

CHAPTER XVI

MEDICAL AND PUBLIC HEALTH SERVICES

The Bangalore Rural district being placed on the table land of the Deccan Plateau has good climate and moderate rainfall and hence the people of the district have not suffered much from the epidemics like malaria, cholera, etc., caused by extreme seasonal variations. The Indian Ayurvedic system is popular in the rural areas even today, but the Allopathic system has been quite popular with the establishment of major hospitals and a number of nursing homes in Bangalore city. Some of the older dispensaries in the district are the general hospitals at Channapatna and Kanakapura; combined dispensary at Hoskote and other institutions at Ramanagaram, Magadi, Devanahalli, and Dodballapur. Bangalore city being nearer to all the taluk headquarters, major hospitals could not develop in the taluk places.

During 1988, as on 31.3.1988, there were four hospitals with 166 beds, 24 Primary Health Centres with 301 beds, 50 Primary Health Units with 61 beds in the district in addition to 276 sub-centres, one private hospital at Channapatna and a number of private nursing homes and clinics both in the urban and rural areas of the district.

At the district level, there is the District Health and Family Welfare Officer who is the administrative head and is responsible for the supervision, guidance and effective implementation of various National and State Health Programmes through a network of various types of health and medical institutions in the district. He is the administrative head of the department in the district and is assisted by the Headquarters Assistant to the District Health and Family Welfare Officer, the District Malaria Officer, the District Leprosy Officer, the District T.B. Officer, the Gazetted Assistant and a number of other subordinate staff. Some of the schemes of the Department have been transferred to the Zilla Parishat which came into being in 1987-88.

At the sub-divisional level, there are two Assistant District Health and Family Welfare Officers (ADH & FWO), one at Ramanagaram for the taluks of Ramanagaram, Kanakapura, Channapatna and Magadi and the other at Dodballapur for the remaining taluks of the district. The ADH & FWO controls all the government medical institutions in the sub-division. His duties consists of the supervision of all health programmes, arranging mass camps, taking up enquiry, reporting and control measures when there are epidemics in the area, reviewing the work of medical officers, inspection of cinema theatres and hotels, arranging mass media education programmes, co-ordinating other departments in the implementation of health programmes. The staff of the office of the ADH & FWO consists of one Junior Non-Medical Supervisor and Steno-Cum-Typist.

SANITATION

In the earlier days, sanitation was looked after by the Sanitary Department which later came to be known as the Department of Health, and the District Sanitary Board. There were District Health Officers who were later replaced by Sanitary Inspectors to look after the Sanitary work in the district. The Village Improvement Scheme introduced in 1914 stimulated the economic and other activities in the villages through Village Improvement Committees. The Scheme of Rural Health Centres introduced in 1931 had the objectives of improving village Sanitation, immunization services, control of epidemics, etc. in rural areas.

Sanitation in rural areas rested with the headman of the village and he was responsible for cleanliness and other simple sanitary works according to the village sanitation regulation. The incidence of plague in 1898 and subsequent years forced the towns to pay attention towards better sanitation facilities. During June, 1960, the curative and preventive services at the taluk level were amalgamated and came under the control of the District Health Officer. In the Urban area, the municipality looks after the sanitation of the town. There was the District Board making arrangements for general sanitation, conservancy and safe water supply during *jatras*. The District Health and Family Welfare Officer is the administrative head and his duties consist of supervision and control of epidemics, supervision of sanitary arrangements in *jatras*, selection of sites for village extensions, examination of drinking water supplies, medical inspection of schools, health propaganda work, etc. With the formation of Zilla Parishat, many of the services have been transferred to the Zilla Parishat regarding sanitation.

VITAL STATISTICS

The system of registration of births and deaths dates back to 1879 in the State. In the earlier days, the Village Patels in villages and the municipalities in towns were registering births and deaths in the district. Monthly returns were sent to taluk office and from there to the district office for compilation. In 1915-16, some rules were revised to bring about better registration system by making provisions for actual verification of village registers, professional scrutiny of the figures before tabulation at the taluk level and a periodical review of the recorded statistics by the local bodies. In 1918, regulations were passed to improve the system.

With the abolition of Patels and Shanbhogs, the registration of births and deaths is done by the Village Accountants in rural areas and the municipalities continue to register births and deaths in the urban areas. The Deputy Commissioner of the district is the District Registrar of Births, Deaths and Marriages and the Statistical Officer is the Additional District Registrar of Births, Deaths and Marriages under the provisions of the Registration of Births, Deaths and Marriages Act, 1969 and the Rules 1970, thereunder.

SAMPLE REGISTRATION SYSTEM

The Sample Registration system (SRS System) began functioning in the district from June, 1960 in Rural areas and from July, 1968, in the urban areas of the district. The SRS provides reliable estimates of annual birth and death rates and other refined measures of fertility and mortality separately for rural and urban areas. There are part-time enumerators in the selected villages, who register births and deaths in their jurisdiction. From 1971 to 1982, Kamasandra Menasi, Narasandra, Hullikeregurur, Honganur and Hosadurga were the rural units and Kanakapura was the urban unit under SRS system, which were under the administrative control of the State Government. Haithi in Magadi taluk was a rural unit and Nelamangala (upto 1982) was an urban unit under the control of the Director of Census Operations from 1976 to 1981. From 1983 Byranayakanahalli and Dyavapatna, (Channapatna tq), Jinke Bachahalli, Doddabelavangala and Kanchiganala in Dodballapur taluk, Kallur and Thippasandra in Magadi taluk, and Varadanayakanahalli in Nelamangala taluk were the rural units under the administrative control of the State Government. Harthi in Magadi taluk, Settigere in Devanahalli taluk are the rural units and Ramanagaram and Kanakapura are the urban units under the control of Director of Census Operations.

BIRTHS AND DEATHS

The births, deaths, birth rate, death rate are some of the general indicators of any population of a given period from which many other measures of population studies are calculated. The annual averages of births and deaths in the undivided district from 1903 to 1907 were 12,868 and 19,725 respectively. From 1908 to 1910, the annual averages for the undivided district excluding the Bangalore city were 12,213 births and 11,237 deaths. During the next decade from 1911 to 1920, the average number of births was 13,570 with a maximum of 15,617 in 1916 and the minimum was 10,466 in 1919. During the next decade from 1921 to 1930 the annual average number of births increased to 14,131 with a maximum of 16,643 in 1926 and a minimum of 11,720 in 1921. The annual average number of deaths from 1911-1920 was 14,508 with a maximum of 35,593 in 1918 and a minimum of 9,282 in 1912. The heavy toll of death in 1918 was probably due to the epidemic influenza. During the next decade from 1921-1930, the annual average number of deaths decreased to 10,871 with a maximum of 13,828 in 1922 and a minimum of 7,982 in 1926. The above figures are for the undivided Bangalore district excluding the Bangalore city. With the improvement of health conditions in the later years, the number of deaths decreased leading to population explosion. The birth and death rates computed from the above figures during the period were stated to be below the true rates owing to the incompleteness of reporting. According to a special enquiry made in 1929, which had revealed the accuracy of reporting in Bangalore city was birth rate 59 per cent and death rate 89 per cent. In the table that follows, the reported total births, deaths, infant deaths, maternal deaths and still births for the undivided Bangalore district are given from 1971 to 1983.

year	Number of births	Number of deaths	Number of still births	Number of infant deaths	Number of maternal deaths
1	2	3	4	5	6
1971	68,510	19,395	1,773	3,314	49
1972	75,404	22,275	2,027	3,917	131
1973	73,460	23,964	2,633	4,155	62
1974	71,554	23,823	2,833	3,845	90
1975	74,008	24,928	2,555	4,060	49
1976	74,600	23,039	2,568	4,296	123

1	2	3	4	5	6
1977	76,343	23,055	1,968	4,643	251
1978	74,298	21,607	2,040	4,479	48
1979	78,593	23,707	2,113	4,599	93
1980	81,484	20,974	1,927	2,487	30
1981	84,401	25,627	1,953	4,244	65
1982	81,928	26,110	1,917	5,225	61
1983	75,614	22,464	1,989	3,860	33

Source: Chief Registrar of Births, Deaths and Marriages, Bangalore.

Note: The figures are taken from the annual reports on the working of the R.B.D. Act 1969 which are based on the reports received-which are incomplete as the coverage is 50% or less, and hence birth rates and death rates have not been calculated for the district.

The birth rate and death rate for the State also holds good for the district and the birth and death rates for Karnataka from 1971 to 1983 were as follows according to the year Book 1984-85 Family Welfare programme in India and S.R.S. year Book 1983.

Year	Birth rates			Death rates		
	Rural	Urban	Common	Rural	Urban	Common
1	2	3	4	5	6	7
1971	32.3	26.4	30.7	14.2	7.9	12.4
1972	30.8	26.1	29.4	13.7	7.8	12.0
1973	29.7	24.3	28.2	13.1	7.4	11.4
1974	30.1	24.0	28.4	12.8	7.4	11.2
1975	29.3	23.9	27.8	12.8	7.7	11.3
1976	29.5	25.2	28.3	13.1	7.9	11.6
1977	29.1	25.4	28.1	12.6	7.5	11.2
1978	29.4	25.6	28.3	12.0	7.1	10.6
1979	29.0	25.3	28.0	10.9	6.4	9.7
1980	28.9	24.4	27.6	10.7	6.6	9.6
1981	29.2	25.7	28.3	10.2	6.3	9.1
1982	28.8	25.7	27.9	10.2	6.3	9.2
1983	30.2	26.0	29.1	10.6	6.0	9.3

SOME EPIDEMIC DISEASES

The district is situated at a higher altitude receiving moderate rainfall and hence the population is subjected to lesser hazards from many of the epidemics like malaria, cholera, etc. In the earlier days, the District Boards and Municipal Councils were responsible in the control of epidemics and to take preventive measures under the advice of the Director of Health and the Sanitary Commissioner. The State Department of Health met the cost of anti-plague inoculations and the cost of anti-cholera vaccine was met by the District funds. Epidemic diseases like small pox, plague, malaria, etc., required continuous effort to control their spread.

SMALL POX

Small pox was always more or less prevalent in the district during summer but was less fatal. Death due to this disease during the years between 1881 and 1893 was as follows: 897, 620, 995, 820, 522, 595, 284, 858, 777, 391, 493, 1,142 and 140 respectively. There were quarantine camps and chatrams at important railway stations for the travellers and pilgrims as a precautionary measure against the spread of the epidemic diseases. The death due to small pox in the undivided district in 1974 was 45 and afterwards no cases have been reported.

MALARIA

Malaria fever is an age old disease in the country. In the last decade of the previous century, it was found in an endemic form in the taluks of Ramanagaram, Kanakapura and Channapatna and was scarcely found in other taluks of the district. The National Malaria Control Programme was launched in the district in 1953 and in 1958, it was converted into the National Malaria Eradication Programme. The district entered into maintenance phase in 1964. The disease is not severe in the district and is found to some extent in areas covered by the Primary Health Centres of Kanakapura, Hosadurga and Kanasavadi and the malaria cases reported from those centres were only 14 in 1988. The following table shows the blood smears collected, examined, the number of patients detected and the treatment given in the district from 1978 to 1988 (upto the end of October 1988).

Year	Blood smears collected	Blood smears examined	Number found Positive to the disease	Number of persons given treatment
1978	2,52,016	2,52,106	6,561	4,446
1979	2,52,745	2,52,745	4,130	3,262
1980	2,72,228	2,72,228	2,005	1,741
1981	3,46,147	3,46,147	1,930	1,722
1982	3,21,228	3,21,228	1,028	957
1983	3,24,291	3,24,291	352	309
1984	3,00,859	3,00,859	141	121
1985	3,39,121	3,39,121	95	93
1986	3,81,098	3,81,098	51	48
1987	2,33,993	2,33,993	39	35
1988	2,00,868	1,44,632	19	16

The Junior health workers in the Primary Health Centres visit the houses in the villages once in 15 days and collect the blood smears of those suffering from fever. About 50 houses around the house where malaria patient is detected are disinfected by D.D.T. spray. There is also provision for collecting blood smears for examination from 15 patients out of every 100 patients who attend the dispensary or hospital. Blood smears are also taken from the persons of the neighbouring households and relatives of the victims of the disease for examination. Malaria cases in the Ramanagarm sub-division are reported to be imported from the neighbouring State of Tamilnadu and generally the cases are reported in the months of January and February.

The office of the District Malaria Officer was started on first of January 1981 headed by the District Malaria Officer and assisted by an Assistant Malaria Officer, a non-Medical Assistant, six Senior and six Junior Malaria Inspectors, field workers and other office staff.

TUBERCULOSIS

Tuberculosis is another disease which had been a nightmare among the people. The T.B. patients of the district are treated at the District T.B. Centre of the district. The District T.B. Centre of the Bangalore Rural district at present is housed in the General Hospital, Jayanagar, Bangalore from 23-5-1988 and covers all the eight taluks of the district. It is managed by the District Tuberculosis Officer who is assisted by the two senior Health Assistants, one x-ray Technician,

two Laboratory technicians, and on the office side, one First and one Second division clerks, and one Statistical assistant. The Centre is engaged in monitoring and supply of drugs to the patients and in the control of Tuberculosis under National Tuberculosis Control Programme. There were 890 Tuberculosis patients in the Bangalore Rural district as on 31-5-1989 taking treatment and another 149 cases had been cured of the disease during the year 1988. The Centre had analysed 6,052 samples of sputums and had taken 7102 x-rays and screenings during 1988-89. Professional hazards connected with beedi rolling and pottery work are described as causing T.B.

PLAGUE

Plague broke out for the first time in Bangalore city in 1898 and the first case was reported on 12th August 1898. The epidemic spread first in the Bangalore taluk and later into the taluks of Anekal, Closepet (now Ramanagaram), Dodballapur, Channapatna, Hoskote, Nelamangala, Magadi, Devanahalli and Kanakanahalli (now Kanakapura) in order. This was mostly due to infected persons or persons with infected items like cloths hurriedly leaving Bangalore, being afraid of anti-plague operations like segregation. By the end of October, 1898, some places in Bangalore, Anekal taluk and Bidadi in Ramanagaram taluk were under the grip of this epidemic. In November 1898, the number of attacks increased and raised in December, reached the peak in January, 1899. On 12th January, 149 deaths had been reported in the district. The epidemic declined in February 1899 and almost died out in April and May, but reappeared in the city and in the villages of Kasaghattapura of Nelamangala taluk, Romohalli in Bangalore taluk and Doddagubbi in Hoskote taluk during the month of June 1899. The plague was very severe in Channapatna taluk with 828 attacks and 822 deaths. Among these 828 attacks, 712 were in the town and the rest of 112 cases had been distributed among 26 villages of the taluk. Anti-plague operations like inoculation, disinfection of houses, evacuation, demolition of houses which were unfit for human habitation etc., were carried out.

The number of villages affected by the epidemic, number of attacks and deaths respectively in the taluks were as follows: Channapatna 27, 828 and 822; Devanahally 25, 207 and 204; Dodballapur 18, 350 and 337; Hoskote 16, 357 and 325; Kanakapura 13, 173 and 128; Magadi 7, 178 and 166; Nelamangala 33, 489 and 389 and Ramanagaram 13, 134 and 114.

It appeared again in 1902-03, and its ravages were severe till 1907-08. It also appeared during the I world war period. The epidemic continued to visit the district till the 1950s and subsided completely when D.D.T. spraying was started to control malaria. Now, the district is free from this epidemic.

There is one plague control unit in the district attached to the District Health and Family Welfare Office and the staff consists of one Senior Health Inspector, two Junior Health Inspectors, 19 Supervisors/Field Workers, 57 Labourers, one Group D official and an Insect Collector.

CHOLERA

In the earlier days Cholera was an endemic disease occurring occasionally and in most of the cases, the first cases were imported by pilgrims returning from Thirupathi and other places. Deaths due to Cholera in the district between the years 1881 and 1893 were as follows: 2, 6, 5, 20, 91, 0, 205, 67, 465, 31, 94, 172 and 112 and from 1971 to 1983, the reported deaths in the undivided district were 23, 86, 34, 40, 5, 205, 0, 0, 0, 0, 7, 5 and 4. The district being situated on the elevated Deccan Plateau, cholera as an epidemic is less harmful to the people.

It has been reported from many Primary Health Centres that children are more susceptible to gastroenteritis. During 1988, there were 531 cases of gastroenteritis with 25 deaths as against 173 attacks and 15 deaths in 1987 in the district. During 1987, there were 315 cholera attacks with five deaths in the district and anti-cholera inoculations were done to 67,259 persons.

LEPROSY

Leprosy is another disease of some concern in the southern taluks of the district. During 1987-88, a total of 2,05,052 persons in the district had been surveyed, examining 1,36,076 and detecting 670 new cases and again in 1988-89 upto the end of February 1989, another 1,40,705 persons had been surveyed detecting another 384 new cases bring up the cumulative total of patients to 3,217 in the district. During this period, it is reported that 247 patients had been cured of this disease. There is one National Leprosy Control Centre and an Urban Leprosy Centre both at Kanakapura. Leprosy cases are found more in Kanakapura taluk of the district.

Leprosy Control Centre: The Leprosy Control Centre, Kanakapura was started on 30th March, 1988. The centre covers the taluks of Kanakapura, Ramanagaram and Channapatna. Till February 1989, the centre had surveyed 98,526 persons, examining 65,596 and detecting 1,627 leprosy patients. During Anti-leprosy month in January 1989, 41 new cases were detected. By the end of January 1989, 1,668 leprosy patients had been identified; of whom 30 had been cured of the disease and 12 either died or left the place. The remaining 1,626 cases were under treatment. There are 801 villages under this centre; of which, 414 villages are endemic containing leprosy patients. It is reported that more number of leprosy patients are found in villages of the Kanakapura taluk bordering Tamilnadu and among them many are migrants from Tamilnadu who have settled in the district. The Leprosy Control Centre is managed by a Medical Officer assisted by four Senior non-Medical Supervisors, 20 para-Medical workers and a Junior Laboratory Technician.

There is one Urban Leprosy Centre at Kanakapura town started in 1978. It is managed by a Senior non-Medical Supervisor. By the end of January 1989, there were 147 Leprosy patients identified by the centre and out of them, 103 were under treatment.

There were 42 Survey Education and Treatment (SET) Centres in the district during 1988. The District Leprosy Office was started in 1977. The Leprosy Control Scheme in the district is looked after by the District Leprosy Officer who works under the District Health and Family Welfare Officer. The District Leprosy Officer is assisted by five Senior and eight Junior non-Medical Supervisors, a Physiotherapist, a Block Extension Educator and other subordinate technical and office staff.

JAPANESE ENCEPHALYTIS

The Japanese Encephalytis is a disease first found in Japan and is a disease spread by Culex mosquitoes through pigs. Mostly children are susceptible to this disease. The disease entered into Karnataka State from Andhra Pradesh in 1979. The disease manifests itself by high fever, headache, vomiting, shivering and unconsciousness. During 1988, there were two cases with one death in the district as against six cases and four deaths in 1987.

Influenza, a severe epidemic, occurred in 1890 in the district and again in 1918-19. A severe epidemic dengue occurred in the later part of 1872 in the district. During 1988, there were 451 cases of measles

attack with 15 deaths as against 244 attacks and five deaths during 1987. During 1987-88, 1,584 doses of measles vaccine had been administered and the achievement was 63.4% of the target fixed.

The table below shows the deaths due to various causes in the district from the year 1971 to 1983. The figures are for the undivided district of Bangalore.

Causes	1971	1972	1973	1974	1975
1	2	3	4	5	6
Plague	-	5	-	2	-
Small Pox	38	32	24	45	-
Cholera	23	86	34	40	5
Malaria	610	636	227	322	156
Typhoid	209	386	81	70	95
Other fevers	1,062	2,597	3,629	3,941	3,866
Dysentery and Diarrhoea	1,080	1,437	1,838	1,861	1,684
Respiratory diseases	781	1,652	2,299	2,645	2,391
T.B. & Pulmonary	707	489	186	223	514
Leprosy	36	53	9	24	25
Maternal deaths	49	131	62	90	49
Suicide	82	88	14	17	47
Drowning	98	65	41	82	60
Wounds and acci- dents	260	296	42	72	219
Killed by wild beasts	4	9	1	-	2
Snake bite	16	12	17	33	34
Rabies	8	5	7	2	34
Tetanus	245	121	-	1	127
Diphtheria	65	12	-	-	20
Whooping cough	3	20	11	7	6
Polio	-	7	-	-	-
Other causes	13,960	14,031	15,352	13,956	15,165
Causes not stated	59	105	90	390	429
Total	19,395	22,275	23,964	23,823	24,928

The General Hospital, Channapatna was started in 1893 as a local Fund Dispensary and in 1960, it was converted into a combined dispensary. Later, it became a General Hospital with fifty beds in March 1986. A post-partum centre was attached to it in January 1988. The present building of the hospital was completed in 1985 at a cost of Rs.15 lakhs. It has the facilities of a laboratory, an X-ray unit and an ambulance van to shift the emergency cases to higher institutions. The common diseases reported are worms, anaemia, ambiosis, viral hepatitis, typhoid and intestinal diseases. During

GENERAL HOSPITAL, CHANNAPATNA
INSTITUTIONS

1976	1977	1978	1979	1980	1981	1982	1983
205	-	-	-	-	-	-	-
171	215	111	14	8	7	5	4
52	13	7	3	10	8	1	-
2,994	2,865	3,095	3,416	3,200	3,545	2,902	3,043
1,790	2,362	2,165	1,583	1,291	1,767	2,257	1,281
2,518	2,576	2,443	2,547	2,571	2,749	1,085	3,152
603	769	917	1,114	991	1,065	98	1,428
11	46	28	18	1	16	-	-
123	251	48	93	30	65	61	33
33	84	268	209	166	111	69	249
31	51	26	28	19	3	18	8
547	582	565	539	940	955	826	1,024
1	-	-	-	-	-	-	-
29	26	15	16	18	14	8	3
5	1	-	-	3	2	-	-
94	-	-	2	4	4	2	1
4	1	-	-	-	-	1	-
-	-	2	-	47	123	49	-
1	-	-	-	5	1	3	-
13,447	12,916	11,917	13,849	11,376	14,600	14,368	10,571
380	297	-	276	294	525	4,351	1,670
23,039	23,055	21,607	23,707	20,974	25,627	26,110	22,464

1988, 78,019 out-patients 3,823 in-patients attended the hospital, 889 maternity cases were attended, 245 major and minor operations were performed and 574 X-rays and 19 screenings were taken. There were 185 tuberculosis and 24 leprosy patients under treatment. During 1987-88, under Family Welfare Services, two vasectomy, 243 tubectomy operations were performed, 297 IUD (Intra-uterine Devices) placements were made. Under MCH (maternal and child health) programme, 855 doses of DPT, 4,015 doses of DT, 2,163 doses of TT and 855 doses of oral polio were administered. The Hospital was administered by a Medical Officer of the grade of Deputy Surgeon, assisted by six Assistant Surgeons and 64 other subordinate staff.

GENERAL HOSPITAL, KANAKAPURA

The General Hospital, Kanakapura seems to have been started as a Local Fund Dispensary in 1935 and was converted into a combined Dispensary with 10 beds in 1947, and then into Government of India type Primary Health Centre in 1964. It was upgraded into a 50 beds hospital in 1984. The Urban Leprosy Centre was attached to the Institution in 1978 and a post-partum Centre in 1988. An Urban Family Welfare centre is also attached to the Hospital. The original building of the Hospital was built in 1935 and was expanded in 1947. The building of the maternity section was constructed by donation from K.N.Srikantaiah of the town in 1980. The Hospital has an operation Theatre, a laboratory and an X-ray unit. There are 16 sub-centres attached to the Hospital. Malaria and intestinal diseases are some of the epidemics found among the patients who attend the hospital. During 1988, 72,002 out-patients attended the hospital as against 82,470 in 1987, 203 deliveries conducted and 1,053 maternity cases were attended. There were 79 T.B. patients and 270 Leprosy patients under treatment in 1988-89 as against 115 T.B. and 303 Leprosy patients in 1987-88. Under Family Welfare Services, four Vasectomy, 262 Tubectomy, 723 Leproscopic sterilization were performed and 652 IUD placements made during 1988-89 as against 9 Vasectomy, 328 Tubectomy, 815 Leproscopic operations and 663 IUD placements during 1987-88. Under M.C.H. Programme during 1988-89, 2,868 doses of DPT, 2,718 doses of DT, 3,982 doses of T.T. (mother 1947, children 2,035), 2,868 doses of oral polio, 4,255 doses of B.C.G. and 1,920 doses of Measles vaccination were administered and iron and folic acid tablets were distributed to 4,516 children as against 2,847 doses of DPT, 2,087 DT, 6,447 doses of T.T. (mother 1,528 and children 4,919) and 2,540 doses of polio during 1987-88.

The Hospital was managed by a Deputy Surgeon, assisted by another Deputy Surgeon for post-partum centre, six Assistant Surgeons, one

Dental Surgeon, 7 staff members, 4 Pharmacists both Senior and Junior, 3 Lab.technicians, one Basic Health Educator, 3 Lady Health Visitors, one Senior Health Inspector, 30 Health Assistants, both male and female and other office and other subordinate staff.

K.S.P.T.S. HOSPITAL, CHANNAPATNA

The Karnataka State Police Training School (KSPTS) Hospital, Channapatna was started during 1964-65 with 12 beds for the trainees of the school. It is managed by a Medical Officer assisted by a Staff Nurse, Pharmacists and Group 'D' officials. During 1988, the hospital treated 1,294 out-patients.

COMMUNITY HEALTH CENTRES

Community Health Centres are established at taluk headquarters for every one lakh population or one community Health Centre out of every four Primary Health Centres. The Community Health Centres are 30 beds hospital at taluk levels and 50 beds hospitals at sub-divisional headquarters and serve as referral hospitals for the rural population. The 30 beds hospitals will have specialised services at the least in general medicine, general surgery, obstetric and gynaecology and dentistry. In 50 bed hospitals, in addition to these, there will be specialists in ENT and paediatrics. There are two community Health Centres in the district at Dodballapur and Ramanagaram.

COMMUNITY HEALTH CENTRE, DODBALLAPUR

The Community Health Centre, Dodballapur was in existence as a Local Fund Dispensary in 1937 and it was upgraded into a Community Health Centre in 1986. The number of beds in the Centre is 50. There is one X-ray unit attached to centre. There are 11 sub-centres under this centre. The common epidemic reported is cholera. During 1988, 1,04,977 out-patients and 3,528 in-patients attended the hospital, 1,865 maternity cases were attended, and 534 X-ray and 65 screenings were taken. During the same year, 126 T.B. and 84 leprosy patients were under treatment. Under Family Welfare Services during 1987-88, six vasectomy and 689 tubectomy operation were performed and 520 IUD placements made. Under MCH programme, 1,894 doses of DPT, 1,346 doses of D and T, 1703 doses of TT and 1,894 doses of oral polio were administered and 1,299 persons were distributed folic acid tablets under Prophylaxis Against Nutritional Anaemia. It was administered by a Deputy Surgeon assisted by three Assistant Surgeons and 73 other subordinate staff.

COMMUNITY HEALTH CENTRE, RAMANAGARAM

The Community Health Centre, Ramanagaram was under the control of Health and Family Welfare Training Centre, Ramanagaram till 1975 and

afterwards in 1975 was converted into the Maternity Hospital and on 1.12.1988 was renamed as Community Health Centre. The bed strength of the Centre in 1988 was 30. It has an X-ray unit and laboratory facilities. During 1987, the centre treated 920 in-patients and 13,544 out-patients, attended 936 maternity cases, took 198 X-rays and 242 screenings. There were 43 tuberculosis and 18 leprosy patients under treatment. During 1987-88 under Family Welfare Services, 1,055 tubectomy operations were conducted and 221 IUD placements made. Under MCH programme, 1,149 doses of DPT, 405 doses of D&T, 1,074 doses of TT and 1,149 doses of polio vaccine were administered and 2,121 persons were supplied vitamin A and D tablets for blindness. It was managed by a Deputy Surgeon assisted by an Assistant Surgeon and a Dental Surgeon, Office Superintendent, Pharmacists, X-ray and Laboratory Technicians, Nurses and other subordinate staff.

HEALTH TRAINING CENTRE, RAMANAGARAM

The Health and Family Welfare Training Centre, Ramanagaram, one of the oldest training centres in India was started in 1936 as a Health Training Centre by the State Government with the co-operation of the Rockefeller Foundation, with the objectives of providing modern and efficient health services in a specific rural area which could serve as a model in the study of methods, personnel and budget, to establish standards for starting similar units elsewhere and also to serve as a Field Training Centre for Officers and those specialising in health work. It covers parts of the taluks of Ramanagaram and Channapatna. The Centre had preventive and consultative services and training in the beginning and later curative services were also included. The Local Fund Dispensary, Ramanagaram was attached to the centre from 1946 and a maternity hospital with 10 beds was added in 1953. Family Planning, Demonstration and Experimental Centre was attached to this Centre from 1952 to 1967 and afterwards, it was shifted to Bangalore. In 1974, the Health Training Centre was renamed as Health and Family Welfare Training Centre. The post of the Health Officer was renamed as Principal in 1981 and upgraded to Deputy Surgeon in 1982.

In addition to training programme, the Centre also undertook special studies like Housing Scheme on Co-operative basis (1938, 1941 and 1948), Life Expectancy Figures, Hand Flush Latrine (1936), Helmenthic Survey by World Health Organisation (1956-58), Nutrition and Diet Survey (1930 to 1950) and also Family Planning studies sponsored by the Government of India. At present, the Centre is conducting Integrated Training to Medical Officers, Supervisory Training to Health Assistants and Continued Education Training to Health Supervisors. From 1982-83 to 1987-88, a total of 573 persons have undergone training under various programmes. During 1988-89, 36

Medical Officers underwent 3 week's Integrated Training. A 30 days Block Health Educators Training was given to 29 persons and 38 persons were given a 10 day Orientation Training for Senior and Junior Health Assistants.

The Centre is headed by a Principal of the cadre of the Deputy Surgeon, assisted by one Assistant Health Officer and 57 other technical, non-technical and office staff.

GOVERNMENT UNANI HOSPITAL, RAMANAGARAM

The Government Unani Hospital, Ramanagaram was started in 1985. The bed strength of the hospital is 10. It is now housed in a rented building. During 1987, 121 in-patients had been treated in the hospital. It comes under the administrative control of the Directorate of Indian Systems of Medicine. During 1987-88, drugs and medicines worth Rs.46,605 were supplied to the hospital as against Rs.55,621 in 1986-87. It is managed by a Medical Officer assisted by a Lady Medical Officer and other subordinate staff. The common diseases for which treatment is sought were dysentery and skin diseases. The Unani dispensary started in 1982, is attached to the hospital and is managed by a Medical Officer and other subordinate staff. During 1987, the dispensary treated 44,900 out-patients.

PRIMARY HEALTH CENTRES

The Primary Health Centres provide all the basic health services in the rural areas of the district which include curative, preventive and promotive health services. All National and State health programmes like Leprosy Control, Malaria Eradication, Maternal and Child Health Programme, Family Welfare etc., are carried out through Primary Health Centres. They act as nuclei of rural health services. Generally, there will be two Medical Officers, one being the lady Medical Officer and sometimes, three who are assisted by Pharmacists, Lady Health Visitors, Health Inspectors both Senior and Junior, Staff Nurses, Laboratory Technicians, Auxiliary Nurse Mid-wives, Basic Health Educators and multi-purpose Health Workers, both male and female. During 1988, there were 24 Primary Health Centres for a population of 14,52,044, each serving on an average, a population of 60,500. Each Primary Health Centre is supplied drugs worth Rs.30,000 annually. But as per the guidelines, there should be a Primary Health Centre for a population of 30,000. The table on pages 730 and 731 shows some information about the Primary Health Centres for the year 1987-88 in the district.

Table II - Information about the Primary Health Centres for the year 1987-88 in the district

Location with year of starting	No. of beds available	Patients treated		Ma-ter-nity cases at-tended	Ope-ra-ti- ons per- for- med	Family Wel- Ste- rili- zations	Lep- rosy cases IUD	TB cases under treat- ment	M.C.H. Programme			Oral Polio	Blind- ness Tablets distri- buted	Sub- cen- tres	
		In	Out						DPT	DT	TT				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Avathi	-	-	9356	1598	-	698	311	112	114	1197	2417	1751	-	-	13
Bidadi 1962	6	81	21028	1473	nil	754	285	139	17	1633	1765	2676	1581	6030	29
Dobbspet 1981	6	749	19518	606	687	343	159	16	1653	1449	1665	1653	-	-	31
Doddamarala- vadi 1954	-	-	14437	-	-	656	328	38	12	1058	431	715	1058	-	16
Hosadurga	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hosahalli	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jadigenahalli 1970	6	615	16786	94	714	381	812	34	10	2160	1833	1714	2160	-	18
Jalamangala 1978	-	-	6062	-	-	446	229	75	81	540	682	1206	540	-	11

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kylancha 1952	Nil	Nil	7588	569	622	622	412	47	17	2031	1133	2161	2161	Nil	8
Kanasavadi 1962	6	48	12654	65	Nil	451	211	88	15	749	1006	1007	-	Nil	14
Kurur 1344	-	-	8957	350	-	1	-	40	38	-	-	-	-	-	17
Kundana 1984	-	-	3221	-	-	341	180	55	26	1010	450	140	1010	-	14
Magadi	30	2190	27641	1095	Nil	924	295	144	380	3732	4148	3100	3100	8400	18
Mudigere 1963	10	25	10803	1640	476	547	219	13	95	818	1767	822	818	12168	13
Nagavara 1974	-	-	4059	443	306	306	100	39	20	1140	600	592	1140	3010	7
Nallur 1956	-	-	3409	-	134	134	40	57	4	180	900	180	180	-	5
Nelamangala 1891	14	NA	NA	NA	NA	610	380	272	-	1971	845	2813	1971	-	14
Sathanuru 1956	-	-	7576	-	-	669	220	236	47	762	1376	1074	728	1405	14
Solur 1956	12	500	12122	1640	673	673	138	83	23	829	554	766	-	-	14
Sulibele 1956	6	220	11449	2105	685	683	491	181	69	2209	1835	2495	2029	-	13
Tubugere 1979	-	-	12270	457	-	462	267	69	26	1191	966	1091	1191	947	12
Mugabala 1976	Nil	Nil	4255	Nil	Nil	-	-	-	-	-	-	-	-	-	8

NA - Not Available

PRIMARY HEALTH UNITS

The different types of medical institutions such as the Local Fund Dispensaries, Reduced Scale Local Fund Dispensaries, Taluk Board Dispensaries, Medical Sub-Centres, etc., were renamed as Primary Health Units in 1978 and were brought under a single nomenclature. The staff of a Primary Health Unit consists of one or two Medical Officers assisted by one or two Pharmacists, three Auxiliary Nurse Mid-wives, Basic Health Workers and Group 'D' officials. Each Primary Health Unit approximately covers a population of 15 to 20 thousand and drugs worth Rs.20,000 are supplied annually. These Primary Health Units like the Primary Health Centres provide all the basic health services to the people. There were 50 Primary Health Units in the district as on 31-3-1988.

There are health sub-centres in the district approximately for a population of 5,000 which are managed by two Junior Health Assistants, one male and the other female. Each sub-centre is supplied with drugs worth Rs.2,000 annually for minor ailments. There were 276 sub-centres in the district as on 31st March 1988.

The Primary Health Units at Anugondanahalli, Bevoor, Budigere, Hunasanahalli, Melekote, Sankighatta, Shivagange and Yelekyathanahalli were earlier Local Fund Dispensaries; those at Kanva and Santhemogenahalli were Reduced Scale Local Fund Dispensaries. The Primary Health Units at Doddhejjaji, Hoskote, Nandagudi, Thyamagondlu, Vijayapura and Devanahalli were combined dispensaries and the dispensaries at Bylanarasapura and Veeregowdanadoddi were Medical Sub-Centres.

The combined dispensaries and some of the Local Fund Dispensaries in the district have wards for the in-patients. The number of beds available and in-patients treated in them during 1988 were as follows: Anugondanahalli four beds and in-patients nil; Budigere 10 beds and in-patients nil; Devanahalli 16 beds and 1,110 in-patients; Doddhejjaji 10 beds and 31 in-patients; Hoskote 17 beds and 600 in-patients; Nandagudi 16 beds and 86 in-patients; Shivagange four beds 142 in-patients; Thyamagondlu 7 beds and 148 in-patients and Vijayapura 10 beds and 1,284 in-patients.

The table on pages 833 to 835 gives some information about the Primary Health Units in the district for the year 1987-88.

Information about the Primary Health Units for the year 1987-88 in the district

Location	Year of start- ing	Out pati- ents treat- ed	Ma- ter- nity cases at- ten- ded	Ope- ra- ti- ons per- for- med	Family Wel- fare Ste- ri- li- sations	IUD	Patients under treat- ment Lep- rosy	M.C.H. Programme T.B.	DPT	DT	TT	Oral polio	Blind- ness tab- lets distri- buted	Sub- cen- tres
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Akkur	Not functioning													
Anagondana- halli	1937	10940	64	52	26	20	25	8	-	-	-	-	-	2
Arudi	1983	15437	127	5	96	114	22	13	327	917	397	397	-	3
Asudavalli (Hasuravalli)	1985	5059	-	-	16	11	-	-	53	30	31	53	145	2
Bendiganahalli	1987	2137	-	-	95	59	-	-	59	912	315	-	-	2
Bevur	1959	7465	39	-	160	40	24	18	633	200	200	633	420	3
Bannikuppe	1981	4950	-	115	84	55	9	5	880	319	348	710	-	1
Budigere	1955	9954	-	12	54	122	16	3	447	800	290	447	900	-
Bylanarasapura	1974	8664	288	-	21	5	69	-	2	40	40	-	396	1
Byramangala	1976	5932	163	-	203	42	65	-	142	76	131	142	-	2
B.V. Halli	1986	9784	-	-	160	45	6	10	280	70	150	280	2000	5
Chakrabhavi	1981	3553	56	97	119	67	5	3	326	-	127	236	300	1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Chikka Mudavadi	1983	6680	296	-	242	80	51	12	232	454	251	332	2068	3	
Devanahalli	1928	27010	547	499	547	125	72	45	1729	342	1620	1362	1000	-	
Doddahejjaji	1948	10421	25	40	-	35	20	5	1025	1145	975	975	52	-	
Doddalahalli	1950	4209	NA	NA	NA	-	-	-	-	-	-	-	-	6	
Gejjegaruguppe	1986	6344	93	-	80	38	2	8	343	362	102	343	590	1	
Guddlumuddena-															
halli	1977	3447	NA	NA	NA	-	-	-	-	-	-	-	-	-	
Gudemaranahalli	1977	5863	-	-	-	-	12	6	293	295	293	293	-	3	
Halenahalli	1980	10595	760	-	77	28	30	25	168	170	548	168	152	2	
Harohalli	1959	17079	139	346	322	114	42	19	3588	696	93	3588	1143	2	
Honganur	1986	12120	1	-	113	75	24	2	425	482	503	1111	562	2	
Hosahalli	1983	16232	127	5	98	110	22	16	337	123	555	337	1985	4	
Hosakote	1987	30000	317	8	426	206	48	155	1262	-	1035	1262	621	3	
Hunasanahalli	1960	4756	300	-	167	90	166	7	378	367	351	378	-	3	
Jagadapura	1982	2000	116	8	481	239	263	19	4276	2529	2528	2528	-	3	
Kadanur	1977-78	6270	-	-	67	36	6	-	34	216	107	34	107	-	
Kanva	1941	1872	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	
Kodihalli	1938	10987	-	-	337	170	62	17	658	463	1019	-	1229	5	
Konenahalli	1978	7316	-	-	78	26	7	-	144	126	149	149	93	2	
Kutagal	1982	3221	-	-	122	27	-	5	49	20	142	49	-	2	
Lakshmipura	1981	5538	-	-	153	124	-	27	429	298	388	388	400	2	
Manchegowdana-															
palya		Not functioning													
Manne		NA													

NA - Not available

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Maralenahalli	1976	6208	268	-	162	75	16	18	218	870	495	495	2112	2
Maruru	1979	3255	30	-	81	48	-	12	456	1697	1442	1442	456	4
Melekote	1949	10439	161	-	134	70	17	18	161	216	433	433	-	2
Modalakote	1977	-	313	-	197	81	-	-	432	396	569	569	-	6
Muthasandra	1976	6656	26	-	4	11	61	-	34	-	52	54	-	2
Nandagudi	1949	9865	41	-	125	147	41	21	452	450	508	418	1226	3
Sadahalli	1981	7410	108	-	26	30	8	-	388	200	220	388	200	2
Sankighatta	1950	684	48	-	-	-	12	10	-	-	-	-	-	-
Santhemogena-														
halli	1959	13665	326	165	165	66	94	3	318	285	372	318	1423	3
Sasalu	1983	5962	-	98	98	55	-	-	256	169	250	104	84	1
Shivagange	1930	16244	77	65	65	17	19	5	1100	5521	381	-	1440	5
Sugganahalli	1954	3046	94	-	101	65	6	9	49	17	141	59	400	-
Thimmasandra	1968	3000	-	-	-	-	-	-	-	-	-	-	-	2
Tungani	Not functioning													
Veeregowdana														
Doddi	1974	4823	182	-	92	23	-	7	586	447	1045	586	-	3
Vijayapura	1923	23974	330	-	327	149	67	40	1711	2700	1760	-	605	-
Yelkyathana-														
halli	1942	3575	20	12	112	65	4	6	158	68	42	158	85	3
Thyamagondlu	1919	46407	426	69	333	156	39	31	587	416	789	529	221	5

NA - Not available

AYURVEDIC DISPENSARIES

Ayurveda, Indian system of medicine, was popular in the earlier days. With the laps of time quack physicians of Ayurveda, without any institutional teaching and training began to prescribe medicines in the rural parts which made more harm than good to the system and gradually the system lost its importance. There were medicine men in the rural parts who could cure diseases like paralysis, leucoderma and other chronic diseases and the system continued as hereditary occupation. There are also bone setters in the district using herbs. Magenahally in Channapatna tq. has specialists in herbal medicine, treating paralysis.

A study about health culture in Jadigenahalli Village in Hoskote taluk of the district conducted by the Jawaharlal Nehru University, New Delhi in 1978 reports that the people believe in two types of sickness, one the *jevare sikku* caused by the supernatural forces for the remedy of which they seek the advice and prescription of the local *tantriks*, and the other *nadi sikku* caused by bodily disorders and food stuffs. For the latter type of sickness they seek the advice and the prescription of the local Ayurvedic Pandits and doctors in dispensaries and hospitals. The local medicines are prepared out of green leaves, roots, herbs, etc. Of the many types of treatments given by the local people cauterisation is of special significance as the method is adopted for various diseases of the children like *elavu*, a respiratory disease and Balagraha (possession by supernatural spirits), epilepsy, etc. There are two types of cauterisation. *Chutike*: burning of the skin at certain places by a red hot needle or a glass bangle piece heated in a castor oil lamp, is a general treatment given to the children for ailments like *elavu* and *balagraha*, etc. Major cauterisation is done by using red hot steel or panchaloha rods and is used for treatment of paralysis and such other diseases. *Chutike* is something like accupuncture and needs further research in the field. The ear is pierced by a *Panchaloha* wire in cases of paralysis. The umbilical chord is burnt by a castor oil lamp after it is being cut to avoid infection by the village midwife.

During 1957, there were Ayurvedic dispensaries at Akkur, Bevr and Singarajapura (Channapatna tq), Bannimukudlu (Kanakapura tq), Chakrabhavi, Doddamudigere, Motaganahalli and Narasandra (Magadi tq), Harohalli, Tubugere (Doddballapur tq), Jadigenahalli (Hoskote tq), Kylanchara (Ramanagaram tq) and Kundana (Devanahalli tq). There were also Unani dispensaries at Avathi (Devanahalli tq), Byramangala and Kutagal (Ramanagaram tq), Chikkamudavadi (Kanakapura tq), Kadanur (Doddballapur

tq) and Manchenabele (Magadi tq). During 1988-89, there were four government Ayurvedic dispensaries at Motaganahalli (Magadi tq), Hosur (Ramanagaram tq), Heggadahalli (Devanahalli tq), and at Kanakapura town; and one Government Unani Hospital and a dispensary at Ramanagaram town. There is one homeopathic dispensary at Byrasandra in Nelamangala tq. The Ayurvedic dispensaries were supplied medicines and drugs worth Rs.24,761 in 1987-88, as against Rs.28,781 in 1986-87. During 1988-89 there were 120 Ayurvedic, 8 Unani, 30 Homoeopathic and 14 Integrated Registered Medical Practitioners in the district.

The State Government is awarding pensions to five persons of Indian Systems of Medicines every year from 1981 and from 1985 four gold medals to persons who have rendered meritorious service in their field. During 1982, Dr.B.T.Thimmaiah of Bidadi in Ramanagaram tq (Sidda system) and Dr.Sayid Muhammad of Kagajwada in Channapatna taluk during 1984 have been sanctioned pension. During 1987-88, Dr.Sayid Khasim of Channapatna was awarded a gold medal for his service in Unani system of Medicine.

The Ayurvedic dispensary at Heggadahalli was started in 1979 and in 1988, 850 out-patients had attended it. The Hosur dispensary was started in 1935 and in 1988, 14,757 out-patients attended the dispensary and in 1987-88, 12 sterilizations and 18 IUD placements were made under Family Welfare Programme. The Motaganahalli dispensary was started in 1981 and it treated 9,000 out-patients in 1988. The Kanakapura dispensary started in 1984 had treated 9,858 out-patients in 1988.

ESI DISPENSARIES

There are five Employees State Insurance (ESI) dispensaries in the district at Kanakapura, Channapatna, Nelamangala, Hoskote and Ramanagaram. The ESI dispensary at Channapatna started during 1973 had 997 insured persons during 1988-89 and had treated 18,611 patients during 1987-88 as against 19,372 during 1986-87. The dispensary was managed by one Insurance Medical Officer assisted by nine subordinate staff. The ESI dispensary at Kanakapura was started in 1983. During 1988-89, there were 918 insured persons attached to it and was managed by one Insurance Medical Officer and six subordinate staff. In 1987-88, 6,068 out-patients attended the dispensary as against 5,403 in 1986-87. The ESI dispensary at Nelamangala was started during April 1988 and there were 413 insured persons attached to it during December 1988. From May 1988, upto the end of December 1988, 4,866 out-patients attended the dispensary. It was managed by one Insurance Medical Officer assisted by seven subordinate staff. The ESI dispensary at

Ramanagaram was started during 1987-88. The ESI hospitals at Bangalore are the referral hospitals for the ESI patients in the district.

The Catholic missionaries are running St. Rita's Dispensary at Kanakapura, Our Lady of Lourdes Health Centre at Ramanagaram, Snehalaya Socio-Medical Relief Centre, Solur, Magadi tq; and sister of the Redemption Jeevanalaya Medico Social Centre, Yelachaguppa, Nelamangala tq. There is one hospital run by the Church of South India at Channapatna.

FAMILY WELFARE

The Family Welfare Programme was launched on a massive scale in the district during the Second Five year plan period. The approach was clinical in the beginning which changed to "extension" and then target oriented and finally to "target oriented and time bound". All medical institutions in the district are engaged in the successful implementation of the programme. Many incentives, both in kind and cash, have been made available to the acceptors of the programme. All the Primary Health Centres and Primary Health Units are the Family Welfare Centres in the district and there are Urban Family Welfare Centres at Dodballapur, Channapatna, Kanakapura and Ramanagaram. The maternity hospital at Ramanagaram, Primary Health Unit, Vijayapura and others have been recognised as M.T.P. Centres (Medical termination of pregnancies) in the district. At the Primary Health Unit, Vijayapura, 34 M.T.Ps. have been induced during 1987-88. The All India Post-Partum Programme started in 1969 is a hospital based, maternity centred approach to Family Welfare, the Primary objective being the improvement of the health of the mothers and children through M.C.H and F.W. programmes. This programme includes ante-natal and post-natal services, immunisation services and prophylaxis against anaemia and blindness. There are two post-partum centres attached to the general hospitals at Channapatna and Kanakapura in the district. The following table shows the achievements of the Family Welfare programme from 1977-78 to 1988-89 in the district. The figures in the bracket show the percentage of achievements.

Year	Vasectomy	Tubectomy	I.U.D.	Nirodh users	Oral Pill users
1977-78	,116 (9.49)	2,676 (16.99)	3,092 (9.27)	4,319 (41.32)	74
1978-79	77 (5.70)	4,339 (35.71)	4,219 (205.80)	4,32 (58.86)	96
1979-80	77 (3.87)	5,870 (32.81)	5,046 (129.38)	3,963 (39.87)	138 (9.20)
1980-81	34 (3.05)	7,244 (72.32)	4,019 (124.81)	3,986 (55.13)	310 (21.23)
1981-82	59 (5.72)	8,996 (96.86)	3,951 (132.58)	4,476 (66.81)	442 (32.50)
1982-83	-61 (3.69)	16,525 (111.08)	4,074 (73.67)	4,265 (57.87)	564 (41.78)
1983-84	53 (2.35)	14,622 (71.89)	5,136 (55.23)	4,335 (47.12)	900 (26.47)
1984-85	230 (10.54)	20,672 (105.27)	9,585 (88.59)	5,210 (51.58)	825 (22.30)
1985-86	238 (12.98)	25,594 (155.14)	12,839 (147.08)	7,662 (70.22)	2,022 (58.83)
1986-87	28 (2.04)	12,532 (101.49)	8,220 (116.43)	5,871 (106.94)	1,519 (61.50)
1987-88	52 (3.79)	13,777 (111.57)	7,876 (100.46)	7,772 (90.16)	2,719 (86.59)
1988-89 upto end of Nov.					
1988		7,227 (46.09)	4,740 (57.59)	5,774 (66.98)	1,980 (63.05)

A project report on the working of the Family Welfare Services at Bidadi and Jadigenahalli Primary Health Centres during 1980-81 and 1981-82 by the Institute of Social and Economic Change reports that the mean age of women who had undergone tubectomy was 27.4 years at Bidadi and 28.9 at Jadigenahalli Primary Health Centre and ranged from 20 to 39 years of age, the concentration being in the age group of 20-34 years. On an average, those who underwent tubectomy had three children in the Bidadi Primary Health Centre area and four in the area covered by Jadigenahalli Primary Health Centre. Among these, 69 per cent at Bidadi and 76 per cent at Jadigenehalli were illiterates. In most of these cases, the last deliveries were

conducted at home and about half of the women who underwent operation knew about Family Welfare Programme and methods even before the first child was born to them.

MATERNAL AND CHILD HEALTH PROGRAMME

The Maternal and Child Health Programme is subsidiary to Family Welfare Programme and the success of Family Welfare Programme depends much upon improving the health of mothers and children, since it is of vital importance to the acceptance of family limitation. The (MCH) Programme includes various aspects and services like the nutrition programme, immunisation against various diseases like tuberculosis, diphtheria, pertusis and tetanus, distribution of Iron and Folic acid tablets, etc., and also training of mid-wives. The table below shows the achievements with percentage of the immunization programme under M.C.H. for years from 1983-84 to 1987-88 in the district. Figures in brackets show the percentage of achievements.

Year	D.P.T.	D & T	T.T.	B.C.G.	Measles	Oral Polio
1983-84	27,590 (57.47)	23,205 (53.46)	19,246 --	28,099 (52.03)	---	23,628 (72.7)
1984-85	31,939 (59.49)	38,870 (81.4)	33,405 (--)	23,414 (43.55)	---	34,932 (65.07)
1985-86	43,772 (88.78)	35,680 (119.02)	40,490 (90.96)	44,768 (90.8)	---	43,614 (86.46)
1986-87	36,497 (77.16)	28,600 (92.51)	30,340 (64.14)	35,300 (74.63)	2,914 ---	36,497 (77.16)
1987-88	31,469 (78.67)	30,221 (103.14)	38,173 (91.76)	43,201 (108.00)	15,844 (63.77)	29,124 (70.31)

FAMILY WELFARE BUREAU

The District Family Welfare Bureau of the District Health and Family Welfare Office consists of medical and para-medical staff. The Bureau consists of three units, the Education Unit, the Sterilization Unit and the Evaluation Unit. The Medical Officer of Health now upgraded to the post of a Deputy Surgeon and renamed as Headquarters Assistant to the District Health and Family Welfare Officer is the head of this section. The Education Unit consists of one District Health Education Officer and two Deputy Health Education Officers and Block Health Educators in Primary Health Centres. The activities of

the education unit consists of Planning, implementation and evaluation of health activities, organization of Family Welfare Leaders Camps, folk media programme like exhibition, Harikathas, etc., supply of educational materials, advertisement (at district level), conducting debates, etc. The sterilization unit consists of one Staff Nurse and an O.T. Attender, which assists the Surgeons in the mini and mass sterilization camps. There is one Senior Statistical Assistant in the evaluation unit to compile the statistics and to conduct sample tests. The table below shows the performance of the various activities under education unit for the years from 1985-86 to 1988-89 upto June 1988.

Particulars	1985-86	1986-87	1987-88	1988-89
1	2	3	4	5
Film shows	87	130	143	29
Folk media programmes	74	73	87	--
Film strip shows	742	975	477	93
Distribution of film slides	30	30	28	8
Newspaper advertisements	8	10	8	--
Exhibitions	377	436	308	35
Advertisements through Akashavani	22	30	40	--
Family Welfare Leaders Training camps	161	105	112	--
Debates for graduates, post graduates and under graduates	11	11	9	--
Family Welfare Camps for Pradhans and Upapradhans	--	--	8	--
Training Camps for Health Workers	2	4	3	--
Health Check-up Camps	9	8	10	--

FAMILY WELFARE ACTION COMMITTEES

There are Family Welfare Action Committees at the taluk, sub-divisional and district level to review the progress of Family Welfare Programmes and suggest the ways and means of improving them. The taluk committees are chaired by the Tahsildars while the committees at the sub-divisional and district levels by the Assistant Commissioner and

Deputy Commissioner of the respective sub-division and the district. There is also a committee for financial assistance to acceptors of Family Welfare Programmes, which considers the applications for legal aid in cases of fatality occurring during Family Welfare Camps. The maximum amount of compensation for a fatal case, which was Rs.5,000 has now been enhanced to Rs.10,000 from 3rd June 1985. During 1987-88, there were three deaths and the compensation paid was Rs.30,000 as against 2 cases and Rs.20,000 during 1986-87 and 4 cases and 40,000 during 1985-86 respectively in the district.

SCHOOL HEALTH PROGRAMME

The two School Health Programmes, the National School Health Programme and the Comprehensive School Health Programme are in operation in the taluks of Dodballapur and Ramanagaram in the district during 1988-89. The Primary Health Centres and Units involved are Dodballapur, Tubugere, Kanasavadi, Bidadi, Kylanchara, Jalamangala, Maralenahalli, Melekote, Hosahalli, Arudi, Doddhejjaji, Konehalli, Sasalu, Sakkare Gollahalli, Kadanur, Byramangala, M.G.Palya, Sugganahalli, Ramanagaram, Kutagal, Lakshmipura and Kanva. During 1986-87, 14,217 children were examined as against 12,303 in 1985-86. During 1986-87, 10,199 doses of DPT, 8,544 doses of typhoid, 1,650 doses of TT and 5,653 doses of BCG vaccines were administered to children and the figures for 1985-86 were 8,272 doses of DPT, 6,550 doses of typhoid, 7,640 doses of TT and 529 doses of BCG vaccines.

I.C.D.S.

The Integrated Child Development Scheme (ICDS) is in operation in the taluks of Kanakapura and Nelamangala, under which Anganwadis are started in villages to provide medical and other services to children and mothers. The Medical Officers of the concerned Primary Health Centres or Units visit these Anganwadis, examine the children and mothers and prescribe treatment to the needy on the spot for minor ailments or refer the cases to higher institutions for further treatment. The patients are also advised supplementary diet for malnutrition. The children and mothers are also administered preventive Toxoids like BCG, DPT, Oral Polio, etc. During 1988-89 upto the end of February 1989, 33,311 doses of BCG, 35,909 first and 30,443 second doses of DPT, 34,400 first and 30,278 second doses of oral polio and 23,780 doses of measles vaccine were administered to children and 28,087 first and 28,306 second doses of TT were administered for mothers as against 40,087 doses of BCG, 40,153 first and 39,355 second doses of DPT, 34,358 first and 27,925 second doses of oral polio, 14,036 doses of measles vaccine for children and 29,551

first and 33,228 second doses of TT for mothers during 1987-88. (See also chapter XVII).

APPLIED NUTRITION PROGRAMME

A branch of the Applied Nutrition Education and Demonstration Unit is functioning in the district to educate and train the rural women in using nutritious food and vegetables and to provide food rich in Vitamin 'A' for pregnant women and mothers. The Unit also arranges demonstration camps, exhibitions, group discussions, etc. The table below shows the achievements for the year from 1982-83 to 1987-88.

Programme	82-83	83-84	84-85	85-86	86-87	87-88
Demonstration	208	223	56	272	269	332
Group meetings	231	236	309	327	296	338
Exhibitions	106	60	72	126	153	190
Film shows	82	41	84	84	61	108

The distribution of Vitamin 'A' food from 1984-85 to 1987-88 was as follows.

Year	First round	Second round
	Number of beneficiaries	Number of beneficiaries
1984-85	87,634	42,950
1985-86	1,48,734	1,27,112
1986-87	1,53,625	1,85,616
1987-88	1,05,909,	1,18,174

FAMILY PLANNING ASSOCIATION OF INDIA, MAGADI PROJECT

The Magadi Project of the Family Planning Association of India was started in the year 1986 which envisages an intensive educational and motivational programme with a view to create an awareness among the people regarding health and small family norm. It also aims at improving the economic conditions of the people. There is a Liaison Committee at Bangalore which provides guidance and supervises the implementation of the programme. The Project Co-ordinator is

responsible for organising and conducting field programmes for the active promotion of Family Planning, integrated with MCH and other social and developmental activities. He is assisted by a Field Organiser and six community welfare workers. There are two sub-centres for the Community Welfare Workers. Since its inception, the project co-ordinator has organised activities in 45 Youth Clubs and 19 Mahila Mandals in the taluk, have started 7 literacy classes and four Balavadis and arrangements have been made for 100% immunisation for children below one year. The Community Welfare Workers are actively participating in the motivation of eligible couples for the adoption of IUD and sterilization. The project has provided seven income generating activities for local voluntary groups. The Project is also organising training for leaders in agriculture, animal husbandary, sericulture, etc.

DEPARTMENT OF DRUGS CONTROL

The Acts, Rules and Regulations administered by the Drugs Control Department in the District are administered by a Drugs Inspector stationed at Bangalore. The Department administers and enforces the following Acts, Rules and Regulations in the district. The Drugs and Cosmetics Act, 1940 and Rules thereunder; Drugs (Price Control) Order, 1987; Drugs And Magic Remedies (Objectionable Advertisements) Act, 1954 and Rules Thereunder; Import Trade Regulations for the Grant of Essentiality Certificate to the Pharmaceutical Industries; Poisons Act, 1919 and Karnataka Poisons Rules, 1966 and Narcotics and Psychotropic Substances Act, 1985. There were 92 Chemists and Druggists in Bangalore Rural District during 1987-88 and their taluk wise break-up was as follows. Channapatna 14, Devanahalli 15, Dodballapur 10, Hoskote 9, Kanakapura 18, Magadi 4, Nelamangala 8 and Ramanagaram 14. There were 174 qualified Pharmacists and 128 registered licenced establishments in the district during 1987-88, and the taluk-wise break-up of the number of Pharmacists and establishments respectively was as follows. Channapatna 27 and 21, Devanahalli 19 and 22, Dodballapur 34 and 15, Hoskote 12 and 9, Kanakapura 19 and 21, Magadi 21 and 8, Nelamangala 18 and 12 and Ramanagaram 24 and 20. (The figures are for the eight taluks including the four hoblis). During 1987-1988, 283 samples were analysed in Drugs Testing Laboratory, of of which, 249 were found to be of standard quality. (This is for the undivided district including Bangalore Urban Agglomeration).

There are branches of the Indian Medical Association at Channapatna, Dodballapur, Hoskote, Kanakapura, Magadi and Nelamangala taluks in the district.