

CHAPTER XVI

MEDICAL AND PUBLIC HEALTH SERVICES

The district of Chikmagalur has a notable heritage of Ayurveda, the indigenous system of medicine. The Ayurvedic system continues to be well prevalent in the region. Many herbs, plants and the like needed for practising it are easily available in the *malnad* parts. In many families, the knowledge of theory and practice of Ayurveda was handed down from parents or relatives to their descendants, and it became the traditional profession of such families. They themselves prepared many medicines. The texts on the subject were sometimes taught in the Samskruta Pathashalas. The ruling dynasties, officers, merchants and the general public patronised it. However, precise information about medical institutions that existed in the district in the olden days is not available.

The medicines that were prescribed to the patients by the Ayurvedic practitioners (called *pandits* or *vaidyas*) were well within the means of their clientele. Many simple remedies were fairly efficacious for common ailments. In many of the villages, there were at least one or two families of Ayurvedic *Pandits*. Now also, there are a number of *vaidyas* carrying on Ayurvedic practice both in the rural and urban areas. Some of them have received institutional training. The common people have considerable faith in the system. Nowadays, the Ayurvedic physicians prescribe also medicines manufactured by organised Ayurvedic pharmaceutical works. The district has one such pharmaceutical work. The Muslims brought the Unani system of medicine practised by *hakims*. Their practice is mainly confined to some urban centres. There are several Ayurvedic dispensaries and a Unani dispensary in the district.

Advent of Allopathic system

It was after the Fourth Mysore War in 1799 that the Allopathic system was introduced in the old Mysore State. After the assumption of the Government of the State by the British in 1831, the Surgeon to the Mysore Commission was put in general control of vaccination work also. A little later, with the establishment of hospitals in the divisions, a Civil Surgeon was appointed in each divisional headquarters.

This officer was also the Superintendent of local jails and Inspector of all the medical institutions within the limits of the division. In addition, the Deputy Surgeon-General of the Indian Medical Department, who was in charge of the Mysore State and the Ceded Districts of the Madras Presidency was also inspecting the medical institutions in the districts of the Old Mysore State. He (the Deputy Surgeon-General) performed the duties of the Sanitary Commissioner and Registrar of Vital Statistics. Till about 1870, the medical services were mainly concerned, as in other parts of the country, with the improvement of health of the members of the military services. In 1880, the duties of the Deputy Surgeon-General of Government of India were transferred to the Surgeon to the Mysore Commission.

After Rendition

In 1884, i.e., three years after the Rendition (retransfer of power to the royal family), a new scheme for the establishment of a local medical service, composed of duly qualified personnel, was introduced. The head of the Medical Department, who was the senior-most among the covenanted medical officers, was designated as the Senior Surgeon. Below him were Surgeons, Assistant Surgeons and Hospital Assistants. In 1887, the Senior Surgeon to the Government was made the *ex-officio* Sanitary Commissioner and was entrusted with also the responsibilities of scrutinising and compiling of the returns of births and deaths, supervision of vaccination work and control of epidemics like cholera and small-pox. In 1888, a new class of Sub-Assistant Surgeons was created. Between 1898 and 1902, a Special Commissioner for Plauge was appointed to check the spread of this deadly disease. In 1907, a separate sanitary service was introduced by reorganising the Sanitary Department. The State was divided into three circles, viz., Western, Eastern and Southern, and a Divisional Sanitary Commissioner was appointed for the Western Circle comprising the Kadur, Shimoga and Chitradurga districts. The District Medical Officers, who headed the District Hospitals, continued to be *ex-officio* District Sanitary Officers in districts.

In 1909-10, the posts of Divisional Sanitary Officers were abolished and a new cadre of District Sanitary Officers was formed. They were placed under the control of the Deputy Commissioners of the districts. Three years later, in 1913, the head of the Medical Department was designated as also the Sanitary Commissioner. In the same year, travelling dispensaries, at the rate of one for each district, were started, and Assistant Surgeons, who were also *ex-officio* District Sanitary Officers, were appointed as their heads.

Malnad Improvement Committee

During the year 1914-15, a Malnad Improvement Committee was formed for each of the districts of Kadur (later called Chikmagalur

district), Shimoga and Hassan. A Central Committee was also appointed to supervise and guide the work of these district committees. The Malnad Improvement Committee was expected to deal with, *inter alia*, local matters of sanitation. The duties of the District Sanitary Officer were to assist the Special Revenue Officer who was placed in charge of the work of improvement of the *malnad* parts, to supervise vaccination, sanitation and registration of vital statistics in villages, to deliver public lectures on matters relating to public health and sanitation, to look to the sanitation of schools and epidemic prophylaxis (preventive treatment against epidemic diseases) and to see that the village sanitation rules are followed.

Compulsory primary vaccination of children between the ages of six and twelve months was introduced in the old Mysore State in 1922 when a Department of Public Health was established. In 1923-24, the post of a full time Sanitary Commissioner was abolished. The Senior Surgeon was again entrusted with the duties of the post of Sanitary Commissioner, and a new cadre of Chief Sanitary Inspectors was created to take the place of District Sanitary Officers. As early as 1927, the planters in the district were having their own dispensaries employing their own doctors to look after the welfare of the employees.

Sanitation

The first All-India Medical Conference in 1911 noticed that very few towns and villages in India had a proper system of conservancy. The quality of work in them also suffered from a lack of guidance to and supervision over the local bodies. The level of health services was unsatisfactory even in the urban areas and the position was much worse in rural parts. In the rural areas of the district, sanitation in any accepted modern sense of the word was practically absent. The banks of a stream or the margins of a tank were commonly used for defecation. The use of polluted water gave rise to various diseases like gastro-enteritis, diarrhoea, dysentery, malaria and cholera.

Three outstanding problems connected with rural sanitation have been (i) soil pollution by indiscriminate defecation, (ii) lack of proper drainage for house and in the village as a whole and (iii) use of polluted water. In recent years, efforts have been made by both educative and constructive methods. Sanitation is much affected in some villages during *jatras*, *uruses* and such other gatherings also. In order to overcome this problem, latrines and urinals of a special temporary type are set up on such occasions. Sanitation in hotels and eating houses is inspected by the health authorities. Now in many places, water meant for drinking purposes is chlorinated. The slum areas both in villages and towns are sprinkled with D.D.T. and other insecticides.

After the introduction of community development schemes and also after the establishment of new local bodies high importance has been

attached to sanitation. Primary health centres have been set up for providing both curative and preventive services in the rural areas. The village *panchayats* are also taking up rural sanitation work in their respective places by constructing drains, soak-pits, hand-flush latrines, etc. Rural water supply schemes are being implemented for supply of wholesome water to the villagers since 1950.

In the year 1945, a post of a District Health Officer was sanctioned for Chikmagalur district. However the district Medical Officer continued to hold additional charge of the sanitary office till 1953. In the beginning, a few Junior Health Inspectors were posted to assist the District Health Officer in his work. Later the strength of the establishment was augmented from time to time to cope up with the increase in the volume of work consequent on the undertaking of several departmental schemes under the successive Five Year Plans.

Reorganisation of Department

In 1965, the Medical and Public Health Departments of the State were amalgamated. An officer designated as Director of Health and Family Planning Services was appointed as the head of the reorganised department at the State-level. In November 1978, the Department of Health and Family Welfare Services was bifurcated into two functional spheres at the level of Director, namely Directorate of Medical Education and Directorate of Health and Family Welfare Services. At the district-level, two independent officers were appointed, viz. District Surgeon in charge of the District Headquarters Hospital at Chikmagalur, and the District Health and Family Planning Officer. Because of the great importance attached to family-planning programmes from 1966, the District Health Officer was designated as District Health and Family Planning Officer.

Both these officers were made responsible to the Regional Deputy Director of Health and Family Planning Services, Mysore Division, Mysore and to the Director of Health and Family Planning Services in Karnataka. In 1977, the phrase 'family-planning' was amended as "family-welfare". Consequently, the designation of officers concerned were also altered.

The District Health and Family Welfare Officer, Chikmagalur, is in charge of public health and family welfare wings of the department at the district level. He is both a technical and administrative officer and deals with public health matters such as control of epidemics, malaria eradication, maternity and child welfare, vital statistics, sanitation, health education and laboratory work associated with public health. His functions as family-welfare officer include propaganda on family welfare, supply of contraceptives, conducting of camps for vasectomy and tubectomy operations and loop insertions. In addition to curative and preventive health services, technical guidance is also given by him to the local bodies on matters pertaining to public health. He is also in

overall charge of all the medical institutions at the taluk-level in the district.

From August 1978, an Assistant District Health and Family Welfare Officer has been placed in charge of each of the two revenue subdivisions of Chikmagalur and Tarikere. The Assistant District Health and Family Welfare Officer of Chikmagalur Subdivision is in charge of the medical institutions of Chikmagalur, Mudigere, Koppa and Sringeri taluks, while the Assistant District Health and Family Welfare Officer of Tarikere Subdivision is in charge of the medical institutions of Kadur, Narasimharajapura and Tarikere taluks. Each of them is assisted by a health supervisor, a junior stenographer, a driver and a class IV official. Each Assistant District Health and Family Welfare Officer of the Subdivision is in over-all charge of implementation of all the health programmes by the medical institutions in his jurisdiction and is responsible for their proper functioning. In his jurisdiction he is also in charge of the National Malaria Eradication Programmes, National Filaria Control Programme, control of T. B. and Leprosy diseases, Family Welfare Programmes, maternity and child health, laboratory services, health education and School Health Programme, and has to control the communicable diseases, etc. He is a liaison officer between the Department of Health Services and other departments, local bodies, and voluntary organisations in order to secure necessary co-operation and co-ordination for implementing the health and family welfare programmes.

Under the family welfare programme, the District Health and Family Welfare Officer is assisted by 49 Male Medical Officers, nine Lady Medical Officers, two Assistant District Health Officers, six District Extension Educators, five health Assistants, 240 Auxiliary Nurse Midwives, one Statistical Assistant and necessary ministerial and Class IV officials as in 1979. In respect of the District Health Laboratory, he is assisted by a Medical Officer of Class II grade, four senior Laboratory Technicians, four Laboratory Attenders and two class IV officials. There is also a Regional Laboratory at Chikmagalur, headed by an Assistant Chemical Examiner who works under the supervision of the District Health and Family Welfare Officer at the district level and under the control and guidance of the Deputy Director of Laboratories, Bangalore, at the State level. In respect of the Maternity and Child Health Programme, there is a District Nursing Supervisor to assist the District Health and Family Welfare Officer. In addition, medical officers and staff of several medical institutions functioning in the taluks, such as Primary Health Centres, Primary Health Units, Medical Sub-Centres, Health-Unit Type Dispensaries, Combined Dispensaries, Civil Dispensaries, Local Fund Dispensaries, Reduced Scale Local Fund Dispensaries and the General Hospitals are also under the administrative control of the District Health and Family Welfare Officer.

Vital Statistics

With a view to securing better registration of births and deaths, rules were revised in 1915-16 according to which inspecting revenue officers were required to scrutinise entries made in the registers maintained by the village officers. A new Regulation was issued in 1918 with a view to improving the system. In accordance with this, the entries with reference to births and deaths had to be certified by a technical officer after a sample check-up in the area. This proved helpful in correcting the deficiencies to some extent. In urban areas, the bye-laws of the municipalities provided for the registration of births and deaths.

Prior to the development of the Department of Statistics into a full-fledged Department in September, 1955, the registration of births and deaths as also the processing of births and deaths reports were being done by the Directorate of Health Services, then, the Department of Statistics was entrusted with this responsibility. A new legal measure called the Registration of Births and Deaths Act, 1969, was brought into force in order to streamline the system. Now, the Director, Bureau of Economics and Statistics, Bangalore, administers the provisions of the Act on registration of births and deaths and marriages. In the rural areas, live births, still-births and deaths and other related statistics were registered by the Village Patels, but now it is being attended to by the Village Accountants who are designated as Registrars for the purpose. They have to send the monthly returns to the Tahsildar of the taluk. The Deputy Commissioner of the district is the *ex-officio* District Registrar of Births, Deaths, and Marriages. The District Statistical Officer is the Additional District Registrar of Deaths and Marriages. Through the Tahsildars of the taluks, births, deaths and other related statistics are sent to the Director, Bureau of Economics and Statistics, Bangalore, who is the *ex-officio* Chief Registrar of Births, Deaths and Marriages. The Bureau of Economics and Statistics has also a Joint Director for Demography who has to implement the rules of the Registration of Births and Deaths Act, 1969 and a Deputy Director in charge of vital statistics, who is designated as Deputy Chief Registrar of Births, Deaths and Marriages. The Sub-registrars are the registering authorities for marriages under the Special Marriage Act, 1954 and Hindu Marriage Act, 1955. The priests of the churches are the registering authorities of the marriages under the Indian Christian Marriages Act, 1872. The Deputy Commissioners of the districts are the registering authorities under the Parsi Marriages and Divorce Act, 1936. In the urban areas, the Health and Sanitary Inspectors of the municipalities are designated as Registrars of births and deaths and collect these statistics and send them on to the Chief Registrar. In respect of health-unit areas, the Health and Sanitary Inspectors obtain the statistics, and during their visits, they have to check up the figures registered by the village officers.

Sample Registration System

A Sample Registration System for Vital Statistics was introduced in Karnataka in 1966 in the rural areas, and in 1968, in the urban areas covering 0.81 per cent of the rural population and 0.69 per cent of urban population of the State taking 1961 as the base year. The scheme was launched by the Registrar General of India with the aim of providing reliable annual estimates of vital rates of births and deaths on a current and continuous basis, separately for the rural and urban areas at the State and National levels. The data yielded by the sample registration system range from crude birth and death rates to more refined measures of fertility, mortality, specific birth and death rates, infant mortality rates, birth-order statistics and other ancillary data such as seasonality in vital rates, sex ratio, etc. In order to record the extra events which might have occurred but missed by the enumerators and supervisors during the previous half year, the six months' reference period was extended to one year. The period relating to the previous half-year is termed as extended reference period. Enumeration work is being attended to continuously by part-time enumerators who are mostly school teachers in both the rural and urban areas. The part-time enumerators are paid an allowance. The Half Yearly Survey work is being carried out by computers for each half year and supervision is done by Assistant Director of Census Operations (Technical) and also by the Officers of the Bureau of Economics and Statistics, Bangalore. Out of 150 rural units in Karnataka State under the sample registration system, four rural units were selected in Chikmagalur district for the purpose.

Crude Birth and Death rates

The crude birth-rate is defined as the number of live-births per thousand of mid-year population in any given year. Similarly, the crude death-rate is defined as the number of deaths per thousand of mid-year population in any given year. It is stated by the Bureau of Economics and Statistics that the registration of vital events could not be said to be complete, and as such, the figures are deficient to a considerable extent. Subject to this important condition, the number of births and deaths reported in the district during some recent years were as follows :

<i>Year</i>	<i>Number of births reported</i>	<i>Number of deaths reported</i>
1970	6,563	2,224
1971	6,864	2,638
1972	7,185	2,891
1973	6,670	2,615
1974	5,577	2,432
1975	5,529	2,544
1976	6,432	2,957
1977	6,855	3,055
1978	5,433	2,510

Infant and maternal mortality

Still-birth-rate, pre-natal-rate, neo-natal-rate and post-natal-rate are the components and other related indicators of infant mortality. Infant mortality was considerably high in the district in the early decades of this century. The main causes for such deaths are prematurity, bronchitis, diarrhoea, dysentery, fevers, convulsions, sepsis and respiratory diseases. The infant mortality rate has, however, been considerably reduced in recent years with the introduction of modern system of midwifery and rapid implementation of maternity and child welfare services under the plan programmes. The table given hereunder indicates the number of registered still-births and infant deaths for recent years.

<i>Year</i>	<i>Number of still-births reported</i>	<i>Number of infant-deaths reported</i>
1970	N.A.*	211
1971	325	290
1972	253	266
1973	337	268
1974	308	223
1975	157	247
1976	222	216
1977	206	236
1978	136	153

Maternal deaths

The main causes for maternal deaths are anaemia, haemorrhage and difficult labour. As in the case of infant mortality, the rate of maternal deaths has also decreased in recent years. This is largely due to increased facilities provided for the pre-natal and post-natal treatment being given in the several hospitals and health centres in the district. The table given below shows the year-wise number of maternal deaths reported in some recent years by the Chief Registrar of Births, Deaths, and Marriages.

<i>Year</i>	<i>Number of maternal deaths reported</i>
1970	N.A.*
1971	19
1972	23
1973	14
1974	15
1975	18
1976	24
1977	14
1978	17

*N.A.—Not Available

Common Diseases

The common diseases for which a majority of patients are treated in the district are fevers, malaria, dysentery and diarrhoea, respiratory diseases, typhoid, digestive diseases, gastro-enteritis, worms, ulcers, anaemia, skin diseases, polio, etc. The subjoined statement shows the number of reported deaths caused by various diseases and other causes in the district during some recent years.

Deaths due to	Number of deaths during							
	1971	1972	1973	1974	1975	1976	1977	1978
Plague	1	—	—	3	—	—	—	—
Cholera	12	26	25	8	9	15	—	—
Malaria	246	235	146	145	155	175	193	125
Small-pox	3	—	12	4	—	—	—	—
Typhoid	76	86	42	22	60	49	39	12
Other fevers	404	471	490	254	263	126	23	100
Dysentery and Diarrhoea	220	208	247	278	139	324	305	330
Respiratory diseases	164	220	217	243	280	297	163	254
T.B.	97	119	71	81	76	80	104	79
Leprosy	9	11	7	5	6	8	4	2
Rabies	14	4	—	2	2	3	2	1
Tetanus	2	3	3	5	1	4	1	—
Diphtheria	—	—	1	—	1	1	—	—
Whooping cough	—	6	3	2	—	3	—	—
Polio	—	—	—	—	—	1	—	—
Pulmonary disease	—	—	3	1	1	1	2	1
Other causes	1,274	1,374	1,215	1,123	1,238	1,503	1,921	1,338
Suicide	27	14	34	26	18	25	22	25
Drowning	26	13	15	10	27	11	24	23
Wounds and accidents	37	16	26	28	20	39	19	9
Killed by wild beasts	2	8	—	—	—	—	—	—
Snakebites	14	11	9	8	5	10	4	3
Causes not stated	50	66	49	184	243	282	215	191

Plague

The district is free from the ravages of plague. Its incidence has been almost nil in recent years. Hence, it may be said that this disease is now completely under control.

Cholera

Cholera is one of the most dreaded communicable diseases. In recent years, there has been a considerable decrease in the incidence of cholera in the district. Whenever there is an outbreak of cholera, groups

of necessary health staff are rushed to the places for anti-cholera inoculations. It is found to be very difficult to eradicate cholera because there is, to some extent lack of good environmental sanitation and use of unprotected water. The subjoined table gives the number of cholera attacks and deaths, and the number of persons inoculated during some recent years.

<i>Year</i>	<i>No. of attacks</i>	<i>No. of deaths</i>	<i>No. of anti-cholera inoculations done</i>
1973	4	2	80,500
1974	—	—	1,800
1975	1	—	19,200
1976	1	—	2,957
1977	1	—	10,257
1978	1	1	4,115
1979	17	4	68,147

Malaria

The National Malaria Control Programme in this State which was begun in 1953 was switched over to the National Malaria Eradication Programme in 1958 with 19 units covering the entire State. The whole district of Chikmagalur was taken up along with the taluks of Arsikere and Belur of Hassan district in 1959-60, under this programme.

In Chikmagalur district, the Attack Phase of the programme lasted for five years from 1953-54 to 1957-58, for bringing down the incidence of infection to a minimum level by the use of insecticides like D.D.T., and it was switched over to the Consolidation Phase in 1958-59. The district of Chikmagalur entered the Maintenance Phase of the programme in 1965-66 when the taluks of Arsikere and Belur of Hassan district were separated from this jurisdiction, and the Chikmagalur district was taken up as one independent unit. A regular surveillance programme was introduced in the district during the year 1960. The district is divided into six sub-units, entrusting the work of each sub-unit to six Primary Health Centres located at Koppa, Balehole, Tarikere, Hirehallur, Nidaghatta and Mallandur. The Medical Officers of Health of these six Primary Health Centres are in charge of this work also. The controlling officers at the district level are the District Health and Family Welfare Officer and the Assistant District Health Officer who are assisted by two Health Supervisors, a Senior Health Inspector, 14 Basic Health Workers and necessary ministerial staff. There are two types of surveillance, *viz.*, (1) Active Surveillance or Active Case Detection and (2) Passive Surveillance or Passive Case Detection. Active surveillance is done with the assistance of the Malaria Surveillance Worker who has to visit every house once in a fortnight, where there are fever cases, collect bloodsmears

from them and give presumptive treatment with aminoquinoline tablets. Passive surveillance is done with the help of Government and private medical institutions. The cases are treated as out-patient and in-patient as per needs. If a positive case is detected, immediate steps are required to be taken for radical treatment of the case, mass contact, blood survey and D.D.T. spraying in order to check the spread of the disease. The subjoined table gives the relevant figures for the past some years.

Year	Blood smears collected and examined		Mass contact and follow-up action	Malaria Parasite positive cases	Radical treatment given
	Active	Passive			
1971	59,981	52,245	9,585	3,045	2,933
1972	69,743	55,867	6,310	1,197	1,166
1973	54,316	37,959	13,114	1,614	1,632
1974	65,595	39,599	3,595	2,618	2,301
1975	74,804	51,123	2,023	19,105	12,576
1976	77,756	65,536	4,606	35,541	20,594
1977	86,367	67,884	7,562	27,406	22,297
1978	46,717	74,804	9,924	35,129	18,160
1979	76,682	43,044	325	23,791	19,089

The National Malaria Eradication Programme is envisaged to be completed by 1986. It is found that the incidence of malaria is again gradually increasing. Hence, the present-day programme has pin-pointed two specific responsibilities, viz., how to continue to keep such areas free from infection, and secondly how to liquidate the infection in the residential areas.

Typhoid

Typhoid has been causing some deaths now and then. As and when cases of this disease are reported, the health authorities treat the patients on the spot and undertake preventive measures such as administering of T.A.B. inoculations, chlorination of sources of drinking water and disinfection of infected houses and the epidemic is brought under control.

Small-Pox

In 1961, National Small-pox Eradication Programme was launched by the Central Government to eradicate small-pox with the co-operation of the various States. Earlier, the strategy in India was to give cent per cent primary vaccination to all new-born, and revaccination once in every four years to all the population. Efforts were made for cent per cent coverage. However, small-pox continued to show its presence on a smaller scale. Some of the cases were also imported from other States. Hence, the strategy was changed and the campaign was intensified.

Special surveillance schemes were taken up in the State in association with World Health Organisation's epidemiologists for detection of contamination of small-pox outbreaks. Special search operations were conducted throughout the State in all rural and urban areas several times, and much publicity was given door to door as well as through other media. In January 1975, operation of small-pox "target zero" was launched in the country. The Chikmagalur district has been divided into six units for the purpose of eradicating small-pox which have been entrusted to the care of Primary Health Centres located at Koppa, Balehole, Tarkere, Hirehallur, Nidaghatta and Mallandur. The vaccination work is being conducted by twenty-two male vaccinators, five female vaccinators, five health inspectors with necessary Auxiliary Nurses and Midwives. Vaccination of babies under the age-group of 0-1 month is also undertaken by the medical and para-medical staff of the medical institutions. The Government have announced a reward of Rs 1,000 to be given to those who detect and report small-pox cases. Only one case of attack was reported in 1973, that being the last. The relevant figures for some recent years are as given below :

Year	Primary vaccination	Re-vaccination	Total
1973	26,916	1,36,280	1,63,196
1974	25,812	1,06,754	1,32,566
1975	25,195	89,153	1,14,348
1976	23,938	1,15,836	1,39,774
1977	25,582	74,554	1,00,136
1978	22,106	—	32,106
1979	24,659	2,498	27,157

Leprosy Control

Leprosy is stated to be prevalent in Tarkere taluk and particularly in Lakavalli *hobli* and that about 70 persons are affected by this disease. Many crippled and disabled patients, though now free from this disease, continue to be shunned by the society. With a view to controlling the spread of this dreaded disease, a Survey, Education and Training Centre was started in 1974 at Tarkere under the care and supervision of a Para-Medical Officer who also distributes tablets and dresses the wounds of the patients. All the seventy leprosy cases referred to above were treated as out-patients by the Para-Medical Officer and fifty fresh cases were treated as out-patients in 1977 while the same was forty in 1976. Treatment of these fresh leprosy cases is arranged at weekly clinics at important places where the Medical Officer of Health examines the cases. In addition, treatment is also given by rural medical practitioners and health inspectors in several places.

Handiganur Syndrome

What is called "Handiganur Syndrome" is described as "peculiar and mystery" disease which was noticed in January 1975 in some parts

of the district, particularly in the area of the Primary Health Centre of Koppa. Twenty-one cases were found at Janagadde, 22 cases at Basapura, 16 cases at Herambi, and one case in Thamballi (all in Chikmagalur taluk only), and three cases each at Halasur and Balehonnur, one case each at Byranamakki and Saragodu (all in Narasimharajapura taluk). These cases were similar to those which are prevailing in Sagar taluk of Shimoga district. Some experts are of the opinion that this disease is due to myopathy or protein deficiency. The aetiology of this disease is under investigation. It attacks specially in early ages and its duration is from a few weeks to five years as observed in many of the cases. The symptoms are pain in the waist, hip, and knee joints. In the prolonged cases, there is stiffness in the hips and/or knee joints, with no fever in most cases. Actually, this is found to be a disease of bones and joints and of muscles of lower limbs and in some cases crippling too. Technically, this syndrome is stated to be of a hyper-sensitive arthritis of migratory type, affecting synovial weight-bearing joints. Very rarely, the symptoms could be seen in the elbow and ankle joints. All the 68 cases have been treated with physiotherapy.

Medical Institutions

There is a General Hospital by name Malle Gowda General Hospital at Chikmagalur. The maternity section of this hospital is located in a separate building which has been donated and is called Rukminiamma Maternity Hospital. In 1978, this was upgraded as a District Hospital for Women and Children. As in 1978, there were six primary health centres, 31 primary health units, one combined dispensary, seven local fund dispensaries, one health-unit type dispensary, one Mines Hospital at Kemmannugundi and three medical sub-centres. With effect from 31st August 1978, all types of medical institutions below the taluk-level such as local fund hospital, local fund dispensary, combined hospital, combined dispensary, reduced scale local fund dispensary, Government dispensary, *malnad* improvement dispensary, medical sub-centres and health-unit-type dispensary, have been redesignated as Primary Health Units, while the Government Hospitals at the taluk-level, which were known as "Civil Hospitals", "Cottage Hospitals" or by any other name, are now called "General Hospitals". In addition to these, there is a National Malaria Eradication Programme Centre, a District T.B. Centre, a District Health Laboratory and a Regional Laboratory.

Ayurvedic and Unani Dispensaries

Ayurvedic and Unani dispensaries are headed by institutionally qualified doctors. The para-medical staff, who assist the Ayurvedic or Unani doctor in the dispensary, have undergone training for a period of ten months. Ayurvedic and Unani medicines to a tune of Rs 3,000 per annum are supplied to all the dispensaries by the Government Central Pharmacy, Bangalore. These dispensaries can purchase the patent

Ayurvedic medicines to an extent of Rs 300 per annum from private firms. There are three Government Ayurvedic dispensaries, one each at Yaradakere, Honnenahalli and Yemmedoddi, all in Kadur taluk. The District Health and Family Welfare Officer is the supervisory officer of these dispensaries at the district-level. There are two Ayurvedic dispensaries, one at Kurubara-Budihal, a hamlet of Jodi-Machenahalli, and the other at Melinahuluvatti (in Chikmagalur taluk), one Unani dispensary at Hosahallipet of Chikmagalur taluk, an Ayurvedic dispensary each at Meguru (Koppa taluk), Devavrunda (Mudigere taluk), an Ayurvedic dispensary at Melpal which is a hamlet of Karkeshwara village in Narasimharajapura taluk, Muduba (Sringeri taluk), Hadikere (Tarikere taluk), ten Ayurvedic dispensaries at Devanuru, Kunkanadu, Huligere, Matighatta, Choulehiriyyuru, Anegere, Niduvalli, Patnagere, S. Madapura and K. Bidare (all in Kadur taluk), which are financed by the respective Taluk Development Boards.

P.K.S. General Hospital

The Patre K. Shivappaiya General Hospital, Birur, was said to be started in 1900 as a Local Fund Dispensary, possibly the oldest among the working dispensaries, which was later, in 1955, converted into a Combined Hospital with a maternity section. It was upgraded as a General Hospital in 1961 with 50 beds. This hospital has (1) Medical, (2) Surgical, (3) Maternity and Child Health, and (4) Dental section etc. It has a Physician and a Surgeon, both with post-graduate qualifications, four Staff Nurses, two Auxiliary Nurse-Midwives, an X-ray technician, and necessary ministerial and Class IV officials. The number of in-patients and out-patients that were treated for various diseases in 1979 was 3,135 and 81,700 and in 1978 was 2,907 and 73,751 as against 2,525 and 60,117 respectively in 1977. The total number of major and minor operations done in the hospital in 1979 was 397 and 1,663 and in 1978 was 363 and 1,463, the corresponding numbers in 1977 being 473 and 1,538 respectively. The number of tests in the laboratory in 1979 was 2,300 as against 2,000 in 1978. The total number of labour cases that were attended to in the hospital in 1979 was 456 and in 1978 was 351 as against 336 in 1977. The total number of X-rays taken was 964, screenings 723, and bariums 83 in 1978 whereas their numbers in 1977 were 1,328, 585, and 125 respectively. Only urine test for sugar and Albumin are conducted in the hospital and other Pathological tests are referred to other hospitals. The number of vasectomy cases was 2, tubectomy 185 I.U.C.D. 74 in 1979, while it was vasectomy cases four, tubectomy 162, I.U.C.D. 33 in 1978 and four vasectomy, 162 tubectomy and four I. U. C. D. cases in 1977. T.B. patients are treated as out-patients only and their number was 628 in 1979 and 82 in 1978 while it was 49 in 1977. A separate ward with ten beds for T.B. patients is under construction. The hospital

caters to the needs of the people from the taluks of Kadur and Tarikere of Chikmagalur district and Hosadurga taluk of Chitradurga district. E.N.T. and other specialists from the District Hospital, Chikmagalur, visit this hospital once in a fortnight. The revenue of the hospital during 1979-80 was Rs 26,179 and during 1978-79 was Rs 18,857 as against Rs 13,353 in the previous year. The expenditure incurred on this hospital during 1979-80 was Rs 4,06,377 and was Rs 3,47,922 in 1978-79 as against Rs 3,38,786 in 1977-78.

M. G. General Hospital

The Malle Gowda General Hospital, Chikmagalur was established in 1932 as a charitable institution. It had periodical expansions. The bed-strength, which was 40 in the beginning, was increased to 237 by 1978. The hospital has E.N.T., dental, venereal diseases, X-ray, ophthalmological, general, out-patient, laboratory, medical, surgical, maternity and child health, urban family welfare and paediatrics sections. There is also provision for training nursing students in the Auxiliary Nurse Midwife Training School attached to the hospital. Besides the District Surgeon, who is the head of the hospital, there were, in 1978, one Lady Surgeon, one Assistant Dental Surgeon, fourteen Assistant Surgeons (out of whom three were having M.D. qualification, and two M.S. qualification), an Ophthalmologist, one Nursing Superintendent of Class II grade, one Nursing Tutor, 28 Staff Nurses, four Auxiliary Nurse-Midwives, three Pharmacists and 20 other officials. A separate ward of 12 beds is maintained in the premises of the hospital to treat the T.B. patients. The total number of persons treated for the T.B. disease as in-patients and out-patients in the year 1979 was 207 and 3,955 as against 349 and 2,290 in 1978 and 481 and 2,803 in 1977 and 599 and 3,072 respectively in 1976. The number of in-patients and out-patients who were treated for various other diseases in 1979 was 59,369 and 1,42,873 and 57,928 and 1,25,972 in 1978 and 56,321 and 1,61,416 in 1977. The total number of major and minor operations that were done in the hospital in 1979 was 434 and 180 as against 510 and 97 in 1978 and 480 and 470 in 1977. The maternity section of the hospital is housed nearby in a separate building donated by Smt. Rukminiamma. The number of labour cases that were attended to in the hospital in 1979 was 697 whereas it was 1749 in 1978 and was 1,775 in 1977. The number of X-rays taken was 1981, screenings 7,722 and bariums 946 in 1979 as against 2,419 X-rays, 9,947 screenings and 727 bariums in 1978 and 2,419 X-rays, 8,376 screenings, and 428 bariums in 1977. The number of vasectomy cases was 11, tubectomy 184, and I.U.C.D. 196 in 1979 while it was vasectomy 194, tubectomy 132, I.U.C.D. 135 in 1978, while the corresponding figures for 1977 were 359, 349 and 198. There is a laboratory attached to the hospital which is working since 1973. It

has two junior technicians and one senior technician. The number of tests conducted in the laboratory in 1979 was 43,847 while in 1978 was 34,819, as against 35,338 in 1977 and 32,469 in 1976. The amount of expenditure incurred on this hospital during 1979-80 was Rs 13,13,026 while it was Rs 40,92,064 in 1978-79 and Rs 37,83,216 in 1977-78. The income of the hospital in 1979-80 was Rs 1,00,662 and in 1978-79 was Rs 85,758, while it was Rs 40,380 during the previous year.

The Mahabodhi Burns and Casualty Centre was founded in April 1979 in the premises of the Malle Gowda General Hospital, for the purpose of treating burns and casualty cases on an emergency basis both as in-patients and out-patients. It is working under the administrative control of the District Surgeon of the Malle Gowda General Hospital. The bed-strength of the section is four. The number of in-patients and out-patients treated in this centre was 29 and 113 respectively in 1979.

General Hospital, Kadur

The General Hospital at Kadur, which was previously a Combined Dispensary was upgraded as a General Hospital in 1973. At the time of starting, it had a bed-strength of 12 which was raised to 37 by 1978. The hospital has Medical, Maternity and Child Health Sections. There is a physician with post-graduate qualification, a Male Medical Officer, a Lady Medical Officer, two Pharmacists, three Auxiliary Nurse-Midwives and necessary ministerial and class IV officials. The number of in-patients and out-patients treated for various other diseases was 2,264 and 35,264 respectively in 1979 as against 17,159 and 89,338 in 1978 and as against 11,996 and 78,287 respectively in 1977. T. B. cases are treated as out-patients and their number was 64 in 1979 while it was 120 in 1978 as against 25 in 1977. The total number of minor operations done in the hospital was 223 in 1979 as against 209 in 1978 whereas the corresponding number during 1977 was 354. The total number of maternity cases attended to in 1979 was 393 whereas in 1978 it was 381, as against 284 in 1977. The total number of tubectomy cases done was 200, I.U.C.D. 73 and no vasectomy cases in 1979 whereas it was 166 tubectomy and I.U.C.D. 42 in 1978, while it was one vasectomy, 225 tubectomy, and 28 I.U.C.D. respectively in 1977. The total number of Pathological tests conducted in the laboratory attached to the hospital in 1978 was 8,844 as against 5,252 in 1977 and 4,565 in 1976. The revenue of the hospital during 1979-80 was Rs 11,340 whereas it was Rs 3,050 in 1978-79 and Rs 2,746 during the previous year. The expenditure incurred on this hospital in 1979-80 was Rs 2,97,636 while in 1978-79 it was Rs 2,74,039 as against Rs 2,12,915 in 1977-78.

M. G. M. General Hospital, Mudigere

A Local Fund Dispensary functioning in Mudigere town was upgraded first into a Combined Dispensary in 1951, and then into a

General Hospital in 1972. A new building for the General Hospital was constructed at a cost of Rs seven lakhs in 1972. The State Government and the Mahatma Gandhi Memorial Trust of Mudigere equipped the Hospital with modern equipments and furniture to the tune of Rs 1.5 lakhs in 1977. It is now called the Mahatma Gandhi Memorial General Hospital. It had a bed-strength of 56 in 1978. The number of in-patients and out-patients treated for various diseases in 1979 was 2,373 and 20,376 respectively while in 1978 it was 1,826 and 20,591 as against 1,105 and 43,750 in 1977. The total number of minor operations done in the hospital in 1979 was 205 whereas in 1978 it was 113 while it was 371 in 1977. Fifteen major operations were done in 1979. The number of labour cases attended to in the hospital in 1979 was 408 whereas in 1978 it was 243 as against 179 in 1977. The total number of family welfare cases attended to in 1979 was 225 while in 1978 it was 112 as against 156 in 1977. The total number of pathological tests conducted in the laboratory attached to the hospital in 1979 was 19,968 while it was 16,403 in 1978 as against 5,823 in 1977. The total number of persons treated as out-patients for T.B. disease was 27 in 1979 while it was 27 in 1978 as against 21 in 1977. The revenue of the hospital during 1978-79 was Rs 5,532 while it was Rs 1,291 in 1977-78. The expenditure incurred on this institution in 1978-79 was Rs 2,96,318 whereas it was Rs 6,78,158 in 1977-78. E.N.T., Ophthalmic and other specialists of the District Hospital visit this hospital periodically.

H. V. S. General Hospital, Tarikere

A Primary Health Centre, which was opened at Tarikere in 1961, was upgraded to a General Hospital in 1978. Out of the total expenditure incurred for the construction of a new building for this general hospital in 1979, an amount of Rs 60,000 was donated by Hanji Veerappa Shivamma and the hospital has been named after this donor. The hospital has medical, maternity and child health and surgical sections. It has a Male Medical Officer, a Lady Medical Officer, two Pharmacists, five Assistant Surgeons, three Vaccinators, 17 Auxiliary Nurse Midwives, six Staff Nurses, a Para-Medical Worker, two Technicians, with necessary clerical and class IV staff. The bed-strength of the hospital in 1980 was 50. T.B. cases are also treated here and the number of in-patients and out-patients treated for this disease in 1979 was 20 and 47, while in 1978 it was 19 and 63, as against 48 and 70 respectively in 1977. The total number of in-patients and out-patients that were treated for other diseases in the hospital in 1979 was 593 and 62,299 respectively while in 1978 it was 560 and 51,269, as against 356 and 69,298 in 1977 and 230 65,015 in 1976. The number of minor operations done in the hospital in 1979 was 672 while in 1978 it was 128, as against 132 and 183 in 1977 and 1976 respectively. Major operations performed in 1979 were 79. The number of labour cases that were treated in the hospital in 1979 was

485 while in 1978 it was 435, while it was 323 and 258 in 1977 and 1976. The number of family welfare cases that were attended to in the hospital was 1,482 in 1979 and was 783 in 1978, while it was 2,744 in 1977 and 583 in 1976. Only 17 screenings were taken in 1979. The total expenditure incurred in the hospital during 1979-80 was Rs 4,72,083 while it was Rs 3,57,389 in 1978-79 and was Rs 4,04,601 in 1977-78 as against Rs 30,93,512 in 1976-77 and Rs 4,53,468 in 1975-76. The revenue of the hospital during 1979-80 was Rs 10,000 while it was Rs 9,150 in 1978-79.

A. L. N. M. C. Hospital

The Aroor Lakshminarayana Rao Memorial Charitable Hospital, Quarri Hitlow, which is a hamlet of Nuggi village, was founded under A.L.N. Rao Charitable Endowments, in 1971. It is working in a building of its own since 1979. The objective of this institution is to provide medical facilities to the poor, rural residents and to the plantation labourers of the area. It has a surgeon and a Lady Medical Officer, a Pharmacist, six Nurses, three Laboratory Technicians with necessary other staff. Sections pertaining to Obstetrics and Gynaecology, General Medicine, Paediatrics and E.N.T. are functioning here. The diseases treated in this hospital are malaria, anaemia, asthma, influenza and common fever. The bed-strength in 1980 was forty five, out of which four beds were reserved for T. B. patients. The number of in-patients and out-patients treated for T. B. disease in 1979 was fourteen and fifteen, while it was nine and eighteen respectively in the previous year. The number of in-patients and out-patients treated for other diseases in 1979 was 1,028 and 22,578 as against 1,230 and 20,507 respectively in 1978. The number of tests conducted in the laboratory attached to the hospital in 1979 was 2,126, where as it was 889 in 1978. The total number of major and minor operations conducted in 1979 was 343 and 215, as against 287 and 214 respectively in 1978. The number of maternity cases that were attended to in 1979 was 24, as against 23 in 1978. The total number of family welfare cases attended to in the hospital in 1979 was 32 whereas it was 43 in the previous year. The number of X-rays taken was 887, screenings 43, and bariums 147 in the year 1979, while it was 1,296, 142 and 208 in the previous year. Donations received and other income realised by the institution in 1977-78 was Rs 62,500 and Rs 1,58,337 respectively, whereas the corresponding figures for 1976-77 were Rs 43,000 and Rs 1,06,330. The amount of expenditure incurred by the hospital during 1977-78 was Rs 2,82,776, while it was Rs 1,49,729 in 1976-77.

H. C. Hospital, Basagalu

The Holy Cross Hospital, Basagalu in Chikmagalur taluk was founded in 1971 by the Society of Sisters of Holy Cross with 14 beds and serves

as the centre for community health programme in the area, which covers 16 villages with a population of about 2,500. Medical, obstetrics and preventive health care which includes maternity child health clinics, pre-school health care and natural family planning clinics are the services being rendered by the hospital. It has an X-ray unit and surgical equipment for minor operations and obstetrics. The staff of the hospital consists of a Medical Officer, four Staff Nurses with necessary ministerial staff. The main diseases that are treated in this hospital are gastro-enteritis, upper respiratory infections, anaemia, mal-nutrition, ascariasis, skin infections, etc. The number of in-patients and out-patients that were treated for various diseases in 1979 was 641 and 10,842 respectively while in 1978 it was 544 and 6,085, while it was 495 and 5,140 in 1977. The total number of minor operations done in the hospital in 1979 was 70 while in 1978 it was 56, as against 69 in 1977. The number of labour cases that were attended to in 1979 was 93 as against 85 in 1978 and 90 in 1977. Only 30 persons were taught natural family planning methods in 1979. The number of screenings taken in 1978 was 12, while it was 14 in 1977. The revenue of the hospital in 1978-79 was Rs 39,124 as against Rs 30,824 in 1977-78. The expenditure incurred on the hospital in 1978-79 was Rs 39,036 as against Rs 28,645 in 1977-78 while it was Rs 28,837 in 1976-77 and Rs 35,716 in 1975-76.

P. M. Hospital, Narasimharajapura

The Pushpa Mission Hospital at Narasimharajapura was established in 1974 by C. M. C. (Congregation Mother of Carmel) Sisters of Tellichery of Kerala. The present bed strength of the hospital is fifteen. Common diseases like anaemia, upper respiratory ailments, bronchitis, tuberculosis, diabetes, etc., are treated in this hospital. It has a Medical Officer, a Pharmacist, two Nurses, and a Laboratory Technician. The number of in-patients and out-patients treated in 1978 was 2,326 and 28,450 as against 541 and 30,845 respectively in 1977. The number of minor operations done in the institution was 410 in 1978 while it was 250 in 1977. The number of labour cases attended to in 1977 was 82 as against 54 in 1976. T.B. patients are treated as out-patients and their number was 40 in 1978 as against 18 in 1977. There is a clinical laboratory attached to the hospital and 1,667 investigations of various kinds were done in 1978 as against 1,456 in 1977. The revenue of the hospital during 1978-79 was Rs 60,123 as against Rs 58,198 in 1977-78 and the expenditure incurred by the hospital in 1978-79 was Rs 58,923 while during the previous year it was Rs 59,525.

Kudremukh Hospital

The Kudremukh Hospital, Malleswara in Mudigere taluk, was started in July 1977. A permanent building for the hospital was constructed in 1979. It has twenty beds and Medical, Surgical, E.N.T., Gynaecology, Paediatrics, Dental and Maternity and Child Health sections. A Chief

Medical Officer, six Junior Medical Officers, a health officer, three Resident Medical Officers, two Pharmacists, eleven nurses, one laboratory assistant and necessary ministerial and class IV staff are working in this hospital. The number of in-patients and out-patients that were treated for various diseases in 1979 was 920 and 59,500 respectively and in 1978 it was 748 and 38,092, as against 222 and 24,419 in 1977, respectively. Persons suffering from T. B. disease are treated both as in-patients and out-patients and their number was 25 and 87 respectively in 1979. The total numbers of major and minor operations conducted in this hospital were 14 and 134 respectively in 1979 and were 28 and 480 in 1978, while corresponding figures for 1977 were 2 and 203. The number of maternity cases that were attended to in 1979 was 73 and in 1978 it was 558, as against 591 in 1977. The number of X-rays and bariums and screenings taken in 1979 was 663 and 9 and 4 respectively and in 1978 it was 340 X-rays and 4 bariums while 99 X-rays were taken in 1977. There is a laboratory attached to the hospital and the total number of pathological tests done in it in 1979 was 10,800 and in 1978 it was 6,440, as against 1,725 in 1977. The income of the hospital upto the end of 1978-79 from the date of its establishment is Rs 1,80,000 and the expenditure incurred on the hospital since its establishment is Rs 13,10,000.

S. D. Hospital

The Sharada Dhanvantari Hospital, Sringeri was inaugurated in February 1979 at Sringeri to mark the silver jubilee *peethavaroham* of the pontiff of the Sringeri Matha. It is housed in its own building. It has a Medical Officer, a Nurse, an E.C.G. Technician, two Laboratory Technicians, a Pharmacist with necessary other staff. At present only the out-patient section is working. There are two emergency beds. T. B. cases are treated as out-patients and till the end of September 1979 three T. B. cases were treated. The out-patients that were treated for other diseases was 20,192 and the laboratory attached to the hospital has conducted 2,174 tests upto the end of September 1979. A sum of Rs 2,49,715 has been received as donations from private parties and the expenditure incurred is Rs 1,98,415 upto the end of September 1979. A new block has been added and it is equipped for compiling diagnostic data with electro-cardiogram, X-ray and clinical tests as also pathological survey. It is proposed to house an operation theatre, a medical and a surgical ward.

H. C. H. Centre, Chikmagalur

The Holy Cross Health Centre at Chikmagalur was started in 1979 by the Society of Holy Cross Sisters. It is a health centre where cases are admitted and treated as in a primary health centre. The hospital, which owns its own building, has a bed-strength of 12 and renders treatment against viral and bacterial infections, respiratory diseases, asthma,

diabetes, gastro-enteritis, etc. It has a doctor, a pharmacist and three nurses at present.

Primary Health Units and Centres

In keeping with the Government policy of providing more and better medical facilities, primary health centres and primary health units have been established in the rural parts of the district during the successive Five-Year Plan periods. In 1979 there were six primary health centres of the Government of India type in the district, and 31 Primary Health units of the Karnataka pattern. While the former cover a population of about 60 thousand each, the latter covers a population of 10 to 15 thousand each. On an average, there are eight beds in each of the primary health units and primary health centres for the treatment of in-patients. The main basic health services that are being rendered through these health centres are (1) curative services, (2) control of communicable diseases such as malaria, cholera and tuberculosis, (3) family welfare and child health services, (4) health education, (5) school-health services, (6) environmental sanitation and (7) collection of vital statistics. The staff attached to each of the Karnataka-type primary health units comprises a Male Medical Officer of Health, a Lady Medical Officer, a Health Inspector, a Pharmacist, a Basic Health Worker, three or four Auxiliary Nurse-Midwives with necessary ministerial staff and three or four members of class IV staff, on an average. The staff of each of the Government of India pattern health centres consists of a male Medical Officer of Health, a Lady Medical Officer, a Pharmacist, a Health Inspector with necessary Basic Health Workers, Auxiliary Nurse-Midwives, ministerial and class IV staff. For looking after the family-welfare aspect of the work, there is an Extension Educator, a Pharmacist and a Health Assistant for every 20 to 30 thousand of population, and an Auxiliary Nurse-Midwife for every ten thousand population under the Medical Officer of Health. The six primary health centres of Government of India pattern are one each at Hirehallur and Nidaghatta of Kadur taluk, Malandur of Chikmagalur taluk, Koppa town, Balehole of Mudigere taluk, and Tarikere town. The 31 primary health units of Karnataka pattern are : seven in Chikmagalur taluk, one each in Kadur and Sringeri taluks, five each in Koppa and Kadur taluks and four in Narasimharajapura taluk and eight in Mudigere taluk.

Other dispensaries

In addition, there are Local Fund Dispensaries at Manenahalli of Chikmagalur taluk, Yagati, Panchanahalli and Singatagere of Kadur taluk, and at Kudlur, Sollapura and Shivane of Tarikere taluk, a Combined Dispensary at Aldur in Chikmagalur taluk, a Health-Unit Type Dispensary at Yellambalase in Kadur taluk, a Medical Sub Centre in Kadur and Bettadahalli of Tarikere taluk.

District Tuberculosis Centre

The District Tuberculosis centre started functioning in the district in 1971. It has to do preventive and curative aspects of work, namely house to house B.C.G. Vaccination (Bacillus Calmette Guerin) and domiciliary treatment. There are fifty five referring centres all over the district from which cases are referred to this centre. Attached to this Centre, a small laboratory is maintained from 31st December 1971 and the total number of tests conducted was 7,693 in 1979 while it was 23,785 in 1978 and was 18,010 in 1977. The B.C.G. Vaccination is given to the persons in the age group of 0-19 years. The total number of X-rays taken in the centre was 2018 in 1979 while the same was 1,333 in 1978. The B.C.G. technicians allotted to the Primary Health Centres go from place to place for vaccinating the eligibles. Since 1968, there is a District Tuberculosis Association which aims at securing the welfare of T.B. patients, providing financial assistance to deserving poor T.B. patients, organising orientation training camps on T.B. disease, conducting Anti-T.B. camps with the help of voluntary social service organisations. An amount of Rs 10,729 was collected by the sale of T.B. seals upto 31st March 1979 as against Rs 11,798 which was collected upto the end of 31st March 1978. The following table gives some particulars of the District T.B. Centre, Chikmagalur.

Year	No. of patients treated	B.C.G. Programme		Financial year	Expenditure in Rs.
		Registered	Vaccinated		
1973	1,496	1,29,670	51,375	1973-74	94,317
1974	1,938	1,52,819	58,200	1974-75	1,36,366
1975	1,729	1,63,615	73,116	1975-76	1,48,297
1976	1,979	1,52,324	71,514	1976-77	1,63,766
1977	18,378	1,44,157	70,576	1977-78	1,87,561
1978	2,290	40,435	36,174	1978-79	1,75,110
1979	3,955	35,658	3,50,658	1979-80	1,29,439

District Health Laboratory

A District Health Laboratory was set up at Chikmagalur in 1964. Pathological tests are made here by analysing the samples received from various medical institutions of the district. In 1979 the laboratory made 1,71,457 tests as against 2,01,854 tests in 1978. It has a Medical Officer of Health of Class II, four Senior Laboratory Technicians, four Laboratory Attenders and two Class IV officials, all working under the administrative control of the District Health and Family Welfare Officer of the district. The expenditure incurred by this institution in 1979-80 was Rs 1,14,577 as against Rs 74,639 in 1978-79.

Regional Laboratory

A Regional Laboratory was opened at Chikmagalur in 1971, with a view to assist the police and excise departments and also the magistrates

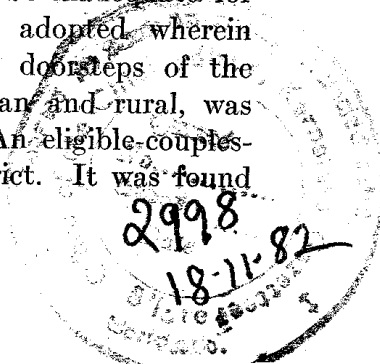
in Chikmagalur and Hassan districts. It furnishes chemical reports after analysing excisable articles such as ganja, opium, denatured spirits, French-polish, etc., from the licensed depots of arracks, toddy samples bottled for analysis, molasses from the nearby sugar factories, wines specified as alcoholic drinks, seized foreign liquors, etc., This laboratory is also now being equipped to start additional work on analysis of water, sewerage and industrial effluents. In 1979 the Regional Laboratory made 859 sample tests as against 543 sample tests in 1978. The figures for earlier years are (given in brackets) 1977 (649), 1976 (766), 1975 (1019) and 1974 (759). This laboratory is headed by a Regional Assistant Chemical Examiner, a Senior Laboratory Technician, a clerk-cum-typist and two Laboratory Assistants all working under the administrative control of the District Health and Family Welfare Officer at the district-level and the Deputy Director of Laboratories, Bangalore at the State-level. The expenditure incurred by the laboratory in 1979-80 was Rs 36,530 as against Rs 64,133 in 1978-79 and Rs 55,204 in 1977-78.

Family Welfare

A branch of the State Family Welfare Board (earlier called as Family Planning Board) has been functioning in the district since the year 1961. An extended family-planning programme (now called family welfare programme) was started in the district in the year 1964, when a separate District Family Planning Bureau (now called Family Welfare Bureau) was formed to look after, guide and co-ordinate the family welfare activities in the district. For purposes of better co-ordination and supervision of the various aspects of the work, the District Health Officer has been designated as District Health and Family Welfare Officer. (The phrase "family planning" was amended in 1977 as "family welfare"). The many Government medical institutions in the district (including five general hospitals), *inter alia*, help in the family welfare work. There are family welfare wings in all the allopathic medical institutions in the district. Maternity-cum-sterilisation wards and residential quarters for the personnel of the programme at all levels are being provided. The district of Chikmagalur was considered as an area of moderate growth-rate of population since the population increased by 23.33 per cent in the decade 1961-71 as against 24.22 per cent in Karnataka State during that period.

Extension approach

Formerly, the family welfare programme was being implemented on the basis of clinical approach. This was found to be inadequate for the rural areas. Hence, the extension approach was adopted wherein education and service facilities were extended to the doorsteps of the rural community, and the entire population, both urban and rural, was brought under the extended reorganised programme. An eligible couples-survey was taken up and completed in the entire district. It was found



that the number of eligible couples was more than one lakh. The District Family Welfare Bureau is managing the programme operations with the help of five functional components, namely, (1) Mobile Sterilisation Unit, (2) Mobile I.U.C.D. Unit, (3) Education and Information Division, (4) Field Operation and Evaluation Division and (5) Administrative Division. These are directly responsible to the District Health and Family Welfare Officer who is the controlling Officer and Chairman of the District Mass Media Co-ordination Committee. All the key personnel in the organisation are progressively trained so as to enable them to act effectively in implementing the programmes. The district has come out first achieving 98.28 per cent of the total target set for the district in the family welfare scheme. Out of 1.66 lakh sterilisations set for eleven months till the end of February 1980, 1.52 lakh operations had been performed.

Vasectomy and Tubectomy

Facilities have been provided in all bigger medical institutions in the district for conducting vasectomy and tubectomy operations. Such operations are also being done at camps in rural areas arranged for the purpose. In order to popularise these surgical methods of family welfare, the services of private medical practitioners are also utilised wherever possible. The authorised private practitioners, who render such service at their own clinics or nursing homes, can claim Rs 30 per case of vasectomy, Rs 40 per case of tubectomy and Rs 11 per case of I.U.C.D., provided they render service free of cost to the patients, give free pre- and post-operative follow-up treatment and attend to any complications noticed later on.

All the medical institutions controlled by Government in the district also conduct couple surveys, and selected couples are advised through individual contacts to adopt temporary or permanent family welfare methods. A device of family welfare for women popularly known as loop (an intra-uterine contraceptive device) was introduced in the district in the year 1965. Services are rendered either at medical institutions or at clinics and a sum of Rs three is paid per case as compensation to the acceptor for the first time, and the worker who motivates the case is paid a rupee per case. *Nirodh* is being issued free of charge at the medical institutions and by the health workers during their domiciliary visits. In addition, it is being sold at subsidised rates at selected medical shops and at commercial shops.

Intensive propaganda through lectures, film shows, exhibitions, publicity, literature, etc., is being done throughout the district in order to educate the people in respect of family welfare. In addition, family welfare fortnights are organised every year throughout the district, when as many people as possible are covered under the programme. Orienta-

tion-training camps are also conducted at certain selected centres for providing training to village leaders. The people in the district are evincing more interest than before in the family welfare programmes. The sterilisation method (both male sterilisation and female sterilisation), I.U.C.D. placements and use of *nirodh* are becoming popular in the district. Relatively female sterilisation is more resorted to than male sterilisation and gaining momentum. The table at the end of the chapter indicates the targets and achievements in respect of sterilisation, placements of I.U.C.D. and use of contraceptives for some recent years.

Family Welfare Action Committee

Formerly, there was a District-level Family Welfare Action Committee which was headed by the Deputy Commissioner as the Chairman. Since 1978, the family welfare work is being reviewed at a special sitting of the District-level and Divisional Action Committees which has to immediately precede the District-Level Co-ordination Committees, as several departments are involved in the family welfare work. Professional organisations like the Indian Medical Association, Chikmagalur Branch, social service organisations like the Rotary and Lions Clubs, *CARE*, and Merchants' and Farmers' associations are co-operating in the programmes and are co-ordinating their services in organising sterilisation camps in the district.

Applied Nutrition Programme

The Applied Nutrition Programme is multi-departmental in character. Local social-service organisations and international agencies like the *UNICEF*, *FAO*, and *WHO* are also associated with it. The Departments of Horticulture, Fisheries, Animal Husbandry, Health Services, Education, Social Welfare and Panchayat Raj co-operate in carrying out this programme. The *UNICEF* provides financial assistance for the training programme and for equipment, while the *FAO* and *WHO* provide technical assistance. In this district, the Applied Nutrition Programme was first started in Kadur taluk (1968-69), Mudigere taluk (1971-72), Narasimharajapura taluk (1972-73) and Koppa taluk (1976-77). In the taluks of Chikmagalur, Sringeri and Tarikere, this programme has not yet been introduced. In order to improve the existing dietary pattern, several measures have been taken in the selected blocks. Education of the people about proper nutrition is being carried on through a net-work of health workers and the staff of the community development blocks, who are required to organise practical demonstrations, to hold follow-up talks, film-shows and exhibitions and to distribute educational materials. The Mid-day Meals Scheme organised by the Department of Public Instruction is closely associated with this programme. As at the end of July 1979 there were 196 centres for the purpose, including lower primary schools, higher primary schools and high schools, catering to 36,676 students.

Food Consumption and Clinical Nutrition Survey

During the year 1975-76, the Bureau of Nutrition of the Directorate of Health and Family Welfare Services in Karnataka took up a Food Consumption and Clinical Nutrition Survey in Koppa and Chikmagalur blocks. This was conducted in four villages that were selected in Koppa block and one village in Chikmagalur block under the Applied Nutrition Programme by the Medical Officers of Health of the Primary Health Centres and Primary Health Units. In ten selected households in each of those villages, all the members of the families were medically examined. The nutrition deficiencies noticed during this survey were recorded. Rice is the important staple food of those villages. The average per capita consumption of cereals among them was found to be 632 grams, which was more than one-and-half times the recommended allowance. The consumption of pulses was about half the quantity and that of fresh food 26 grams. The intake of all types of vegetables was only 81 grams and that of sugar and jaggery 59 grams. Among the 386 persons examined, the percentage of disordered persons was 21.2 and the others suffered from vitamin B deficiency only.

Special Nutrition Programme

A Special Nutrition Programme is in operation in the urban slum areas. As on 31st July 1979, 289 centres were under this programme in Chikmagalur district catering to 36,520 children and 23 mothers. Cereals are given to them in the form of gruel, *uppittu*, fish, eggs, *balahar*, etc. Supplements including about 300 calories and 12 grammes of protein are also given under this programme. The World Food Programme, which is in operation in the district, provides mid-day meals to pupils of schools coming from nearby villages. About 2,200 inmates of 25 hostels run by the Social Welfare Department are also benefitted by this Programme.

With a view to providing supplementary nutrition, health check-up, immunisation against diseases, referral service, nutrition and health education, non-formal education under Integrated Family Welfare Service Projects, one hundred *anganawadis* have been opened during 1978-79 in one hundred village panchayats of Kadur taluk. About 50-100 children are admitted to each *anganawadi* centre for a four month period. An *anganawadi* worker has to possess a minimum qualification of VIII standard. He is given Rs. 125 as stipend per month. If he has passed S.S.L.C., he is given a stipend of Rs. 175. The duration of training for an *anganawadi* worker is four months. This scheme is looked after by a Child Development Project Officer.

Health education

Health education forms one of the functions of the Health Services Department. The basic health worker, who primarily attends to this

aspect of the work, is required to utilise every opportunity, especially during village gatherings, to contact the people in the rural areas and talk to them about various health subjects. He has to give practical demonstrations in regard to personal cleanliness, environmental sanitation, chlorination of water, vaccination, D.D.T. spraying, etc. The Department also arranges for the observance of World Health Day, Leprosy Day, Anti-Fly Week, Family Welfare Fortnight and the like in the district, when arrangements are made to give talks, hold exhibitions and screen films on the subjects in villages and towns.

School Health Services

The aim of School Health Programme is to provide comprehensive health care to the school children. It comprises medical examination, treatment, correctional remedies etc. The school children are also guided in forming habits and practices necessary to promote their best growth. Under this programme, children in the age-group 6-11 are being immunised against diseases such as diphtheria, polio and whooping cough. Medical examination of students is done at least twice during a school year by government or private agency as may be arranged by the Medical Inspector who is in charge of medical inspections of the institutions. This officer is working in the office of the Joint Director of Public Instruction, Mysore Division, Mysore. A fee of Re one is being collected towards the medical fees in the high school classes only, whereas free medical advice is given to the pre-high school children. It has been made compulsory to get all the students medically checked up for diseases of eyes, teeth and mal-nutrition. The school-health programme was started at Mallandur in Chikmagalur taluk and Hirehallur in Kadur taluk in 1968, and then in Koppa and Tarikere Primary Health Centers in 1972 and in the remaining primary Health Centres in subsequent years. From the year 1978-79, all the government allopathic medical institutions are doing school health services in the district. The sub-joined statement gives particulars of work done in recent years under the school health programme.

<i>Year</i>	<i>No. of students covered</i>	<i>Amount collected (in Rs.)</i>
1972-73	12,714	12,714
1973-74	15,147	15,147
1974-75	15,660	15,660
1975-76	15,158	15,158
1976-77	16,929	16,929
1977-78	16,444	16,444
1978-79	14,962	14,962

Medical Personnel

As on 31st March 1980, the district had 6 doctors with post-graduate qualification, 41 graduate doctors, 38 graduate Ayurvedic Physicians, 23 Staff Nurses, 250 Auxiliary Nurse-Midwives, 189 Para-Medical Staff,

33 Ministerial Staff and 235 class IV officials working in the various Government medical institutions of the district. The total number of registered private medical practitioners practising Allopathy, Ayurveda, and Unani systems as on 30th June 1979 in the district were 195, 45, and, three respectively. There are twenty two traditional bone-setters and massagists in the district.

Chemists and Druggists

There were 30 chemists and druggists shops and 30 qualified pharmacists in 1968-69 as against 39 chemists and druggists shops and 94 pharmacists as in March 1980 in the district.

Medical Association

The district has a branch of the Indian Medical Association at Chikmagalur functioning since 1951. In the beginning it had 17 members and by June 1979, the number had increased to 128, consisting of doctors in Government service and private practitioners. This association is exclusively of those who are qualified practitioners of Allopathy. The activities of this body include organisation of periodical professional meetings of doctors, educating the public on matters of health, conducting of ante-natal, pre-natal and child guidance clinics and family welfare motivation. It has conducted medical examination for 4,000 school children in 1978-79. There is also an association of Government doctors which was started in 1977 with 60 members. The main purpose of this association is to project their service difficulties and try to find out salvation to their problems and to have better understanding among government doctors. The meetings of the Association are held at the taluk headquarters also where free medical camps are conducted with the co-operation of voluntary social service organisations like the Rotary Club, the Lions Club, the Jaycees Club and Rotract etc. Recently, the Association has taken steps to conduct periodical free medical camps in various taluks. The total number of patients that were examined in these camps upto 31st March 1980 were 925. On the occasions of monthly meetings, lectures on medical topics by eminent doctors are arranged. The branch of the Indian Medical Association organised medico-legal workshops on three occasions. Short-term medical refresher courses are held every year. The State Government of Karnataka are encouraging of holding of such courses by deputing doctors to attend them and by giving grants for conducting the courses. The branch hosted all-Karnataka medical conferences several times. The revenue of the branch of the Indian Medical Association in 1978-79 was Rs 6,000 as against Rs 5,244 in 1977-78 while its expenditure in 1978-79 was Rs 6,200 as against Rs 4,250 in 1977-78.

Table showing the Targets and Achievements of Family Welfare Programme in Chikmagalur District

Year	Sterilisation Achievement			I.U.C.D. Insertions		Conventional Contraceptives Achievement		
	Target	Vasectomy	Tubectomy	Total	Target	Achievement	Target	Conventional contraceptive users
1868-69	4,250	2,027	177	2,204	2,830	572	4,250	1,670
1969-70	3,725	707	1,106	1,813	875	334	4,380	1,532
1970-71	4,115	319	1,801	2,120	1,050	397	6,060	1,730
1971-72	1,800	353	1,935	2,238	765	1,103	2,430	1,556
1972-73	7,500	231	1,897	2,128	1,200	792	3,900	1,933
1973-74	4,010	176	1,552	1,728	770	637	2,515	1,200
1974-75	4,150	114	1,802	1,916	900	417	4,000	2,045
1975-76	4,250	156	3,225	3,381	880	828	3,800	3,300
1976-77	5,110	1,895	8,591	10,486	4,520	753	7,555	2,575
1977-78	7,515	153	3,241	3,394	1,450	488	4,491	—
1978-79	5,800	82	2,644	2,726	900	786	2,950	1,624
1979-80	8,530	160	4,275	4,435	1,700	1,635	4,270	3,409

CHIKMAGALUR DISTRICT