

CHAPTER 12

HEALTH

Kerala has achieved very good health standards in areas like birth rate, death rate, IMR, MMR, average life at birth as well as immunization and control of infectious diseases. But the state now faces problems like high morbidity rate, low maintenance of health infrastructure, shortage of manpower, growing prevalence of life style diseases and diseases of the elderly, re-emergence of some diseases like malaria, diarrhoea, T.B, dengue fever and rapidly increasing medical cost. Medical cost is increasing with the rise in the cost of drugs and equipment. Unless private hospitals with Specialities are increasing, the quality of public health services has failed to keep pace with public demand and expectation. Thus there is a mixed health situation in which second generation problems dominant.

12.2 Kerala achieved many health goals of 2000 AD by 1991 itself. The basic health indicators in Kerala and India are shown in Table –12.1

Health care Infrastructure

12.3 Kerala achieved high health standards through widespread growth of three systems of medicine; allopathy, ayurveda and homoeopathy. In Kerala there is at least one health care institution

in each grama panchayat. Three systems of medicine together have 2696 institutions in the government sector and 48834 beds. The present status of the three systems of medicine is given in Table 12.2. Forty seven per cent institutions and 89% beds are under Allopathy. There are 931 primary health centres in allopathy, 737 rural dispensaries under Ayurveda and 525 rural dispensaries under Homoeopathy. In other words, out of 2696 health care institutions in Kerala 81% are in rural areas.

12.4 Three systems together treated 18.84 lakh inpatients and 756.6 lakh outpatients during 2003. It is against 19.36 lakh inpatients and 809.4 lakh outpatients during 2002. In-patients and outpatients treated decreased by 2.6% and 6.5% respectively. However, outpatients treated under allopathy increased from 48% in 2002 to 53% in 2003.

Private Sector

12.5 Details of private health care facilities in Kerala are available only for 1995; based on a study by Department of Economics and Statistics which shows that there were 4288 allopathic medical institutions with 67517 beds, 4922 ayurveda institutions with 2595 beds and 3118

Tabel-12.1
Health Development indicators- Kerala & India –2002

Health Indicators	Kerala	India
Birth rate (per '000 population)	16.90	25.00
Death rate (")	6.40	8.10
Infant mortality rate (")	10.00	63.00
Maternal mortality rate (")	0.87	4.37
Total Fertility rate (per woman)	1.70	3.30
Couple Protection rate (%)	66	52
Life at birth		
Male	70	64.10
Female	73.62	65.60
Total	70.93	64.90

Source: Directorate of Health Services

Table-12.2
Medical institutions, beds and patients treated under three systems of medicine in Govt. Sector during 2002 and 2003.

Sl. No	Systems of medicine	Institutions		Beds		Patients treated-2002 (Lakh)		Patients treated-2003(Lakh)	
		2002	2003*	2002	2003*	IP	OP	IP	OP
1	Allopathy	1310	1278	46224	43619	18.42	390.54	18.12	401.21
2	Ayurveda	845	857	3411	3920	0.68	179.77	0.47	187.89
3	Homoeopathy	557	561	1170	1295	0.25	239.09	0.25	167.50
	Total	2712	2696	50805	48834	19.35	809.4	18.84	756.6

*Note: - Excluding sub-centres and grant in aid institutions

homoeopathic institutions with 394 beds. Private hospitals have grown rapidly during the last ten years.

Co-operative Sector

12.6 There are 85 co-operative hospitals/dispensaries with 4566 beds and 717 doctors and 2561 nurses and para medical staff in Kerala. District wise details are given in Appendix 12.1

Insurance Medical Services

12.7 There are 12 ESI hospitals with 1123 beds and 136 dispensaries in Kerala. District-wise details of ESI hospitals, dispensaries, medical and para medical personnel are given in Appendix.12.2

Beds per lakh population in Kerala

12.8 Three systems together have 48834 beds in the Govt. sector. It shows that for one lakh population there are 153 beds. District wise details of medical institutions and beds per lakh population are given in Appendix 12.20. System-wise beds available per one lakh people including private sector are 383 under allopathy, 20 under ayurveda and 5 under homoeopathy.

Directorate of Health Services

12.9 There are 6357 institutions and 35607 beds under the Directorate of Health services. Out of which 5094 are sub centres, 132 are hospitals, 931 are primary health centres, 115 are community health centres and 59 are dispensaries. Similarly 22645 (63.6%) beds are in hospitals, 7716 (21.7%) are in primary health centres and 4840 (13.6%) are in community health centres and 406 (1.1%) are in dispensaries. District wise details of institutions and beds are given in Appendix.12.3.

During 2004, 2743 new beds have been added, which shows an increase of 8.3% over 2003. Details of health personnel are shown in Appendix 12.12.

12.10 The Tenth Plan objective was to improve and standardise facilities in PHCs/CHCs/District and other hospitals based on norms. Accordingly a Committee was constituted to fix standards for facilities at each level of institution. The Committee submitted the report in November 2002. In order to utilise the idle buildings under Health Service Directorate, 1200 posts of different category of health personnel and 2393 additional beds were newly created in 201 health care institutions. (See Table 12.3). Similarly medical equipment worth Rs. 2.12 crores were also purchased during 2003-04.

12.11 Tele Health and Medical Education project connecting six medical colleges, 10 district/general hospitals and community Health centre at Attappady for distance medical treatment and education, formulated in association with ISRO is under implementation. Total cost of the project is estimated at Rs.233.12 lakh. The project implementation is in advanced stage and is expected to be commissioned during 2004-05 itslef.

Immunization coverage

12.12 Kerala has achieved near universalisation of immunisation. But immunisation achievement in programmes like BCG, Measles and TT in 2003-04 is below 2002-03. Details of targets and achievements are given in Table 12.4. (Further details are given in Appendix 12.13)

Table. 12.3
Health personnel and beds created in different levels of institutions during 2004-05

Sl. No	Category	Number	Additional posts created (Nos)						Additional Beds (Nos)
			Asst. Surgeon	Head Nurse	Staff Nurse	Nursing Asst.	Hospital Attender	Total	
1	Primary Health Centres	194	327	--	489	182	167	1165	2323
2	Community Health Centres	4	2	1	10	4	3	20	44
3	Govt. Dispensaries	2	4	--	2	1	1	8	14
4	Taluk Head Quarters Hospitals	1	2	--	3	1	1	7	12
	Total	201	335	1	504	188	172	1200	2393

Source: Directorate of Health Services

Table-12.4
Target and achievement of Immunization Programme-2003-04

Sl. No.	Programme	Target	Achievement	%
1	DPT	582480	556582	95.6
2	Polio	582480	552064	94.8
3	BCG	582480	576128	98.9
4	Measles	582480	500260	85.9
5	TT for Pregnant Women	642678	574572	89.4
6	TT for 5 years	534759	431500	80.7
7	TT for 10 years	534759	517899	96.8
8	TT for 16 years	578969	525534	90.8

Source: Directorate of Health Services

Communicable Diseases

12.13 Of the ten leading causes of Burden of diseases (BOD) and mortality in India, almost 50% are on account of respiratory infections, diarrhoeal diseases, T.B. and measles. T.B. kills more people in India than HIV, malaria, leprosy and tropical diseases combined (see Appendix 12.17). In Kerala while the incidence of major communicable diseases came down, the prevalence rate of respiratory infection increases and diseases such as dengue fever and leptospirosis is increasing. Table-12.5 shows the prevalence rate of major public health diseases in Kerala.

12.14 Statistics during the last two years indicate

that communicable diseases like dengue fever, leptospirosis, malaria, cholera and typhoid are re-emerging as a serious health problem. Table 12.6 below shows the details of dengue fever, leptospirosis, and diarrhoea during 2002 and 2003. (See Appendices 12.14 and 12.15)

12.15 Surveillance activities, control measures, diagnostic facilities, treatment facilities and IEC activities are being taken up. Awareness cum training programmes for medical officers and para medical staff are conducted and vector study mapping done. But the activities being implemented need further strengthening.

Table-12.5
Prevalence Rate of Public Health Diseases

Sl. No.	Disease	Prevalence Rate per 1000 population	
		2002	2003
1	Leprosy	0.66	0.05
2	Filaria	1.28	N.A
3	Malaria	NA	0.08
4	T.B	0.70	0.67
5	Acute Diarrhoeal Diseases	16.96	15.43
6	Pneumonia	0.60	0.90
7	Enteric Fever	0.26	0.40
8	Measles	0.07	0.15
9	Respiratory Infection	221.42	247.89

Source: Directorate of Health Services

Table 12.6
Attack of communicable diseases and death

Sl. No.	Diseases	Attack		Death	
		2002	2003	2002	2003
1	Dengue Fever	263	3861	1	67
2	Leptospirosis	2928	2162	199	98
3	Diarrhoea	539863	506034	26	16
4	Typhoid	8408	12996	5	3

Source: Directorate of Health Services

Growing burden of non communicable diseases

12.16 Demographic trends and health transitions along with changes in the distribution of risk factors have accelerated the incidence of non-communicable diseases. Cardio Vascular disorder and cancer are the two leading non communicable diseases causing mortality and disease burden among adults as well as older adults (60+).

12.17 Statistics show that on an average 10 to 12 acute heart attack patients are being admitted daily in Medical College Hospital, Thiruvananthapuram alone. The annual admission to the coronary care unit in the MCH, Thiruvananthapuram is about 1300.

Cancer Care

12.18 One of the major public health problems is the emergence of life style led cancer. In recent years incidence of cancer disease has been increasing. Data collected through two cancer registries, run by RCC, shows the cancer incidence rate at 94 per one lakh people (male) and 91 per

one lakh for females for Thiruvananthapuram District.(see Table-12.7)

12.19 Among women 40% cancers are of breast or cervix; while among men oral cavity (15-10%) and lung cancer (10%) are most common. Tobacco related cancer comes to 40% among males and 15% among females. Based on 2001 census and two cancer registries data, the estimated number of cancer patients annually is 25409 (13140 males and 13269 females). Cancer of oral cavity and lung in men and cervix and breast in women account for 56% of cancer deaths. The National Cancer Control Programmes started in 1975-76 has formulated a four step cancer control strategy - primary prevention, secondary prevention, strengthening of existing facilities and palliative care.

Lifestyle Diseases

12.20 Studies conducted by different agencies indicate that the prevalence of diabetes, mellitus and high blood pressure is much higher in Kerala than in other states. For instance, about 8% of

Table -12.7
Incidence rates of cancer by sex in Thiruvananthapuram district
(per lakh population)

Sl.No.	Incidents rate	Urban		Rural	
		Male	Female	Male	Female
1	Crude incidence rate	86	94.4	89.6	84.2
2	Age adjusted incidence	89.6	91.4	98.3	81.4
3	Trencated incidence rate	129.6	194.0	179.3	153.7

Source: Regional Cancer Centre, Tvm

adults are diabetic in Kerala ranging from 6% in rural areas to nearly 20% in urban areas. Recent surveys reveal that one out of three adults in Kerala tends to be hypertensive. Lack of physical activity, overweight and obesity create a favourable milieu for diabetes and hypertension. Alarming increase in heart attacks and strokes in Kerala is partly the contribution of the high prevalence of hypertension. The Human Development Report of NCAER-2000 shows that Kerala stands second in the prevalence of major non-communicable diseases. It is shown below in Table 12.8

Mental Health

12.21 It is estimated that about 1% of the population at any given time suffers from mental illness. Similarly another 2 to 3% may suffer from mental disorders which may not be severe. Suicide is a major problem in Kerala, which is reported at 28.8 per one lakh people. According to Crime Record Bureau the suicide rate in Kerala is almost three times the national average of 11.6 per one lakh. Kerala contributes 10.1% of all suicides in India while the state population is only 3% of India. Over the last decade, suicide rate in Kerala rose at a compound rate of 4.6%.

12.22 Mental Health Care in Kerala is confined to three mental hospitals at Thiruvananthapuram, Thrissur and Kozhikode. A few beds are also attached to Medical Colleges and a few district hospitals. There are 1714 beds in mental hospitals. But mental health personnel to deal with mental patients are relatively very few in Kerala. For instance, in Kerala there are only 85 psychiatrists in government service and 157 in private service. Number of psychiatrists is only 0.77 per one lakh mental patients. Also there are no psychiatric nurses in Kerala.(see Table 12. 9)

12.23 Mental health care available in Kerala is grossly inadequate to meet the needs of the state. Govt. of Kerala during 2004-05, formulated a master plan at an estimated cost of Rs. 11 crore for the development of mental hospital, Thiruvananthapuram in a phased manner. Similarly it has also been decided to start psychiatric wards in all the district hospitals and taluk hospitals in phases.

HIV/AIDS

12.24 Today HIV/AIDs is a major global health emergency, affecting all regions of the world, causing more than 3 million deaths in 2003 and an

Table – 12.8
Prevalence rate of major diseases
(per lakh population)

Sl. No	Name of Disease	Kerala	India
1	Epilepsy	81	120
2	Hypertension	1433	589
3	Diabetes	980	221
4	Heart Diseases	914	385
5	Mental Diseases	283	132
6	Cancer	39	43

Source: Human Development Report of NCAER-2000

Table -12.9
Mental Health Services in Kerala

Sl.No.	Facilities	(Nos.)
1	Mental Hospital Beds	
	(i) 3 Mental Hospitals	1342
	(ii) Medical Colleges	216
	(iii) General Hospital	156
	Total	1714
2	Man Power	
	(i) Private Service Psychiatrists	157
	(ii) Government Service Psychiatrists	85
	Total	242
3	Clinical Psychologists	7
4	Psychiatric Social Worker	11

estimated 40 million people suffering with the virus. In Asia, an estimated 7.4 million people are living with HIV, around half a million are believed to have died of AIDS in 2003 and about 1.1 million are suspected to have become newly infected with HIV.

12.25 HIV infection and AIDS cases were detected in India in 1986. With more than 5.1 million estimated HIV positives in the country, India has the largest population of HIV infected people outside South Africa. Six states in India viz. Manipur, Nagaland, Maharashtra, Andhra Pradesh, Karnataka and Tamilnadu are identified as high incidence states because the prevalence of HIV/AIDS in the general population is more than 1%. Over 35% of all reported AIDS cases in India occur among young people in the age group of 15-24 years.

12.26 First HIV positive case was identified in Kerala in 1987. Till now total number of AIDS cases reported from different parts of Kerala is 1995 of which 617 are AIDS death cases. Kerala has an estimated HIV population between 70,000 and 1,00,000. Roughly 500 children are born with HIV every year. It is likely that there are at least 3500 HIV positive children below 10 in the State.

Ageing Population

12.27 According to 2001 census, 60+ population is 33.62 lakh (10.5%) in Kerala. In 1991, 60+ was only 25.7 lakh (8.8%). Projected 60+

population is 11.2% in 2011 and 14.3% in 2021. In Kerala ratio of 60+ people is significantly higher than other states in India. The age composition of the projected population of the State is shown in Table 12.10

12.28 Similarly ratio of <14 children is coming down. In 2001, <14 children were 82.9 lakhs (26.1%) and this projected number is 71.10 lakhs (20.5%) in 2011 and 67.80 lakhs (18.5%) in 2021. People aged <14 years and 60+ years are mostly non productive and hence dependents. These two categories together is projected at 31.7% of the total population in 2011 and 32.8% in 2021 against 26.6% in 2001. In other words in 2021, one-third State population will be <14 years and above 60 years.

12.29 Low birth and death rate and high average life at birth causes the high proportion of aged people. State has already attained 100% enrolment in schools. Therefore further fall in birth rate will caused to closing down of schools and starting of more health care institutions for ageing people.

12.30 Statistics show that the prevalence rate of chronic diseases and the levels of disability among elder people are increasing. To tackle the situation appropriate health promotion strategies are needed. Percentage of 60+ having chronic diseases in rural and urban areas in Kerala is given in Table 12.11.

Table -12.10
The age composition of the population in Kerala (projected)
(lakhs)

Year	Age composition			Total
	0-14	15-59	60+	
2001	82.96 (26.1)	201.83 (63.4)	33.62 (10.5)	318.41 (100)
2011	71.10 (20.5)	237.30 (68.3)	38.90 (11.2)	347.30 (100)
2021	67.80 (18.5)	246.00 (67.2)	52.60 (14.3)	366.40 (100)
2031	57.70 (15.5)	241.60 (64.9)	72.90 (19.6)	372.20 (100)
2041	51.10 (13.9)	217.90 (59.5)	97.20 (26.6)	366.20 (100)
2051	45.40 (13.1)	192.40 (55.4)	109.40 (31.5)	347.20 (100)

Source: Centre for Development Studies

Note: Figures in brackets indicate percentage

Table -12.11
Percent of 60+ Males and Females having Chronic Diseases
in Rural and Urban Areas in Kerala

Type of Disease	Rural		Urban	
	Male	Female	Male	Female
Cough	25.5	18.0	20.9	12.7
Piles	8.2	4.0	4.2	2.8
Problem of Joints	47.1	56.5	31.1	42.1
High/Low Blood Pressure	16.9	18.1	21.0	23.1
Heart Disease	8.8	4.7	6.6	3.7
Urinary Problem	4.3	2.7	3.9	2.2
Diabetes	8.7	7.7	9.7	9.0
Cancer	0.6	0.5	0.0	0.7
Any	67.9	69.7	60.0	62.5

Source: National Sample survey organization –1996.

Disabled Persons

12.31 In Kerala there are 8.60 lakhs disabled persons as per the 2001 Census. Seeing disability is more followed by moving disability and mental disability. 38.8% were seeing disabled, 27.7% were moving disabled and 16.5% were mentally disabled. Sex-wise disability shows that disability is more among males than females. Out of the total disabled, 53.2% were male and 46.8% were female. Among the disabilities hearing disabilities more among female than male whereas seeing disability is 50% each. Among female disability, 41.5% are seeing disabled followed by 23.6% movement disabled. However, among males

36.7% suffer from seeing disability followed by moving disability (31.3%). Mental disability among male and female are almost equal. (see Table.12.12)

Rural Health Care

12.32 In Kerala rural-urban separation, as seen elsewhere in India, is difficult. Normally in Kerala Primary Health Centres under allopathy and dispensaries under Ayurveda and Homoeo are entirely in rural areas. But in the case of community health centres, nearly 80% are in rural area. Out of the total outlay in PHC and CHCs during 2004-05, 89% is non-plan and 11% is plan.

Table 12.12
Category-wise Disabled Persons in Kerala

(in lakhs)

Sl. No.	Type of Disability	Persons				Total	%
		Male	%	Female	%		
1	Seeing Disability	1.67	36.4	1.67	41.5	3.37	38.8
2	Speech Disability	0.37	8.1	0.30	7.5	0.67	7.8
3	Hearing Disability	0.36	7.8	0.43	10.7	0.79	9.2
4	Movement Disability	1.43	31.3	0.95	23.6	2.38	27.7
5	Mental Disability	0.75	16.4	0.67	16.7	1.42	16.5
Total		4.58 (53.2)	100	4.02 (46.8)	100	8.60	100

Source: Census India 2001

Out of total outlay 75% is for allopathy , 16% ayurveda and 9% is for homoeopathy.

12.33 Under non-plan in Primary Health Centres 95% is for salary and wages and 3% is for materials and supplies. But in the case of Community Health Centres 63% is for salary and wages whereas 21% is for materials and supplies and 5% for machinery and equipments. The quality of service in the Primary Health Care institutions could be improved only if sufficient quantity of medicines and drugs are provided based on requirement. But this requires a scientific review of allotment of medicines, use of medicines and unused stock of medicines. Without a rational formula for distribution and use of medicines, the quality of service cannot be enhanced.

12.34 For each Ayurveda dispensary amount allotted for medicines is Rs. 30,000 against the demand of Rs. 60,000. Similarly for each homoeo dispensary amount allotted for medicine is Rs. 10,000 against the demand of Rs. 30,000. Here under ayurveda and homoeo also medicines are grossly inadequate.

12.35 Since 1997-98, one third of state plan outlay is devolved to local bodies as plan grant. During 2002-03, local governments have set apart 2.65% of plan grant to health sector which is around Rs. 4300 lakhs. During 2004-05 an amount of Rs. 9662 lakhs under Plan and Rs. 1607 lakhs as non plan is set apart by Local governments.(see Table-12.13)

Table -12.13
Plan and Non-plan outlay to Health in Rural Areas in Kerala (2004-05)
(Rs. lakhs)

System	Plan Outlay	Non-Plan Outlay	Total
A. Allopathy			
1. Primary Health Centres	1885.00	6154.07	8039.07
2. Rural Dispensaries	--	3412.49	3412.49
3. Community Health Centres.	360.00	8968.23	9328.23
Sub Total	2245.00	18534.79	20779.79
B. Ayurveda Dispensaries	80.00	4550.41	4630.41
C. Homoeo Dispensaries	70.00	2373.36	2443.76
(A+B+C) Sub Total	2395.00	25458.56	27853.56
D. LSGIS	6850.00	1078.58	7928.58
Grand Total	9245.00	26537.14	35782.14

Source: Detailed Budget Estimates 2004-05

Ratio of Health Expenditure to SDP

12.36 State spent 1.24% of SDP for health during 1997-98. But the ratio of health expenditure to SDP has been coming down and during 2003-04 it is estimated at 0.94%. Including health expenditure by Local Bodies, the percentage of health expenditure to SDP is one percent. If the state has to spend 2-3% of SDP to health, as envisaged in the Common Minimum Programme, the amount for health care has to be doubled in the next five years.

Blood units

12.37 There are 126 blood banks in Kerala in 2003 registered under Central Drugs and Cosmetic Act. Out of the total blood banks, 30 are in govt./autonomous sector and 96 are in private sector. During 2003, 2.38 lakh units of blood were collected and out of it 1.23 lakh units were from govt./autonomous institutions and 1.15 lakh units were from private institutions. During 2004 (till August) 1.49 lakh blood units were collected. The five Medical Colleges together collected 49626 units of blood which formed 33.2% of the total blood units collected. Market value of one unit of blood is around Rs. 700.

12.38 According to WHO norms, 70% of the beds are active and each such bed requires 7 units of blood in a year. Therefore number of blood units required to achieve 7 units per active bed under government sector is estimated at 1.53 lakh. Details of blood units collected during the last 3 years are given in Appendix.12.4.

Hospital Waste Management

12.39 There are 216 secondary level hospitals in Kerala which generate bio medical waste. The

category of waste generated depends upon the type of service, provided. Hospitals with operation theatre generate pathological and highly infectious waste where as laboratory generates chemical waste. PHCs and CHCs generate mostly general wastes, sharps and some infectious and pathological waste. On an average hospitals produce 1.5 kg. of waste per day per bed of which 0.22 kg. (15%) are infectious/hazardous and need pre-disposal treatment. Therefore each hospital needs a plan for specific waste management. Proper waste management system in hospitals is practically non-existent in Kerala. This is a major challenge to be addressed at the earliest.

Ayurveda

12.40 There are 115 Ayurveda Hospitals with 2744 beds and 737 Ayurveda dispensaries which include 4 visha chikilsa kendras, six siddha and one unani. Hospitals include 14 district hospitals, one nature cure hospital, at Varkala, one sidha hospital, one panchakarma hospital, at Alappuzha and one Ayurveda Mental Hospital at Kottakkal. (see Table-12.14) During 2003, 185.24 lakh patients were treated in Ayurveda institution and out of them 184.86 lakhs were outpatients and 0.38 lakh inpatients. District-wise details of Ayurveda hospitals, beds, dispensaries and patients treated are given in Appendix.12.5

Major Achievements under Ayurveda

- 10 new dispensaries were started during 2003-04
- bed strength has been enhanced from 50 to 100 in two district hospitals; Pathanamthitta and Wayanad
- laboratory facilities have been started in all district hospitals and X-ray units have been

Table 12.14
Distribution of beds in Ayurveda hospitals

Sl. No.	Category	Number	Beds
1	District hospitals	14	950
2	Govt.hospitals	96	1664
3	Nature cure hospital	1	30
4	Siddha hospital	1	20
5	Panchakarma hospital	1	20
6	Marma hospital	1	10
7	Mental hospital	1	50
Total		115	2744

Source: Directorate of Ayurveda

- started in two district hospitals.
- bed strength in Mental hospital, Kottakkal increased from 30 to 50

Ayurveda Medical Education

12.41 There are now 13 Ayurveda colleges in Kerala. Out of which 3 are Government, 2 are private aided and 8 are self-financing. Out of the 8 self financing colleges 3 were started in 2002, 3 in 2003 and 2 in 2004. Total annual intake capacity in these 13 Ayurveda Colleges is 650 for Degree (BAMS/BSMS) courses. There are 77 seats for postgraduate courses all of them in Government Colleges. The details of annual intake capacity in Ayurveda Colleges are given in Appendix-12.6. Five medical college hospitals attached to the medical colleges under government and private aided have 1176 beds. During 2003, these hospitals together treated 3.12 lakh patients, and out of them 3.02 lakh were out patients. The details of beds and patients treated are given in Table 12.15

Major Achievements

In the Ayurveda College, Thiruvananthapuram,

- Panchakarma department has been started newly during 2004-05
- three new PG courses in Panchakarma, Kaumarabhritya and Agadhathantra were started during 2003-04
- Speciality clinic in Ksharasutra, back Pain clinic and cancer care clinics have also been started.

In Ayurveda College, Kannur,

- 13 departments as per CCIM norms but the staff pattern has not been fully implemented. - During 2003-04, 7 new posts, 2 professors, 2 nurses, 2 nursing assistants and one masseur were created.
- Two Post Graduate courses in Roganidhana and Kriyasareera were also started with the assistance from GOI during 2002-04.
- Construction of 150 bedded hospital building started during the Ninth Plan period is nearing completion.

Homoeopathy

12.42 There are 31 hospitals and 525 dispensaries under homoeopathy. Hospitals include 14 district

Table -12.15
Beds and patients treated in Ayurveda Colleges (2003)

(Nos)					
Sl. No.	College Hospital	Beds	Out patients	In patients	Total
1	2	3	4	5	6
A.	Government				
1	Ayurveda College Hospital, Thiruvananthapuram.	634	89280	5177	94457
2	Ayurveda College Hospital, Thrippunithura.	139	21692	923	22615
3	Ayurveda College Hospital, Kannur	100	33838	822	34660
Sub Total		873	144810	6922	151732
B	Private Aided				
1	Vaidyaratnam Ayurveda College, Ollur	153	47692	886	48578
2	Vaidyaratnam P.S. Varrier Ayurveda College Hospital, Kottakkal.	150	110312	1147	111459
Sub Total		303	158004	2033	160037
TOTAL		1176	302814	8955	311769

Source: Directorate of Ayurveda Medical Education

and 17 taluk hospitals. Total bed strength of these hospitals is 970. Out of the 525 dispensaries, 494 are rural and 30 are urban. During 2003, 163.86 lakhs patients sought homoeopathy treatment and out of them, 0.17 lakhs were inpatients and 163.69 lakhs were out patients. District-wise details of institutions, beds and patients treated in homoeopathy hospitals are given in Appendix.12.7.

Homoeo Education

12.43 There are 5 homoeopathy medical colleges, 2 government and 3 private aided. Total annual intake for BHMS course is 250 and for PG course is 36. The details are given in Appendix-12.8. The hospitals attached to these colleges have 325 beds. During 2003-04, these hospitals together treated 3.93 lakh patients. Out of them 3.85 lakhs were out patients. Details of bed and patients treated under homoeopathy medical colleges are

given in Table 12. 16

Medical Education and Training

12.44 Govt. of Kerala started to sanction medical colleges in the self-financing sector in 2001. Accordingly six self-financing medical colleges for MBBS course, five Dental Colleges and eight Ayurveda colleges have been started during the last three years. There are now 13 medical colleges for MBBS courses with an annual intake of 1450 students. Similarly in dental and ayurveda annual intake of students has increased to 410 and 650 respectively. Similarly 32 nursing colleges have been started in the last three years with an additional intake of 1600 students annually. Also nine Pharmacy colleges were started in the self-financing sector with an intake of 540 students. Details of medical colleges and annual intake of students in Govt. and self financing colleges are

Table -12.16

Medical College hospital wise distribution of beds and patients treated in 2003-04

Sl.No.	Name of Hospital	Beds (Nos.)	Patients Treated		Total
			IP	OP	
1	2	3	4	5	6
	Government				
1	Govt. Homoeopathic Medical College Hospital, Tvpm.	100	1482	93862	95344
2	Govt. Homoeopathic Medical College Hospital, Kozhikode.	100	1737	154637	156374
	Government Aided				
1	Dr. Padiar memorial Homoeopathic Medical College	100	2755	73965	76720
2	A.N.S.S.Homoeopathic Medical College	Nil*	147	17548	17695
3	Sree Vidhyadhiraja Homoeopathic Medical College	25	1712	45600	47312
	Total	325	7833	385612	393445

*ANSS Homoeo Medical College is not having an independent teaching hospital. The hospital beds are under the control of the Director of Homoeopathy.

Table -12.17

Details of Medical Colleges and intake of students for Degree course

Medical Colleges	Courses	Government		Cooperative/aided		Self-financing		TOTAL	
		Number	Intake	Number	Intake	Number	Intake	Number	Intake
1	2	3	4	5	6	7	8	9	10
1. Allopathy	MBBS	5	700	2	150	6	600	13	1450
2. Dental	BDS	3	130	--	--	5	280	8	410
3. Ayurveda	BAMS	3	160	2	90	8	400	13	650
4. Homoeopathy	BHMS	2	100	3	150	--	--	5	250
TOTAL		13	1090	7	390	19	1280	39	2760
5. Nursing Colleges	BSc	3	150	--	--	32	1600	35	1750
6. Pharmacy Colleges	B Pharm	2	48	1	40	9	540	12	628
TOTAL		5	198	1	40	41	2140	47	2378

given in Table - 12.17.

12.45 In addition to it there are 281 seats for PG Degree and 39 seats for Super speciality courses. More details of medical/paramedical courses conducted in government medical colleges are given in Appendices 12.9, 12.10 and 12.11.

12.46 Five Government Medical College Hospitals under Allopathy together have 8012 beds, which constitute 16.4% of the total beds in government sector. Inpatients treated was 4.54 lakhs during 2003 which shows an increase of 2.5% over 2002. Outpatients treated increased only marginally by 1% . But major operations conducted during 2003 increased by 24.8% over 2001. Details of beds, patients treated, major operations conducted delivery cases attended etc. are given in the Table-12.18 below.

12.47 On an average 58 inpatients in the Medical Colleges used one hospital bed during 2003 but it varies hospital wise. It was highest in Kozhikode Medical College where 67 inpatients used one bed, whereas in Thiruvananthapuram Medical College 56 patients used one-bed. Total beds in five Medical Colleges together increased from 7978 in 2002 to 8012 in 2003 whereas inpatients treated increased by 0.11 lakhs. Similarly major operations conducted in all the Medical Colleges together increased from 0.67 lakhs to 0.84 lakhs. Number of operations conducted were 0.27 lakhs in Thiruvananthapuram medical college followed by 0.23 lakh in Kozhikode medical college. Delivery cases attended in medical colleges also increased from 0.66 lakhs to 0.69 lakhs. Out of the total delivery cases attended 0.31 lakhs (45%) were in Kozhikode medical college followed by 0.18 lakhs (27%) in Thiruvananthapuram. All

these show that eventhough inpatients treated over the year increased, there has not been proportionate increase in facilities.

Increasing Non-Plan Deficit

12.48 Over the years recurring/maintenance need like salary and wages, repair of equipment, minor works, electricity and water charges, equipments etc. have been increasing. But budget outlay under non-plan for recurring cost does not increase proportionate to the requirement, which causes shortage of drugs and personnel and poor maintenance of existing facilities. Eventhough medical college hospitals are treated as referral hospitals, people even with minor ailments reach medical college hospitals for better treatment from professionals leading to over crowding and stretching of scarce facilities. Under such circumstances quality of services is affected. Therefore a twin strategy is needed. (i) strictly enforce referral system to restrict inflow of patients with minor ailments (ii) thus increase non-plan outlay to meet the recurring cost. During 2004-05 non- plan budget outlay is Rs.211 crores against the estimated requirement of Rs.267 crores.(see Table-12.19)

12.49 Deficit of outlay is more for drug, diet and other materials. For instance, in 2000-01, budget outlay was Rs.2369 lakhs for these items against requirement of Rs. 3800 lakhs, which ended in a deficit of Rs. 1431 lakhs. In 2002-03, requirement for these items increased to Rs.5500 lakhs but budget outlay was only Rs.3396 lakhs. (see Table-12.20). This shows that gap between outlay and requirement for these items is continuously increasing indicating the need for clear-cut policy decision on resource allocation.

Table 12.18
Beds, Patients treated and operations conducted in
Government Medical College Hospitals during 2003

Sl. No.	Medical college Hospitals	Beds (Nos.)	Inpatients (Lakhs)	Outpatients (Lakhs)	Major Operations conducted	Delivery cases attended
1	Thiruvananthapuram	2457	1.37	7.73	27170	18400
2	Alappuzha	1031	0.51	3.50	8900	6246
3	Kottayam	1280	0.64	8.39	14050	7580
4	Thrissur	987	0.50	4.37	10250	5643
5	Kozhikode	2257	1.52	7.12	23420	31250
	Total	8012	4.54	31.11	83790	69119

Source: Directorate of Medical Education

Table -12.19
Budget Outlay under Non Plan, Requirement and Deficit in
five Medical College Hospitals

(Rs. Crores)

Year	Non Plan Budget Outlay	Requirement	Deficit
1999-00	138.00	150.00	12.00
2000-01	137.00	160.00	23.00
2001-02	156.00	184.00	28.00
2002-03	158.00	193.00	35.00
2003-04	180.00	227.00	47.00
2004-05(BE)	211.00	267.00	56.00

Source: Directorate of Medical Education

Table-12.20
Budget Outlay and Requirement for Drug, Diet
and Other materials

(Rs. Crores)

Year	Budget Outlay	Expenditure	Requirement	Deficit
1999-00	22.75	22.75	35.00	12.25
2000-01	23.69	23.69	38.00	14.31
2001-02	32.81	32.81	46.00	13.91
2002-03	33.96	33.96	55.00	21.04

Source: Directorate of Medical Education

Kerala Heart Foundation

12.50 Considering the increase in the incidence of heart disease and limited facilities for cardiac care, Tenth Five Year Plan envisaged setting up Kerala Heart Foundation as a unit of medical college, but with functional autonomy. Project has been formulated at an estimated cost of Rs. 34.7 crores and the State Government support is estimated at Rs. 11.7 crore. An area, of. 3.78 acres for building construction has been allocated in the medical college campus. Steps have been initiated to explore the possibility of raising institutional finance.

Major achievements

Health Personnel

12.51 During the 10th Five Year Plan, the approach has been to create posts of health personnel in each college as per Medical Council of India norms in a phased manner based on an over all development plan. Accordingly during

2003 and 2004, 190 posts of doctors, para medical and others were created in medical colleges. Out of the total posts 40 posts were in Dental College, Kottayam. Similarly 36 posts were of medical officers, 89 were of para medicals and 65 posts were in other categories. In Thiruvananthapuram and Thrissur Medical Colleges posts created were very few while 77 posts were created in Kottayam Medical College and 47 posts were created in Alappuzha. (see Table-12.21)

Expenditure on Medical and Public Health

12.52 Kerala spends fairly substantial amount on public health compared to other Indian States, which is evident from per capita government health expenditure. In Kerala it was Rs.238 in 2001-02 as against the all India average of Rs.191. Including the investment of Local governments, per capita expenditure on health increased to Rs.267 in 2002-03 and to Rs.312 in 2003-04. Similarly expenditure on health to total State expenditure (Revenue & Capital only) was 5.4%

in 2003-04 as against the national average of 4.6%. The expenditure on Health including family welfare during 2001-02 to 2004-05 is

given in Table-12.23. (Achievement under family welfare programmes is shown in Appendices 12.18 and 12.19).

Table -12.21
Posts created in the Government Medical Colleges
During 2003 and 2004.

Sl.No	Medical Colleges	Posts created during 2003 and 2004			
		Medical Officer	Para medical staff	Others	Total
1	Kottayam	8	48	21	77
2	Thrissur	1	1	-	2
3	Alappuzha	-	27	20	47
4	Thiruvananthapuram	4	-	-	4
Sub total		13	76	41	130
5	Dental College, Kottayam	16	13	11	40
6	Nursing College, Kozhikode	7	-	13	20
Total		36	89	65	190

Source: Directorate of Medical Education

Table -12.22
Capital investment in Medical Colleges

Sl.No.	Medical Colleges Hospitals	(Rs. lakhs)	
		2002-03	2003-04
I	Medical Colleges		
1	Thiruvananthapuram	57.5	100.00
2	Alappuzha	27.4	58.80
3	Kottayam	247.0	88.00
4	Thrissur	236.76	159.0
5	Kozhikode	76.50	93.12
6	Regional Institute Ophthalmology	14.5	134.51
Total		659.66	633.53
II	Dental Colleges		
1	Thiruvananthapuram	42.5	--
2	Kottayam	--	66.76
3	Kozhikode	17.5	--
Total		60.00	66.76

Source: Directorate of Medical Education

Table - 12.23
Plan and non-plan expenditure on Medical and Public Health including Family Welfare.

(Rs. in Lakhs)

Year	Expenditure on Medical and Public Health (excluding FW)			Expenditure on Family Welfare	Plan grant of LSG	Total	% of Expenditure to SDP
	Plan	Non-Plan	Total				
<i>I</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
2001-02	6466.88	59120.91	65587.79	10270.57	NA	75858.36	1.2
2002-03	8950.08	62264.16	71214.24	9459.40	4300.38	84974.02	1.2
2003-04 (RE)	8344.31	72225.90	80570.21	10000.00	8780.00	99350.21	1.3
2004-05 (BE)	10860.00	81665.51	92525.51	9200.00	9662.00	111387.51	1.3

Source: Detailed Budget Estimates 2004-05

Local Self Governments and Health Programmes

12.53 As per Panchayat Raj Act 1994/ Nagarapalika Act 1994 health institutions upto and including District Hospitals were transferred to Local Governments. Accordingly out of above one third state plan outlay devolved to Local Governments they set apart Rs. 9662 lakhs for Medical and Public Health during 2004-05 as against Rs. 8780 lakhs during 2003-04. Local Government-wise outlay set apart for health during 2004-05 is shown in Table 12.24. Outlay is set apart for implementing major activities like (i) construction of PHC and CHC building, (ii) repair and maintenance of

building, (iii) construction of separate wards and supply of beds, (iv) purchase of equipment, (v) health awareness camps and immunization programmes, (vi) health counseling, (vii) health survey and study, (viii) women and children health programmes, (ix) distribution of medical kits, (x) medical waste management and (xi) purchase of medicines/drugs. During 2004-05 Local Governments together formulated 13267 projects for the health sector.

12.54 Physical achievement data relating to health during 2002-03 shows that 7219 sq.m. of hospital building space was created and 2910 sq.m. of building was renovated.

Table-12.24
Local Self Government-wise outlay on Health during 2004-05

Sl.No.	Institutions	Projects (Nos.)	2004-05 (Rs.in lakhs)
1	Grama Panchayat	10865	5524
2	Block Panchayat	1381	1326
3	District Panchayat	377	1254
Sub Total		12623	8104
4	Municipality	594	928
5	Corporation	50	630
Total		13267	9662