	96	
Telephone	10	100	90	52
Vehicles (functional)	10	96	80	60
Laboratory adequately equipped)	10	98	93	97
Operation Theatre (OT)	10	100	99	
Separate OT for gynecology	10	96	96	86
Separate aseptic labour room	8	20	18	
Delivery facility	9	98	94	
Gynec OPD facility	9	84	75	
RTI/STI OPD facility	7	0	0	
Linkage with Blood bank	8	24	10	
Total number of units listed	10	50	71	645

IIPS 2001.

Table: H 32: Availability of selected equipents in District Hospitals, First Stage Referral Units (FRU's) and Community Health Centers (CHC's) Maharashtra, 1999-2000.

Type of infrastructure	No of District Hospitals having	% of FRU's having	% of CHC's having
Boyles apparatus	10	26	7
Oxygen cylinder	10	36	10
Shadow less lamp	10	88	87
High pressure sterilizer	10	44	32
Cardiac monitor	6	2	0
Ventilator	7	16	17
OT care/fumigation	10	88	83
Hydraulic table	10	56	7
X-Ray machine	9	100	85
ECG machine	10	24	16
Ice lined freezer	9	98	27
Deep freezer	9	64	38
Refrigerator	9	68	47
Total number of units listed	10	50	71

Source: IIPS 2001.

Table: H 33 Availability of manpower facilities in District Hospitals, First Stage Referral Units (FRU's) Community Health Centers (CHC's) and Primary Health Centres (PHC's) Maharashtra, 1999-2000.

Type of personnel	No of District Hospitals having	% of FRU's having	% of CHC' having	% of PHC' having
Female medical officer	NA	NA	NA	26
Obstetrician/gynecologist	4	34	25	
Pediatrician	7	22	8	
RTI/STI Specialist	2	0	0	
Pathologist	4	2	0	
Anesthesiologist	7	16	11	
General duty doctor	10	92	93	98
Staff nurse/ Mid wife	10	100	100	
Female Health Worker	8	12	3	100
Laboratory technician	10	100	96	24
Total number of units listed	10	50	71	645

Source: IIPS 2001.

Table: H 34 Availability of some stock of selected items in District Hospitals, First Stage referral Units (FRU's) Community Health Centers (CHC's) and Primary Health Centres (PHC's) Maharashtra, 1999-2000.

Item	No of District Hospitals having	% of FRU's having	% of CHC's having	% of PHC's having
Nirodh	9	44	11	61
Oral pill	10	54	16	75
IUD	10	50	18	82
IFA	7	50	17	43
Vitamin A solution	6	42	30	24
ORS Packet	8	74	78	80
DPT	10	58	14	96
OPV	8	58	16	94
TT	9	62	17	89
BCG	8	56	13	85
Measles	10	60	14	97
DT	10	44	11	75
Total number of units listed	10	50	71	645

Source: IIPS, 2001.

Table: H 35 Availability of at least 60 percent of critical inputs in District Hospitals, First Stage Referral Units (FRU's) and Community Health Centers (CHC's) Maharashtra, 1999-2000.

Item	No of District Hospitals having	% of FRU's having	% of CHC's having	% of PHC's having
Infrastructure	9	100	97	88
Staff	8	34	28	60
Supply	2	50	8	87
Equipment's	10	34	10	96
Total number of units listed	10	50	71	645

Source: IIPS 2001.

Table H 36: Proportion of calorie intake from different foods

Item	Percentage of calories	
	Rural	Urban
Cereals	66.80	53.53
Roots and tubers	1.70	1.93
Sugar and Honey	7.42	7.32
Pulses, nuts and oilseeds	7.57	7.72
Vegetables and fruits	1.87	3.21
Meat, Egg and Fish	0.67	1.11
Milk and milk products	4.32	7.97
Oils and fats	7.20	11.05
Miscellaneous	2.6	6.15
Total	100.00	100.00

Source: NSSO 1998b.

Table H 37: Health care indicators across selected states in India

Type of health facility/indicator	Reference Year	Andhra Pradesh	Gujarat	Haryana	Karnataka	Kerala	**Maharashtra**	Punjab	Tamil Nadu	West Bengal	All India
Health Facilities											
Population per hospital	1995	23675	17722	234848	168410	14806	**25921**	101668	133903	186910	61881
Population per bed	"	1526	706	2584	1283	391	**1023**	1509	1120	1351	1498
Registered doctors per lakh population	1997	36.4	61.2	4.9	94.5	81.5	**75.3**	127.9	95.0	61.2	51.8
Registered nurses per lakh population	"	58.1	146.6	22.8	100.2	79.2	**112.9**	138.6	132.5	45.6	63.6
Fertility and Mortality Indicators											
Crude Birth Rate	1998-99	21.4	24.3	23.1	20.4	18.8	**23**	19.1	21.4	20.8	24.8
Total Fertility Rate	"	2.25	2.72	2.88	2.13	1.96	**2.52**	2.21	2.19	2.29	2.85
Crude Death Rate	"	10.7	8	8.1	7.9	6.0	**9**	8.4	10.8	8.3	9.7
Neonatal Mortality Rate	"	43.8	39.6	34.9	37.1	13.8	**32**	34.3	34.8	31.9	43.4
Post Neonatal Mortality Rate	"	22.1	23	21.9	14.4	2.5	**11.7**	22.8	13.3	16.8	24.2
Infant Mortality Rate	"	65.8	62.6	56.8	51.5	16.3	**43.7**	57.1	48.2	48.7	67.6
Under five mortality	"	85.5	85.1	76.8	69.8	18.8	**58.1**	72.1	63.3	67.6	94.9
Life expectancy at birth	1992-96										
Males		60.8	60.5	63.4	61.1	70.2	**63.8**	66.4	62.8	61.8	60.1
Females		63.0	62.5	64.3	64.5	75.8	**66.2**	68.6	64.8	63.1	61.4
Reproductive and child health indicators											
Percentage of women aged 20-24 years married before 18 years		64.3	40.7	415	46.3	17.0	**47.7**	11.6	24.9	45.9	50.0
Percentage who received at least 3 ANC check ups		80.1	60.2	37.4	71.4	98.3	**65.4**	57.0	91.4	57.0	43.8
Percentage of Institutional deliveries	1998-99	49.8	36.3	22.4	51.1	93.0	**52.6**	37.5	79.3	40.1	33.6
Percentage currently using FP Methods	1998-99	59.6	59.0	62.4	58.3	63.7	**60.9**	66.7	52.1	66.6	48.2
Any Modern Method	"	58.9	53.3	53.2	56.5	56.1	**59.9**	53.8	50.3	47.3	42.8
acing methods (pill, IUD and Condom)	"	1.8	8.1	12.5	4.4	5.1	**7.6**	23.0	4.3	13.5	6.8
Full Immunization of children (12-23 months)		58.7	53.0	62.7	60.0	7.7	**78.4**	72.1	88.8	43.8	42.0
Morbidity Rate (rate per 1 lakh popn)											
Leprosy (point prevalence)	1994	63	30	-	NA	-	**65**	-	83	22	57
Diarrhoea (in 30 days)(per 1000 popn)	"	36	9	29	NA	6	**14**	16	19	45	31
Asthma (point prevalence)	1998-99	4292	1979	1922	1733	4806	**2524**	1308	1546	2593	2468
Tuberculosis (point prevalence)	"	592	438	358	269	526	**282**	207	479	492	544
Jaundice (point prevalence)	"	1571	1109	993	373	528	**1534**	976	1142	2381	1361
Malaria (in last 3 months)	"	4851	4449	2093	600	56	**4098**	1082	380	1482	3697
Prevalence of ailments in last 15 days(per thousand population)	1995-96										
Rural		64	46	61	45	118	**52**	76	52	65	55
Urban		61	36	63	40	88	**48**	85	58	65	54
Prevalence of hospitalisation in last 1 year(per thousand population)	1995-96										
Rural		14	14	25	14	70	**19**	14	18	11	13
Urban		17	21	25	18	65	**26**	17	23	22	20
Nutritional Status											
Percentage of children of age 6-36 months with anemia	1998-99	72.3	74.5	83.9	70.6	43.9	**76.0**	80.0	69.0	78.3	74.3
Percentage of ever-married women of 15-49 years with anemia	1998-99	49.8	46.3	47.0	42.4	22.7	**48.5**	41.4	56.5	62.7	51.8
Percentage of household with per capita	1993-94										

calorie intake level of below 2700 Kcal.											
Rural		40.9	46.4	25.9	42.7	45.7	**49.7**	24.4	51.3	32.2	36.9
Urban		48.1	41.0	41.6	44.7	47.6	**45.9**	40.4	52.9	35.7	41.6
Average exp on outpatient care (in Rs)	1995-96										
Rural		165	157	189	122	136	**165**	175	102	131	176
Urban		172	218	414	172	120	**185**	162	129	137	194
Average exp on inpatient care (in Rs)	"										
Rural		6428	2663	3224	2997	2293	**3089**	4988	2840	1957	3202
Urban		4886	3327	6537	3593	1927	**3997**	5712	3934	3217	3921

Table H38: Summary of information on studies covering morbidity and utilization of health care services from private sector and on medical expenditure in Maharashtra.

	Morbidity rates (per 1000 population.)			Utilisation of services from public/private health care sector *						Average medical expenditure per ailment/episode					
	Recall			Rural			Urban			Rural			Urban		
	period	Rural	Urban	Public	Private	Total	Public	Private	Total	Public	private	Total	Public	Private	Total
FRCH 1984 (Jesani (*et al* 1996)				33.1	58.4	91.5	–	–	–	28.0	87.08	56.99	–	–	–
NSSO 1986-87 (1992)															
Inpatient care	–			26.32	73.68	100.00	25.02	74.27	99.29	438.77	901.36	841.78	400.05	1928.49	1498.87
Outpatient care	–									52.10	99.40	86.50	83.80	153.10	131.90
Duggal and Amin (1989)	1 month	154.00	145.00	10.43	79.82	90.35	15.99	73.95	89.94			103.56			100.44
NCAER (1992)	2 weeks	70.46	54.82	38.67	61.33	100.00	45.49	54.51	100.00	97.50	227.26	172.56	129.53	201.86	175.11
NCAER (1993)															
Non-hospitalized ailments	30 days	66.80	78.60							30.19	240.64	171.52	74.10	169.85	136.60
Males		65.40	77.80	46.10	51.30	97.40	30.00	68.00	98.00						
Females		68.40	79.50	41.60	55.00	96.60	35.10	62.40	97.50						
Hospitalisation	1 year	5.50	14.10	30.50	69.50	100.00	58.80	51.20	100.00	664.85	112.72	981.51	461.98	1976.32	1085.61
NSSO -1995-96 (1998)															
Hospitalisation	1 year	19.00	26.00	31.20	68.80	100.00	31.80	68.20	100.00	1529.00	3836.00	3089.00	1439.00	5345.00	3997.00
Ailments	15 days	52.00	48.00	16.00	73.00	89.00	17.00	77.00	94.00	129.00	158.00	147.00	125.00	195.00	185.00
Nandraj (*et al* 1998)	30 days	–	363.00	–	–	–	10.00	84.00		–	–	–	179.89	134.46	134.00
Madhiwala (*et al)* 2000	30 days			22.60	63.50	86.10	10.30	71.70	82.00						
Male		868	247												
Female		1355	457												
Inpatient care										16.00	118.00	97.00	12.00	128.00	98.00
Outpatient care										332.00	2188.00		1938.00	2188.00	–

* percentage may not add up to hundred in some cases since some have not sought treatment or might have gone for self treatment

Table H 39 Goals and Achievements for Health and Family welfare Programme, Maharashtra

SI No.	Indicators	Reference year	Current status		Goals for the year 2000	Goals for the year 2010
			India	Maharashtra		
1	Infant Mortality Rate	1999	70	48	below 60	Below 30
2	Peri-natal Mortality rate	1997	43.2		30-35	
3	Crude Death Rate	1999	8.7	7.5	9	
4	Child Mortality Rate	1998-99	29.3	15	10	
5	Maternal Mortality rate (per lakh)	1997			below 200	Below 100
6	Life Expectancy at Birth	1996-2001	Male 62.4 Female 63.4	Male 65.31 Female 68.19	64	
7	Babies with birth weight below 2500 (gms.) #	1999	15.9	17	10	
8	Crude Birth Rate	1999	26.1	21.1	21	
9	Effective Couple Protection Rate (percentage)	Mar-98	45.4	50.7	60	
10	Total Fertility Rate	1998-99	2.85	2.52		2.1
11	Net Reproduction Rate				1	
12	Annual growth rate (percentage)	1999	1.74	1.36	1.2	
13	Family Size				2.3	
14	Pregnant mother receiving antenatal coverage (%)	1998-99	66	90.4	100	100
15	Deliveries by trained birth attendants/ health professional (%)	1998-99	77.6 (22.4)	79.8 (20.2)	100	100
16	Institutional delivery (%)	1998-99	33.6	52.8	-	80
17	Immunisation status					
	TT (for pregnant women)	1998-99	66.8	74.9	100	
	TT (for school children)					
	10 yrs					
	16 yrs				100	100
	DPT	1998-99	55.1	89.4	100	100
	Polio	1998-99	62.8	90.8	100	100
	BCG	1998-99	71.6	93.7	100	100
	DT (new school entrants)				100	100

Notes: Goals for the year 2000 are from National Health Policy (1983), Govt of India and for the year 2010 is from National Population Policy (2000), Govt. of India.
Figures in bracket denote deliveries that did not receive an attention from a health professional.
Only for babies that have been weighed at the time of birth.

Table above shows that Maharashtra was able to attain the goals for the year 2000 mentioned in the National Health Policy (1983) for indicators such as infant mortality rate, perinatal mortality rate, crude death rate and life expectancy. But the state is unable to meet goals in terms of indicators such as child mortality rate, maternal mortality rate, birth weight, couple protection rate, total fertility rate, annual growth rate, immunisation of mothers and children and in institutional deliveries. To summarize the table shows that there has been substantial reduction in mortality levels during this time period but the maternal and child health situation in the state could not achieve the desired progress.

Table:H 40 Percentage of households having water supply and sanitation facilities, Maharashtra

Type of facility	Rural	Urban
Safe drinking water (1991)	54.0	90.5
Latrine (1993)	7.7	76.5
Underground sewage (1993)	0.0	19.5
Drainage system (1993)	31.0	77.6
Garbage disposal (1993)	32.0	74.2

Source: CSO 2000; NSSO 1998

Table: Percentage of households having drinking water and toilet facilities, Maharashtra 1991

	Drinking water	Toilet
Greater Bombay	96.4	78.2
Thane	72.4	46.6
raigarh	47.4	18.9
Ratnagiri	26.1	14.8
Sindhudurg	14.6	16.1
Nashik	63.5	23.3
Dhule	73.9	10.9
Jalgaon	80.6	16.6
Ahmadnagar	52.6	13.5
Pune	71.8	40.9
Satara	71	11.4
Sangli	73.8	16.3
Solapur	73.3	16.9
Kolhapur	77.3	20.3
Aurangabad	75.3	23.4
Jalna	71.1	10.7
Parbhani	62.9	11.7
Bid	71.3	9.9
Nanded	73.5	13.7
Osmanabad	81.7	5.7
Latur	80.2	10.9
Buldana	51.3	12.2
Akola	55.3	20.4
Amravathi	68.1	26.9
Yavatmal	46.1	11.6
Wardha	49.6	17.8
Nagpur	65.3	42.8
Bhandara	36.5	13.8
Chandarpur	45.4	15.5
Gadchiroli	38.7	7.1
Maharashtra	68.5	29.6

Source RGI 2000

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LIST OF ABBREVIATIONS

AIDS	Acquired Immuno deficiency syndrome
ANC	Ante Natal Care
ARI	Acute Respiratory Infection
BMC	BrihanMumbai Muncipal Corporation
BMI	Body Mass Index
CBHI	Central Bureau of Health Intelligence
CEHAT	Centre for Enquiry Into Health and Allied Themes
CPR	Couple Protection Rate
CSO	Central Statistical Organisation
CSSM	Child Survival and Safe Motherhood
ECG	Electro Cardio Graph
EPI	Expanded Immunisation Programme
FRU	First Stage Refferal Units
RGI	Registrar General, India
HP	Health Post
ICDS	Integrated Child Development Scheme
IIPS	International Institute for Population Sciences
IMR	Infant Mortality Rate
IUD	Intera Uterine Devices
MCH	Maternal and Child Health
MMR	Maternal Mortality rate
NACP	National Aids Control Programme
NCAER	National Council for Applied Economic Research
NFHS	National Family Health Survey
NGO	Non- Governmental Organisation
NLEP	National Leprosy Eradication Programme
NSDP	Net State Domestic Product
NSSO	National Sample Survey Organisation
OPD	Out Patient Department
ORT	Oral Rehydration Theraphy
PHC	Primary Health Centre
PHU	Primary Health Unit
PRC	Population Research Centre
RCH	Reproductive and Child Health
RNTCP	Revised National Tuberculosis Control Programme
RTI	Reproductive Tract Infection
SAP	Structural Adjustment Programme
SC	Sub-Centre
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
TB	Tuberculosis
TFR	Total Fertility Rate