

CHAPTER XVI

MEDICAL AND PUBLIC HEALTH SERVICES

Ayurveda, the Indian system of medicine was the only system practised in the district in ancient times and in the early periods of history. Bangalore being a centre of textile industry and a military centre, it must have had good arrangements for medical service in the earlier days. The advent of the Muslims in the region saw the appearance of the Unani system of medicine. The City and its surroundings being placed on top of the tableland have healthy climate and the people were exposed to lesser hazards of health. The advent of the Britishers, the establishment of the Cantonment, the settling of the Anglo-Indian officers and their families in Bangalore Cantonment area, etc. have all contributed to the popularisation of Allopathic system. Many Allopathic hospitals and dispensaries were opened by the British in the city.

The Allopathic medicines were made available to the public in the district with the establishment of a dispensary in 1833 in a room of the Commissioner's Office in the Fort of Bangalore. In 1834, one dispensary was started in the Cantonment. In 1839 a hospital and a dispensary were established on a small scale in the *peta* (old city) which became very popular. In 1847 a suitable building was erected to accommodate 50 patients and in 1849 the Fort Dispensary was also provided with a proper building. The *peta* hospital was enlarged in 1852, 1856 and 1866. In 1852 a hospital for 70 in-patients was established in the Cantonment bazar. In 1866 the Bowring hospital was started and occupied in 1868 and in 1872 the *peta* hospital was converted into a dispensary transferring the in-patients to the Bowring hospital. The number of in-patients and out-patients treated in Bangalore in the government hospitals for some years was as follows: 1855- 56-1,696 in-patients, 11,243 out-patients; 1865-66-1,800 and 18,711; 1875-76-1,482 and 47,604; and 1880-81-1,688 and 46,040; and 1884-85-1,451 and 41,608. The diseases for which treatment was sought were skin diseases (specially scabies), fevers, diseases of the eye, injuries, dysentery and diarrhoea, respiratory and venereal diseases. There were also

two special hospitals in the *peta*, the Lepers Asylum started in 1845 and the Lunatic Asylum opened in 1850, the inmates being removed from a smaller place of custody which existed two years previously. The Surgeon to the Mysore Commission was in charge of the Bowring Hospital and the asylums in the town with the general control of vaccination while another medical officer was supervising the *peta* dispensary and was the Superintendent of the Central Jail also. The Deputy Surgeon General, Indian Medical Department for Mysore and the Ceded districts personally inspected the institutions at Bangalore and acted as Sanitary Commissioner and Registrar of Vital Statistics.

A Government Maternity Hospital, which owes its existence to the general contribution made by the well known philanthropist Rao Bhahadur Yele Mallappa Setty of Bangalore, was opened in the Cenotaph Road (now Nrupathunga Road) in 1880 and was handed over to the Bangalore Municipality in 1883. It was under the supervision of the Senior Surgeon to the Mysore Government. Till 1884, only labour cases were treated here and in 1884, other patients also got treatment. It was the only maternity hospital in the city till 1886 when St. Martha's Hospital was started. The number of labour cases treated as in-patients and the out-patients from 1881 to 1885 were as follows: 1881: 47-1,954; 1882: 65-2,982; 1883: 74-3,356; 1884: 70-3,766; and 1885: 114-3,732. It had been reported that high caste females were yet to resort to these hospitals as in-patients as much as could be desired. The earlier dispensaries and hospitals in the Cantonment area were the Zenana Muslim Hospital started in 1893, now the Church of South India Hospital, the Municipal dispensaries at Ulsoor, Shooly (Saadat Dispensary) and Frazer Town (Annaswamy Mudaliar Dispensary) with out-patient facilities only and an Isolation Hospital in Longford Town. The Annaswamy Mudaliar dispensary and the Saadat dispensary were opened by the Municipality out of the donations made by Rao Bahadur B.P. Annaswamy Mudaliar and Aga Abdulla Sait. In 1923-24, the Ulsoor dispensary treated 28,367 out-patients and performed 383 minor operations and these figures for Frazer Town dispensary were 22,083 and 174 and for Shoolay dispensary 17,976 out-patients and 220 minor operations respectively. The Indo-Aryan dispensary founded in 1899 by V.D. Pandit under the patronage of P.N. Krishnamurthy attracted large number of patients including Government officials. The Ayurvedic and Unani dispensaries of the Municipality were also popular. In 1928-29, the three allopathic dispensaries at Ulsoor, Shoolay and Frazer Town had treated 12,636 patients while the two Ayurvedic and Unani dispensaries 12,814 patients.

The St. Martha's Hospital in the City was founded in 1886 by the Sisters of the Good Shepherds. In 1893, a Government Hospital was opened in the City and was temporarily located in the District Lock-up buildings until 1900 when it was transferred to the new building constructed nearer to the *peta* and was named as Victoria Hospital. It may be recalled here that there were separate wards for Brahmins, Veerashaivas and other communities initially. The number of out-patients treated in the Victoria, St. Marthas and the Maternity Hospital in 1928-29

was 30,578 and in 1939-40, Victoria Hospital alone treated 83,330 patients indicating the gaining popularity of the Allopathic system in the City. In 1939-40, the Victoria, The Vanivilas and the Minto Hospitals together treated 1,51,473 patients. The H.S.I.S. Ghosha Hospital was started for Muslim women in 1925 and owes its origin to the liberal contribution of Sir Ismail Sait. The starting of the Victoria, and the Vanivilas Hospitals in the City are the milestones in the medical history of the district. In 1939, the Kempa Cheluvamba Maternity Hospital was added to the list of Government Hospitals in the City. The number of hospitals and nursing homes gradually increased year after year with the development and expansion of the City.

Among the earlier medical institutions in the City, mention may be made of the Vaccine Institute started in 1891 to train vaccinators and to manufacture vaccine, and the Public Health Institute established in 1911 to analyse chemical, bacteriological and toxicological samples.

The District Surgeon, Bangalore District is the authority in the district to issue medical certificates for fresh appointments of gazetted and non-gazetted officers in the State and the Central Governments and Officials in the industries and banks. He authorises to conduct detailed examination of pensioners for commutation of pension. He countersigns the *post-mortem* reports, medical certificates issued by private practitioners, conducts medical examinations of government servants and is the administrative head of the Central Jail Hospital, Bangalore.

Sanitation

The need for the Department of Health as a separate department was felt in 1887 when the Senior Surgeon was appointed as *ex-officio* Sanitary Commissioner. The out-break of Plague in Bangalore in 1898 caused the creation of the post of Health Officer for Bangalore City and the first health officer was appointed on Second October 1898. The Health Department was reorganised in 1907 with the appointment of whole-time Deputy Sanitary Commissioner in 1907. Health Officers were appointed in the district. A Central Sanitary Board for the State and District Sanitary Boards for the districts were organised for the improvement of Sanitation. In 1917 a full-time Sanitary Commissioner was appointed. In 1929 the Sanitary Department was separated from medical department and the Department was named as the Health Department and the Sanitary Commissioner as the Director of Health. A Central Health Committee was created. The Department was divided into seven bureaux, the Bureau of Administration, Bureau of Epidemiology and Communicable Diseases, Bureau of Laboratories, Bureau of Vital Statistics, Bureau of Health Education, Bureau of Sanitary Engineering and the Bureau of Rural Health. In Bangalore District, the District Medical Officer continued to work as *ex-officio* District Sanitary Officer.

The Sanitary conditions of the city prior to 1877 was irregular. The open drainage caused bad smell and there was only one sewage cart to dispose of the filth. Public health measures assumed much importance with the out-break of

plague in 1898. In March 1898, a loan of Rs. 50,000 was granted to the Bangalore Municipality by the Government for sanitary improvements, such as cleaning and repairing of drains, repairing of buildings, demolishing of dirty and ruinous unoccupied buildings, etc. House sanitation bye-laws were introduced, collection of death statistics were entrusted to octroi officials. The menace of small pox led to the opening of the Vaccine Institute and the Epidemic Diseases Hospital. The laying of new extensions was a result of plague operations in the city. The Village Improvement Scheme of 1914 and the formation of Village Improvement Committees stimulated the health activities in rural areas. The launching of Rural Health Centres in 1931 was a measure to improve the Village Sanitation, Immunization service, control of epidemics, etc. The Village Sanitation Regulation made the headman of the Village responsible for the cleanliness and sanitary conditions in villages.

In June 1960, the curative and preventive services which were separate till then were amalgamated at the taluk level and below under the control of the District Health Officer and the Health and Medical department were combined into Directorate of Health services, each district being headed by a District Health Officer. The duties of the Health Officer consists of supervision and control of epidemics supervision of sanitary arrangements, selection of sites for village extension, examination of drinking water supply, health propaganda work, etc. He is responsible for all the health programmes, both National and State at the district level. The Bangalore City Corporation has its own health department headed by the Health Officer to look after the sanitation and to carry out health programmes in the city.

Earlier the District Health Officer was subordinate to the President of the District Board in administration and the Director of Health in technical and professional matters. The City Health Officer supervised and controlled all health work in the municipal area including cleaning, conservancy, registration of births and deaths, vaccination prevention and suppression of epidemic diseases, supervision of public markets, slaughter-houses, bathing places, burning and burial grounds, inspection of new buildings, cleaning of roads and drainages etc.,

District Health and Family Welfare Office

With the bifurcation of Bangalore district into Bangalore Rural district and Bangalore district, the new District Health and Family Welfare Office of the Bangalore district came into existence in 1986. The office is headed by the District Health and Family Welfare Officer and is assisted in his office by the Headquarters Assistant to the District Health and Family Welfare Officer, District Malaria Officer, District Leprosy Officer, District Immunisation Officer, Nursing Superintendent and the District Health Education Officer on the technical side, and by the gazetted Assistant, Superintendent and other subordinate staff. At the Sub-divisional level there are the Assistant District Health and Family Welfare Officers

(ADHFWO) for the Bangalore and Anekal Sub-divisions. The duties and responsibilities of the ADH and FWO is the same as that of the DH and F.W.O. but limited to the sub-division and he works under direction and guidance of DH and FWO.

The staff of the department in the district consists of 98 medical officers, 14 health educators, 31 male and 208 female health assistants, 72 pharmacists, 10 laboratory technicians, six ophthalmologists, 15 First and 14 second division clerks, one x-ray technician, six non-medical supervisors, seven *dais*, three typists, one x-ray attender and 199 group D officials and drivers.

In 1988 the City Corporation Health Department was headed by the Health Officer, assisted by Four divisional health officers, two surgeons, 43 assistant surgeons, 15 medical officers, one chemical analyst, Ayurvedic and Unani pandits one each, 30 lady medical officers, one senior biologist, one district health educator, 50 senior and 161 junior health supervisors, 34 lady health visitors, 13 managers and 9,451 other staff including medical, para-medical, office staff and others. There were 6,851 Paurakarmikas in the city.

Vital Statistics

The system of registering births and deaths in the State goes back to 1879. In the earlier days, the village patels registered the births and deaths in rural areas and monthly returns were sent to the taluk office and from there to the district office, where the figures were compiled. The municipalities were compiling data regarding births and deaths in towns and cities. In 1915-16, the rules regarding the registration of births and deaths were revised making provision for actual verification of village registers, professional scrutiny of the figures before tabulation at taluk level and a periodical review of the recorded statistics by local bodies. Again in 1918, regulations were passed to improve the system. A preliminary survey conducted in 1929 in Mysore district revealed that only 50 per cent of the deaths and still fewer births had been actually reported. The Village Accountants are registering the births and deaths in villages to-day and the Municipalities and the Bangalore City Corporation are doing the work in the urban areas of the district. There are 13 centres in Bangalore City where births and deaths in the City are registered. The nursing homes, hospitals and institutions send the reports to these centres which are compiled in the head office. The centres are the Sub-Health Offices at Malleshwaram, Rajajinagar, Gandhibazar, Chickpet, Binnypet, Chamarajapet, Basavanagudi, Jayanagar, Shantinagar (two units), Shivajinagar, Bharatinagar and Rajamahala.

The reported number of births and deaths in Bangalore city during 1987-88 was 81,038 births and 22,322 deaths. The birth rate was 25.9 and the death rate was 7.1. There were 1932 still births in 1987-88 in the City. Maternity cases from outside Bangalore seeking admission in the City Nursing homes and referral hospitals have caused the high birth rate in the district.

SRS System: The Sample Registration System (SRS) began functioning in rural areas of the State from June 1966 and from July 1968 in urban areas. The SRS system provides reliable estimates of annual birth rate and death rate and measures of fertility and mortality separately for rural and urban areas. There are part-time enumerators in the selected places who register births and deaths in their areas of jurisdiction. The S.R.S. Units in the district from 1971 to 1975 are the following: Rural units were Bannerghatta in Anekal taluk and Kalkeri in Bangalore South taluk; urban units were Benson Town, Chamarajapet, Model House Street, Sampangiramanagar, Gandhi Bazar, Kalasipalya, Murphy Town, Malleshwaram, Palace Guttahalli, Neelasandra, Ramachandrapura and Taramandalpet, all in Bangalore City. The above units were under the administrative control of the State Government. Old Tharagupet, Padarayanapura (8th Main), Goripalya (Jagjivanram Nagar), Shankarapuram, Wilson Garden, Gangenahalli, Shantinagar, Muthanna Gardens, Somanatha Mudaliar Street and Devarajeevanahalli all in Bangalore City Agglomeration were the urban units for the same period under the control of Director of Census Operations. In 1982, the following were the SRS Units in the district: The rural units were Bannerghatta and Kalkeri under the control of State Government; and the urban units were Rajajinagar, Subramanyapura, Bhashyamnagar, Ramachandrapura I and II, Padarayanapura, Azadnagar I & II, Yediyur, Jayanagar, Wilson Garden, Vidhana Soudha, Sampangiramanagar, Murphy Town, Byataguttepalya, Devarajeevanahalli (under the control of State Government), Old Tharagupet, Padarayanapura (8th Main), Goripalya, Shankarapura, Wilson Gardens, Gangenahalli, Shanthinagar, Muthanna Garden, Somanatha Mudaliar Street and Devarajeevanahalli under the control of Director of Census Operations. During 1983, Sabmangala and Muthsandra in Anekal taluk, Gavipura in Bangalore South taluk, Guddadahalli and Jarakabande Kaval in Bangalore North Taluk were the rural units and Rajajinagar Subramanyapura, Bhashyamnagar, Ramachandrapura I and II, Padarayanapura, Azadnagar I & II, Yediyur, Jayanagar, Wilson Garden, Vidhana Soudha, Sampangiramanagar, Murphy Town, Byataguttepalya, Devarajeevanahalli (under State Government Control), Rajajinagar, Pattandur, Old Tharagupet, Padarayanapura (8th Main), Goripalya, Shankarapuram, Wilson Gardens, Gangenahalli, Shanthinagar, Muthanna Garden, Somanatha Mudaliar Street and Devarajeevanahalli under the control of Director of Census Operations were the urban units.

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 births and deaths for the present Bangalore district are not available for the earlier periods and hence they are given only for the undivided Bangalore district. 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 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 15,670 in 1916 and a minimum of 10,466 in 1919. During the next decade from 1921 to 1930, the annual average of births was 14,131 with a maximum of 16,643 in 1926 and a minimum of 11,720 in 1921. The average number of deaths in the decade from 1911 to 1920 was 14,508 with maximum and minimum of 35,593 in 1918 and 9,082 in 1912 respectively. The heavy toll of death in 1918 was probably due to the epidemic influenza. During the next ten years from 1921 to 1930 the annual average was 10,871 with a maximum of 13,828 in 1922 and a minimum of 7,987 in 1926. With the improvement of health conditions in the later years, the births remaining the same or increasing and the deaths drastically decreasing year after year led to the population explosion. The birth and death rates computed 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. The enquiry had revealed that the accuracy of reporting in Bangalore City used to be 59 per cent births and 89 per cent deaths. The births and deaths respectively reported in Bangalore City from 1908 to 1931 were as follows:

1908-2,094,	3,230;	1909-2,087,	3,618;	1910-1,824,	3,670;
1911-2,451,	2,900;	1912-3,235,	3,666;	1913-3,107,	2,935;
1914-3,082,	3,356;	1915-3,382,	2,872;	1916-3,195,	4,052;
1917-3,409,	3,466;	1918-3,309,	5,992;	1919-3,448,	3,425;
1920-3,717,	3,584;	1921-3,255,	3,693;	1922-3,444,	3,806;
1923-3,750,	3,422;	1924-4,070,	3,978;	1925-4,453,	3,779;
1926-4,525,	3,209;	1927-4,630,	3,250;	1928-4,699,	4,195;
1929-4,628,	3,902;	1930-5,757,	4,456; and	1931-5,767,	4,290.

The table below gives the reported total births, deaths, infant deaths, maternal deaths and still births for the undivided Bangalore District from 1971 to 1983 excluding Bangalore City. (These are only registered figures and there are chances of under-reporting).

Years	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	14,781	5,169	171	448	45
1972	17,955	6,785	569	444	91
1973	15,702	5,813	722	510	48
1974	14,858	6,185	878	524	31
1975	14,556	6,392	782	543	41
1976	13,217	5,431	795	388	36
1977	12,260	6,187	241	373	28

1	2	3	4	5	6
1978	10,270	3,412	169	232	12
1979	11,368	3,694	N.A.	243	23
1980	13,244	1,060	N.A.	94	11
1981	12,683	3,631	N.A.	209	20
1982	11,508	6,352	N.A.	173	15
1983	9,319	626	N.A.	17	2

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

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 (incomplete) as the coverage is 50% or less and hence birth and death rates have not been calculated for the district.

The following table shows the number of reported births, deaths, still births, Infant deaths and maternal deaths from 1971 to 1983 in Bangalore City (Corporation).

Year	Birth	Death	Still births	Infant deaths	Maternal deaths
1971	53,729	14,226	1,602	2,866	04
1972	57,449	15,490	1,458	3,473	40
1973	57,758	18,151	1,911	3,645	14
1974	56,696	17,638	1,955	3,321	59
1975	59,452	18,536	1,773	3,517	08
1976	61,383	17,608	1,773	3,908	87
1977	64,083	16,868	1,727	4,270	223
1978	64,028	18,195	1,811	4,247	36
1979	67,225	20,013	NA	4,356	70
1980	68,240	19,714	NA	2,393	19
1981	71,718	21,996	NA	4,035	45
1982	70,420	19,758	NA	5,052	46
1983	74,295	21,838	NA	3,843	31

Source: Annual Reports on the working of the R.B.D. Act 1969. For latest figures (1987-88) see the section Vital Statistics in page-772

Communicable Diseases

Some of the important Communicable diseases found in the district and the impact of their incidence is discussed below.

Plague: The first case of plague in Bangalore City (old *peta*) was reported on 12th August 1898. A butler of a Loco Superintendent arrived from Hubli on 11th, developed plague on 12th and died on 15th of August 1898. In the beginning there were a total of 23 plague cases and for the first four weeks upto 9th September 1898, there were only a few cases confined to the proximity of Goods Shed Road and its neighbourhood Gowdanpete, Aralepete and Akkipete with an average mortality rate of 60 per week for these weeks. From 19th of September the mortality rose to 105 per week for two weeks. In October there were 1,393 attacks and the total deaths were 2,807. The severity of the disease went on increasing upto 9th November and began to decline after 15th Nov and by the middle of December 1898, the city took normal appearance, the disease being continued in the outlying portions of the city in January 1899. The number of plague cases reported during January, February and March 1899 were only 47, 7 and 4 respectively. There was one death in the Civil and Military Station in September 1898, 210 in October, 1,319 in November and 1,547 in December. The situation eased in Jan 1899, but still there were 187 deaths in January, 40 in February and 17 in March, bringing the total to 3,321 in the area. There were no indigenous cases from March to middle of June. From 21st June 1899 to 30th June 1899 there were nine attacks with eight deaths. There were 348 deaths in 1899- 1900 in the C and M. Station. The total mortality in 1888-89 in the city *peta* was 8,058, of which death due to plague was estimated to be 6,658 and of this number only 2,665 deaths were registered and 3,393 deaths from plague escaped detection. The cost of plague operation in the city (*peta*) was met by the plague fund and the amount was Rs. 2,45,790. In the early part of September 1898, when plague attacked scavengers, sweepers were segregated, the conservancy establishment struck work. The terror caused by the dead bodies being found thrown into dust bins and manure heaps resulted in the manure cart contractors and their men refusing to remove the sweepings. The Municipality purchased 22 carts and 22 pairs of bullocks at a cost of Rs. 2,565. The sweepers in the Civil and Military Station also struck work and the Deputy Commissioner had to seek the carts and drivers from the city. A good portion of the town was deserted, trade was paralysed, necessities of life were sold at famine rates. The plague patients were deserted in their houses while their family members left, and dead bodies were also thrown into the public streets and sometime into the municipal latrines and dust bins. The plague measures like orders to live in segregation were resisted by the people with protests and mass meetings. The fleeing of the people from the city caused the rapid spread of the disease in the district.

In the district Bangalore taluk was the first to be affected followed by Anekal. During October 1898, Dommasandra in Anekal taluk, Yelahanka and Yeshwanthapur, were in the grip of this epidemic. The attacks increased in November 1898 to 291 in these villages including Bidadi and rose to 1,676 in December and reached the peak in January 1899. Plague reappeared in June 1899 in Kasaghattapura

(Nelamangala taluk), Ramohally in Bangalore taluk and Doddagubbi in Hoskote taluk. The number of villages affected, total number of attacks and deaths during 1898-99 in the taluks of Anekal and Bangalore were as follows. Anekal-30 villages, 1,382 attacks and 1,134 deaths; Bangalore tq-74 villages, 894 attacks and 853 deaths. Anekal town had the highest number of attacks of 599 for a population of 7,419 and nearly half the total number of attacks in the taluk was during the month of January 1899. At Anekal, the weavers who were thrown out of employment were employed to fill the fort trench at a cost of Rs. 2,200.

Epidemic diseases regulations were passed in 1897 and 1898 empowering the Government to take action against the menace of plague, to make rules to regulate the conservancy, etc. much in advance in anticipation of the spread of the disease. A Plague Commission was appointed (in January 1898) to deal with administrative measures. Supervisory system was introduced in the City at the burial and cremation grounds. Road outposts and Inspection stations were established; camps for detection and observation were started; fairs and festivals were prohibited. In 1898, Yeshwanthpur was made a Railway Medical Inspection Station. In 1900 a health department to look after the plague preventive measures was sanctioned. The city was divided into four wards, each being looked after by a medical officer and a supervisor. The Joint Committee of the executive officers of the City and Military Station gave special attention to measures like the establishment of quarantine camps for travellers coming from infected places, issue of hand bills and notices explaining the symptom of the disease etc. Sanitary measures like cleaning and repairing of drains, repairing, whitewashing and cleaning or demolishing of dirty and ruinous unoccupied buildings were also undertaken. In the city 651 houses which were unfit for human habitation were demolished and 893 houses were acquired for opening new roads. House sanitation bye-laws were introduced. Measures were taken for destroying rats. An amount of six annas for a dozen bandicoots killed, three annas for a dozen rats and two annas for a dozen mice killed were notified. This mission of destroying of rats was continued till the year 1910-11. A free grant of Rs. 10,500 for the adoption of sanitary measures in Bangalore was made by the Government. A separate health officer was appointed to Bangalore City from October 1898.

The Government Plague Hospital had two buildings to accommodate 32 patients and other structures to accommodate 108 patients. There were two Eurasian matrons, two compounders, one *mastri*, two load wardens, 23 maleworkers and 16 female workers, *dobis*, peons, cart drivers etc. The total admissions made in 1898-99 were 2,053 and out of this 641 were cured and discharged and 1,412 died. Inoculation was started at the very commencement of the out-break in September 1898. There were 14 medical officers including a lady doctor in the team in Bangalore and the total number inoculated was 36,259 of which 34,832 were inoculated for the first time. Disinfection of houses was another

measure and by 30th June 1899, 8,413 houses had been disinfected in the city. The out-going persons were also disinfected at the city railway station to avoid the spread of the disease.

Segregation camps were set up and sheds of many kinds were erected at health camps in 1898-99. There were 588 sheds with 1,842 occupying them and 35 sheds had been left unoccupied. Compulsory segregation led people to run away from the City (30,000 people leaving the *peta* alone by Dec. 1898) resulting in spread of the disease to the rural parts. The district had been subjected to the annual outbreaks of the epidemic, generally between May and October and the outbreaks were severe in the year 1902, 1903 and 1904. The disease disappeared after the introduction of the National Malaria Control Programme and the district is now free from plague.

Malaria: Malaria had been a disease of some concern in the district in the past. In the earlier decades of this century itself anti-malaria work was carried out by the Bangalore City Municipality like oiling of ponds and stagnant waters, filling up of disused wells, etc. The Public Health Institute conducted public health works, prepared vaccines and was investigating the epidemic diseases. In 1932 proposals were made to carry out anti-malaria operations in Bangalore City. Parisgreen for open water and *Gambusia* fishes for the wells were the methods used. The spleen survey conducted in the city from 1927 to 1932 recorded the spleen rate as follows: 23.2, 11.5, 8.7, 6.1, 0.6 and 0.7 respectively. The decrease in the spleen rate was due to the establishment of antilarval work in the city.

The Mosquito Control Programme was started by the Bangalore City Corporation in 1963 and in 1974, the Urban Mosquito Control Programme with Central assistance came into being. Under this programme, there are one Surgeon, one health officer, five unit officers, 25 junior health supervisors, one entomologist, two laboratory technicians, two insect catchers, 325 additional area workers and 19 other officials. Under Central Assistance Programme an additional staff of one Senior Biologist, 20 insect catchers and 451 area workers are working.

The National Malaria Control Programme was started in the district in 1958 and the district entered into the maintenance phase in 1964. There is a District Malaria Officer for the district who works under the District Health and Family Welfare Officer. The District Malaria Officer controls, supervises and issue instructions regarding the Malaria Control Programme in the district. The malaria cases reported in the district during 1987 were only 73 of which 57 were from the Bangalore City and the rest from other Primary Health Centres of the district. In 1988, there were 71 malaria cases reported of which 50 were from the Bangalore City. There were no cases reported from the P.H.C. of Dommasandra and Anekal, and only one case from PHC Kaggalipura for the years 1986, 1987 and 1988. The following table shows the number of blood smears collected, examined and the Malaria positive cases reported in the district from 1980 to 1988 in the district.

Year	Blood smears collected.	Blood smears examined.	Number found positive to Malaria.	Year	Blood smears collected.	Blood smears examined.	Number found positive to Malaria.
1980	1,38,128	1,38,128	685	1985	1,50,990	1,50,990	66
1981	1,80,015	1,80,015	1,017	1986	1,67,595	1,67,595	35
1982	1,60,535	1,60,535	550	1987	1,24,600	1,24,600	73
1983	1,62,805	1,62,805	258	1988	1,21,823	1,21,823	71
1984	1,26,689	1,26,689	69	*1989	16,103	16,103	5

* till sept. 1989 only

The Bangalore City Corporation has taken measures to control mosquito by spraying Pyrethrum and other chemicals in the Corporation area. During 1988-89 an amount of Rs. 53.26 lakhs was set apart for mosquito control programme and Rs. 524.94 lakhs for Malaria Control Programme.

Tuberculosis: Tuberculosis is a common infectious disease found evrywhere in the world and especially in crowded dwelling places without proper light and ventilation. A study conducted in 1926- 27 in the State on Tuberculosis by Dr. P.S. Chandrasekhar reveals that Tuberculosis (T.B.) patients were found in Bangalore City, Anekal, Yalahanka, Sarjapur, Vartur, Settyhalli and other places of the district. Bangalore City alone contributed 21.4 per cent of the T.B. patients reported in the State according to the study. It was also reported that males among Hindus and females among Muslims and Christians were suffering from the disease. According to the report of the study, more deaths from T.B. were found in Aralapete, Ganigarpet, Chamarajapet and other divisions of the Bangalore City. The number of deaths from the disease from 1913 to 1926 in Bangalore City was as follows: 144, 189, 192, 208, 296, 278, 291, 273, 266, 303, 319, 383, 391 and 327, respectively. In 1926 there were no T.B. dispensaries or hospitals in Bangalore City and the patients were treated and admitted in the Victoria Hospital. To-day, there are isolation hosptials, T.B. Sanatorium and T.B. Demonstration and Training Centres in Bangalore City. During 1988-89, in Bangalore district 2,026 samples of sputum were collected for examination, out of which 150 new T.b. cases were detected as against 17,210 samples of sputum collected for examination and detecting 6,695 T.B. cases in 1987-88. B.C.G. vaccination against T.B. was introduced under the National Tuberculosis Programme during the post-Independence period and the vaccine is administered to children under immunisation programme. According to the Status Report 1988-89 of the Directorate of Health and F.W. Services there were 68,000 T.B. cases in the district as on 31-3-1989.

Leprosy: Leprosy is an age-old disease and people are afraid of the dreadful appearance of the patients. The disease is curable by proper treatment. There is more public apathy about this disease and therefore the patients often hide the disease till it becomes chronic. There are both Government and private agencies in the district engaged in identification of the disease and rendering curative measures. The Lepers Asylum is one of the special hospitals in Bangalore City started in 1845 for the leprosy patients. The National Leprosy Control (now Eradication) programme launched by the Government of India is in operation in the district, from 1954-55, with the objectives of rendering infectious patients non-infectious, to prevent the onset of deformities and to check the spread of the disease in the community. There is one Leprosy Officer for the district who coordinates the Leprosy work of private agencies in the district. The total number of leprosy cases recorded for treatment during November 1978 in the undivided district of Bangalore was 3,686 and Bangalore district was endemic with a prevalence of five per 1,000 population. And it was estimated that there were 12 to 15 thousand leprosy patients in Bangalore City. The Victoria Hospital, Bangalore was recording almost 400 new cases every year. The urban leprosy problem in Bangalore is quite alarming according to a report.

In a survey in Bangalore during 1978, 11,308 people were enumerated, 6,978 were examined detecting 81 leprosy cases. The prevalence rate worked out was 11.6 for every 1,000 population. In the School Survey 15,215 students were enumerated 14,409 were examined and 60 cases were detected giving a prevalence rate of 4.16 per 1,000. It was found that the prevalence rate was the same even in the sophisticated schools. During this period out of 109 registered cases, 24.7 per cent showed deformities and 55.9 per cent anaesthesia. During 1988-89, 436 new leprosy cases were detected and 574 had been cured as against 1,428 cases detected and 818 cured in 1987-88 in the district.

The Bangalore District Leprosy office was started in November 1988, headed by the District Leprosy Officer assisted in his office by one Senior and one Junior non-medical supervisors, a laboratory technician, an extension educator and other office staff. There are seven urban leprosy control centres in Bangalore City one each at Victoria, Bowring, K.C. General and Epidemic Diseases hospitals, one at Primary Health Centre Mavalli and two units at Leprosy Hospital. There are 20 SET (Survey, Education and Treatment) centres in the district. Each Urban Leprosy control centre is managed by a Senior non-medical supervisor. There is one Modified Leprosy Control Unit at Anekal in charge of a Medical Officer who is assisted by one Junior Laboratory Technician. There are 516 villages in the district where leprosy patients have been detected.

The prevalence rate of leprosy in Anekal Primary Health Centre area is the highest in the district with 7.6 per thousand population followed by Dommasandra Primary Health Centre area with 5.9 and the least is in Tavarekere P.H.C. area with

0.36 followed by K. Gollahalli PHC area with 0.88. The taluk-wise number of leprosy patients detected in the district is given in the following table with prevalence rate in brackets.

Taluku	Leprosy patients as on			
	31-3-87	31-3-88	31-3-89	30-9-89
Bangalore North	350(0.85)	419(1.00)	359(0.78)	394(0.90)
Bangalore South	671(1.50)	651(1.46)	470(1.05)	435(0.90)
Anekal	816(4.92)	1049(6.30)	888(5.36)	915(5.52)
Corporation area	8625(3.90)	2646(1.00)	2336(0.99)	2042(0.82)
Total	10462(2.99)	4765(1.36)	4053(1.15)	3786(1.08)

The Sumanahalli Society for the welfare and rehabilitation of leprosy patients and the eradication of leprosy was started in Bangalore during 1977-78. The Society maintains two units, the Survey-Education and Treatment (SET) Centre and the Rehabilitation and Training Centre (RTC). The RTC on Magadi Road 10 km away from Bangalore on a 63.2 acres of land given by the State Government has adopted a family based approach giving vocational training for the patients. In 1980, five Corporation wards of Rajajinagar, Basavanagudi, Yedyur, Jayanagar and Wilson Gardens of Bangalore City were allotted to the Society for survey and treatment. From 1979 to the end of December 1989, under project area, the Society examined 3,15,292 persons out of an enumerated population of 3,74,719 which included 146 schools and 65 slums, registering 1,273 old and new patients. Of these patients, 157 were under treatment during December 1989 and the rest were discharged. In the non-project area from 1979 to March 1989, the Society examined 40,548 persons out of an enumerated population of 45,920 in 46 schools and five slums detecting 820 old and new cases. There were 89 patients under treatment during December 1989 and the rest being discharged. In another project, during 1986-88 and 1989, the Society examined 47,507 persons out of an enumerated population of 62,124, detecting 146 cases of which 15 were under treatment during December 1989. Sister Mary Mascarenhas, the Job Placement Officer of the Society, Abdul Ghani and Hanumantha, cured patients of the society received National Awards in 1990 as the best job placement officer, best self-employed person and best employed by an organisation respectively.

The Katharina Kasper Leprosy Control Scheme (a branch of the Katharina Kasper Social Service Society, Bangalore) was launched in 1978 in Bangalore City and covers the areas of Palace Orchard, Munireddypalya, St. John Hills, Cooke Town and Shivana Chetty Garden of the City. The number of leprosy cases detected under the scheme from 1978 to 1989 was as follows: 166, 118, 219, 111, 196, 119, 84, 98, 63, 88, 68 and 53 respectively. Under the scheme there are one Physician, two staff nurses, two technicians, one physiotherapist, five para-medical workers and

others. Since 1985, the field work has been stopped and attention is being paid to the preparation of health education material. The organisation has surveyed 2,51,466 persons examining about 70 percent of them. The prevalence rate was found to be 6.0 per cent.

The other organisation in the field of leprosy work in the district are the Shantha Jeevjyothi, the United Apostolic Church, Sarjapura, the C.S.I. Hospital, the Baptist Hospital, St. John Medical College Hospital and NIMHANS. The Navjeevana Nilaya on the HAL Road is a rehabilitation centre for the cured Leprosy Patients.

Small pox: Small pox as an epidemic disease has been completely eradicated from the district. But its impact in the earlier years were very severe and the first sanitary measure was that of vaccination against this disease said to have been initiated by Abbe Dubois, a French Missionary around 1800. The last case of death due to this disease in the undivided district was reported only in 1974 and since then the district is free from this epidemic. The epidemic was very severe in the district in between 1871 and 1874. The Government started administering vaccination in the year 1855 and prior to that there were private vaccinators in the State. In 1880-81, there were four vaccinators in Bangalore City.

Dengue was a peculiar type of disease that appeared in 1873 and reached its height in March of that year.

Influenza: Another epidemic like plague that swept the city in 1918-19 was influenza which broke out in Bangalore. It was imported from Bombay, during June 1918. It came to India from Spain. The first wave of the disease lasted for 6-8 months with lesser hazards but the second wave during October, 1918 caused heavy damage to the life in Bangalore City and the Cantonment as well as in the rural parts of the district. It has been reported that the ten dispensaries and hospitals in Bangalore Cantonment treated 7,607 cases of influenza during this period. There were 49 deaths in Bowring Hospital and 52 in Lady Curzon Hospital due to this disease. From July to December 1918 there were 1,105 admissions and 124 deaths in the Military hospital due to this disease. (These are only sample figures; not of the whole city). In those days the disease was called 'Spanish Fever' or Grippe Espangole.

Cholera: The out-break of cholera was very severe in the district in the later parts of 1860s and the early years of 1870s. The disease as an epidemic, was very severe in 1866-67 in Bangalore City (*peta*) in 1870 in Bangalore Cantonment area and again in September 1875 in the city. The disease as an epidemic is doing considerable damage to the human life continuously. In the Corporation area during 1987-88 there were 1,534 attacks of gastroenteritis with 27 deaths and 228 cholera attacks with four deaths as against 2,139 gastroenteritis attacks with 27 deaths and 226 cholera attacks with one death during 1986-87. During 1988-89, in the Corporation area, 3,09,089 doses of cholera vaccines were administered as against 1,88,740 doses in 1987-88 and 2,40,537 doses in 1986-87 by the Bangalore

City Corporation. In the district in 1988-89 there were 1920 gastroenteritis cases with 21 deaths and 531 cholera attacks with four deaths as against 1,374 gastroenteritis with 23 deaths and 276 cholera attacks with three deaths in 1987-88 and anti-cholera inoculations were done to 3,32,091 persons in 1988-89.

Japanese Encephalitis: The Japanese Encephalitis or brain fever is a disease first found in Japan, a disease spread by culex mosquitoes through pigs. The children are mostly susceptible to this disease and the disease entered Karnataka State from Andhra Pradesh in 1979. The disease manifests itself by high fever, headache, vomiting, shivering and unconsciousness. During 1986-87, there were 24 attacks with ten deaths in the Bangalore Corporation area as against a single attack with no death in 1985-86 and there were no reports of attack during 1987-88.

Rabies is another disease of great concern in the city due to dog bites. During 1988-89, 42,100 doses of anti-rabies vaccines were administered as against 41,200 doses in 1987-88 and 40,930 doses in 1986-87. In 1987-88 as many as 42,356 street dogs were caught by the four dog catching squads in the city.

AIDS (Acquired Immune Deficiency Syndrome): The recent nightmare in the district is the appearance of AIDS in Bangalore. In 1989, three foreigners in Bangalore showed AIDS positive in a series of blood tests conducted by the AIDS Surveillance Unit at the Victoria Hospital. According to a press report, towards the end of February 1989 the Maharashtra Government had issued a warning that serum-based vaccines manufactured by three pharmaceutical companies had been found to be contaminated with AIDS virus. The Madurai Medical College Hospital warned the State Department of Health that a consignment Rhiggal batch No. 441771 was detected AIDS positive. But by then 1,760 women of the poorer section of the society in the State had already received the vaccine and their addresses could not be traced. In Bangalore the officials were able to detect four cases. The first AIDS case in Karnataka was that of a *devadasi* from Saundatti in Belgaum district spotted in 1987.

The *AIDS Surveillance Unit* at the Victoria Hospital was started in 1987 and the number of samples examined in 1987 was 916; 2,266 in 1988; and 33,792 in 1989. The total number of ELISA Positive was 42 for all these three years. This is the first centre in Karnataka and comes under Indian Council of Medical Research. The Surveillance Unit at the Bowring Hospital was started in June 1989 recognised by Indian Council of Medical Research, but maintained by the State Government and comes under Director General of Health Service, Government of India. The head of the Department of Microbiology is the head of the unit who is assisted by the Laboratory technicians in each centre. In the Bowring Hospital Unit, upto the end of February 1990 from June 1989, 17,444 serum examination have been made out of which 18 ELISA positives have been identified. Of these 18, eight have been confirmed by Western Blot method at Christian Medical College, Vellore. Out of these eight cases, five cases were from Bowring hospital only. Most of the HIV (Human Immuno Deficiency virus) infections, it is stated, are associated with

tuberculosis in this area. (There is another Surveillance Unit at Hubli started in June 1989).

Bangalore is one of the centres of Nuclear medicines in the country. Nuclear medicine is that part of the medicine which deals with the use of radio-active isotopes. There are more than 30 radio active isotopes and hundreds of 'labelled compounds' (A labelled compound is a chemical in which any radio active atom is incorporated) used in medicine. Out of more than hundred nuclear medicine centres in India, 15 were in Karnataka and 12 in Bangalore in 1987. The first nuclear centre in the city is the Bangalore Nursing Home, a private institution which installed an electronic set-up of Babha Atomic Research Centre, in 1966, to use Radioactive Iodine 131 for the study of the functions of the thyroid gland. In 1974 a nuclear medicine department was started in the Air Force Hospital with the facility of a scanner and in 1975, the Bowring and Lady Curzon Hospital was equipped with facilities for diagnosis with iodine 131. In 1978, a beginning was made in the Kidwai Memorial Institute of Oncology with nuclear medicine and to-day the Institute has the most advanced nuclear medicine set-up and the range of work done there is comparable to any work undertaken in any modern centre in the world. A regional centre for radio pharmaceuticals of the Babha Atomic Research Centre was set up at the Kidwai Institute to meet the needs of the supply of short-lived radio isotopes.

Among the health problems mention may be made of the high incidence of asthma in Bangalore City. It is a general opinion and a complaint also by the asthma patients that the climate of Bangalore is more conducive to asthma. Under the auspices of the Asthma Research Society with the support of Indian Institute of Science and financial help from the Karnataka State Council for Science and Technology, a survey of pollen and fungal spore content of environment was undertaken from July 1976 to July 1978. Atmospheric pollen and fungal spores were collected from different parts of the city and the study resulted in identification of 75 types of air-borne pollen and 120 types of fungal spores. The pollen grains of the local plants were present in the atmosphere all the year round. Different pollen grains were found to be maximum in different seasons and the fungal spores were low during rainy season.

Diabetes mellitus is another chronic disease found to be more prevalent in the urban dwellers. It is estimated that there are more than one lakh diabetic patients in Bangalore City (nearly three per cent of the population as against the national average of 1.8 per cent). The Diabetic Club formed in 1974 is designed to help the diabetic patients, their families at various stages by arranging periodic lectures, group discussions, question and answer sessions, detection camps, exhibition, diet display etc.

The rapid development of Bangalore, its urbanisation and over- population have brought along with them various health hazards. The rapid spread of T.B., gastroenteritis, cancer, polio and such other diseases in overcrowded slums is a

common health problem of the city. According to the psychiatric department of the National Institute of Mental Health and Neuro Sciences, 30 percent of all patients have psychiatric symptoms often precipitated by stress. Stress is now known to be a major cause directly or indirectly to coronary heart disease, diabetes, cancer, lung ailments, accidental injuries, cirrhosis of the liver and suicide. The high rate of hypertension and ulcers have been attributed to job pressures. Road safety has become a matter of serious concern. The three commonly sold drugs are those for ulcers, hypertension and tranquilisers.

In the following table deaths due to various causes are shown as reported in Bangalore city corporation area from 1971 to 1978 and the figures for the Bangalore City Corporation area are not available separately from 1979 onwards. In the next table, deaths due to various causes are given for the Bangalore district (undivided) excluding Bangalore City Corporation area from 1971 to 1978 and for the whole undivided district including Bangalore City Corporation area from 1979 to 1983. (See tables on pages 788 and 789).

Deaths due to various causes reported in Bangalore City during the years 1971 to 1978.

Sl. No.	Causes	1971	1972	1973	1974	1975	1976	1977	1978
1	2	3	4	5	6	7	8	9	10
1.	Plague	-	-	-	-	-	-	-	-
2.	Small Pox	-	2	-	-	-	-	-	-
3.	Cholera	-	3	-	-	-	196	-	-
4.	Malaria	-	3	-	-	-	-	-	-
5.	Thypoid	20	29	-	-	2	-	-	-
6.	Other Fever	114	1,471	2,191	2,780	2,774	2,609	2,783	2,991
7.	Dysentery & Diarrhoea	624	862	1,414	1,485	1,318	1,463	983	1,886
8.	T.B. & Pulmanery	477	258	-	-	282	354	576	814
9.	Respiratory diseases	315	1,084	1,917	2,288	2,046	2,202	2,300	2,242
10.	Leprosy	8	6	-	-	7	2	41	15
11.	Maternal death.	4	40	14	59	8	87	223	36
12.	Suicide	55	58	-	-	21	8	78	259
13.	Drowning	36	9	-	-	23	-	-	-
14.	Wounds & Accidents	199	203	-	-	161	488	569	539

1	2	3	4	5	6	7	8	9	10
15.	Killed by Wild beasts	2	1	-	-	-	-	-	-
16.	Snake bite.	2	-	-	-	1	-	-	-
17.	Rabies.	4	2	-	-	32	-	-	-
18.	Tetanus	242	114	-	-	123	88	-	-
19.	Diphtheria	65	12	-	-	19	2	-	-
20.	Whooping Cough	3	10	-	-	-	-	-	-
21.	Polio	-	-	-	-	-	-	-	-
22.	Other causes	12,041	11,296	12,615	11,025	11,739	10,109	9,315	9,413
23.	Not stated	15	26	-	-	-	-	-	-
Total		14,226	15,490	18,151	17,638	18,536	17,608	16,868	18,195

Source: Annual report on the working of the RBD Act. 1969.

Note: After 1979 separate figures for the city are not available.

Deaths due to various causes reported in Bangalore District (excluding Bangalore City) during the years 1971 to 1983.

Sl. No.	Causes	1971	1972	1973	1974	1975	1976	1977	1978	1979*	1980	1981	1982	1983
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	Plague	-	5	-	2	-	-	-	-	-	-	-	-	-
2.	Small Pox	38	30	24	45	-	-	-	-	-	-	-	-	-
3.	Cholera	23	83	34	39	5	9	-	-	-	-	7	5	4
4.	Malaria	610	633	227	322	156	171	215	111	14	8	7	6	-
5.	Typhoid	189	357	81	70	93	52	13	7	3	10	8	1	-
6.	Other fever	948	1,126	1,438	1,160	1,092	385	82	104	3,416	3,200	3,545	2,902	3,043
7.	Dysentery & Diarrhoea	456	575	424	376	366	327	1,379	279	1,583	1,291	1,797	2,257	1,281
8.	T.B. & Pulmonary	230	231	186	223	232	249	193	103	1,114	991	1,065	98	1,428
9.	Respiratory Disease	466	568	382	357	345	316	276	201	2,547	2,571	2,749	1,085	3,152
10.	Leprösy	28	47	9	24	18	9	5	13	18	01	16	-	-
11.	Maternal Death	45	91	48	31	41	36	28	12	93	30	65	61	33
12.	Suicide	27	30	14	17	26	25	6	9	209	166	111	69	249
13.	Drowning	62	56	41	82	57	31	51	26	28	19	33	18	5
14.	Wounds and Accidents	61	93	42	72	58	59	13	26	539	940	955	826	1,024
15.	Killed by wild beasts	2	8	1	-	2	1	-	-	-	-	-	-	-
16.	Snake bite	14	12	17	33	33	29	26	15	16	18	14	8	3
17.	Rabies	4	3	7	2	2	5	1	-	-	3	2	-	-

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
18. Tetanus		3	7	-	1	4	6	-	-	2	4	4	2	1
19. Diphtheria		-	-	-	-	1	2	1	-	-	-	-	1	-
20. Whooping Cough		-	10	11	7	6	-	-	2	-	47	123	49	-
21. Polio		-	6	-	-	-	1	-	-	-	5	1	3	-
22. Other causes		1,919	2,735	2,737	2,932	3,426	3,338	3,601	2,504	13,849	11,376	14,600	14,368	10,571
23. Not stated		44	79	90	390	429	380	297	-	276	294	525	4,351	1,670
Total		5,169	6,785	5,813	6,185	6,392	5,431	6,187	3,412	23,707	20,974	25,627	26,110	22,464

Note* Figures for the years 1979 to 1983 are for the entire Bangalore District including Bangalore City.
Bifurcated figures for Bangalore District and Bangalore City are not available.

Source: Annual report on the working of the Registration of Births & Deaths Act, 1969.

INSTITUTIONS

The medical institutions in Bangalore City are many and are increasing rapidly day by day. Some of these institutions like the NIMHANS, Kidwai Memorial Institute of Oncology, etc., are national Institutions of repute and command prestige all over India and even outside. The Victoria, the Bowring and Lady Curzon Hospitals, the Minto Ophthalmic Hospital, etc., are very old institutions. A new set of medical institutions are coming-up which are branded as Non-Resident Indians Hospitals, opening a new vista in the medical services in the city. Some of the important insitutions are dealt with in the foregoing pages.

NIMHANS

The National Institute of Mental Health and Neuro Sciences (NIMHANS) now on the Hosur Road was known as the Lunatic Asylum. It was opened near *peta* hospital in 1850 (Old Hospital Rd), the inmates being removed from a smaller place of custody which had existed two years previously in the Cantonment. In 1866-67, the Asylum could accommodate 101 men and 50 women patients and there were 143 patients on the last day of March 1866. The name was changed to Mental Hospital in 1925 and was shifted to its present building in 1937. There were 233 patients in 1939-40. In the earlier days, patients were engaged in out-door labour consisting chiefly of gardening, rope-making etc. In the beginning there were only one occupational therapy unit, one psychology laboratory, one clinical laboratory and one medical library. The All India Institute of Mental Health was started in 1954 in the premises by the Government of India to provide adequate trained man power, psychiatrists, clinical psychologists, psychiatric nurses, social workers and others. Dr. M.V. Govindaswamy was appointed as its Director in 1954. From January 1955, two post-graduate Diploma Courses, i.e., Diploma in Psychological Medicine (DPM) and Diploma in Medical Psychology (DMP) with 12 students in each were started, and in 1956, a post-certificate course in Psychiatric Nursing was introduced. The departments of Neurology and Neurosurgery were started in the Institute of mental health three years after its establishment. The Institute was housed in the Mental Hospital buildings till 1964, when it was moved to its own building. The Institute was fully funded by the Government of India and the Mental Hospital by the State Government. In 1974, the National Institute of Mental Health and Neuro Science (NIMHANS) was established and registered under the Societies Registration Act by combining the mental hospital and the Instiute. It is an autonomous body getting grants from the State and the Central Governments. The main theme of the Institute is a multi-disciplinary team approach for promotive, preventive and curative aspects of health.

Till 1965, the Institute was affiliated to the University of Mysore for the conduct of examinations and award of post-graduate diplomas and from 1966 onwards to the Bangalore University. The Diploma in Phychiatric Nursing is

awarded by the Institute and is recognised by the Indian Nursing Council. The training programmes are M.D. in Psychological Medicine (8 seats; and three years duration) M. Ch. in Neurosurgery (4; five years), D.M. in Neurology (4; five years), DPM in Psychological Medicine (15; two years), Ph.D. in Clinical Psychology (2; three years), M.Phil in Medical and Social Psychology (12; two years), M. Phil in psychiatric social work (8; two years), M. Phil in Neurophysiology (2; two years) and Diploma in Psychiatric nursing (30; ten months). The numbers in brackets indicate the number of seats per year and the duration of the course respectively. Facilities are also available in most of the departments of the Institute for both medical and non-medical graduates to pursue Ph.D in the Faculty of mental health and neuro science of the Bangalore University.

The clinical section of the Institute caters to the needs of patients suffering from psychiatric, neurological and neurosurgical disorders. The Department of Psychiatry provides regular out-patient service on all working days. It is functioning in the same building since 1937. The Neuro Centre caters to the needs of patients with neurological and neuro-surgical problems. There are special wards, paediatric wards, family wards, Occupational Therapy and Rehabilitation Centre and Behaviour Therapy units. A multi-disciplinary team of consultants and residents of NIMHANS are organising Satellite clinics once in a month at the four taluk head-quarters of Kanakapura, Gauribidanur, Maddur and Madhugiri. The Institute is also providing consultancy service to institutions like the Central Prison, Remand Home, Institute for Mentally Retarded Children, etc. The following are the Departments of the Institute with years of starting in brackets. Psychiatry (1954), Clinical Psychology (1954), Psychiatric Social Work (1968) Neurology (1955), Neurosurgery (1958) Neuropathology (1956) Neuroradiology (1958), Neuroanaesthesia (1958), Microbiology (1978), Nursing (earlier to 1959), Speech Pathology, Neurophysiology (1975), Neurochemistry (right from the inception of the Institute), Animal Research Laboratory, Neurovirology (1982), Bio-physics (1958) Bio-statistics (1954), Publication (1981), Library and Information service (1958) and Photography.

The total number of beds available in 1989 was 805. The Institute has advanced neurological testing facilities like ENMG, EEG Laboratories, advanced neuro sciences facilities, modern radiological facilities including sophisticated X-ray machines, C.T. Scan, Biplane angiography and Myelogram, Blood Bank, and sophisticated biochemical, microbiological testing laboratories. The Institute runs a Rural Mental Health Centre at Sakalavara (Anekal tq). During 1989 upto October 13,794 cases were registered and 1,03,839 follow-up cases were treated as out-patients as against 18,136 registration and 1,09,465 follow-up cases in 1988 and 18,522 registration and 84,811 follow-up cases in 1987. During 1989, 5,951 in-patients were treated 1,614 (upto March) major and minor operations performed

and 7,777 X-ray and 45,149 screenings (upto March) were taken as against 7,454 in-patients, 1,634 major and minor operations, 9,917 x-rays and 49,310 screenings in 1988 and 8,165 in-patients, 1,512 major and minor operations, 10,946 x-rays and 46,007 screenings in 1987.

The Institute is managed and administered by the Director, assisted by 123 group A and B, 327 ministerial/technical, 104 Nursing, 124 psychiatric nursing and 455 group D staff. NIMHANS has a Governing Council with Union Health Minister as Chairman and State Health Minister as Vice-Chairman.

The Karnataka branch of the Indian Psychiatric Society was started in Bangalore in 1979 which arranges lectures, discussions, seminars, symposia to educate the people about mental health.

Kidwai Memorial Institute of Oncology (KMIO)

The Kidwai Memorial Institute of Oncology on the Hosur Road is a comprehensive centre for Cancer Research and treatment in Karnataka and is one of the 10 regional cancer centres in the country. The Institute started functioning from 1973 with 50 beds with laboratory and radio therapy services. The Institute was converted into an autonomous body by the Government of Karnataka in January 1980 and is managed by a Governing Council with the Karnataka Chief Minister as its Chairman and Director of the Institute as its Member-Secretary. The Institute has a wide range of sophisticated equipments for cancer research, diagnosis and treatment and in view of the facilities available for diagnosis and treatment, the Institute draws patients from all over the State and also the adjoining States of Tamil Nadu, Andhra Pradesh, Maharashtra and Kerala (about 17% of the patients are from adjoining States). The Institute offers all modalities of treatment-surgery, radiotherapy, chemotherapy and hormone therapy through a multi-disciplinary team approach. The Institute is funded by both the Central and State Governments.

The present bed strength is 252 and in addition to this the Venkateshwara Dharmashala, a unique project of its kind in the country, of Bangalore City Corporation provides accommodation to about 250 ambulatory cancer patients along with about 250 of their attendants.

The Institute built its first block in 1973, the main block was added in 1975 increasing the bed strength from 50 to 150 and to 190 in 1980. The 'Hospice-Shantidhama', the rehabilitation and continuing care centre is a joint project of the KMIO and Helpage India. It is a project of special rooms for paying patients.

The Babha Atomic Research Centre, Bombay has two projects with KMIO, the first being the Regional Centre for dispensing and distribution of Radiopharmaceuticals and the other Radiation Sterilization Plant. There are 25 departments in the Institute and they are, Administration, Pathology, Blood transfusion services,

Biochemistry, Microbiology, Surgical Oncology, Head and Neck Oncology, Gynaecologic Oncology, Oral surgery, Anaesthetics and pain relief, Radiation Oncology, Radiation Physics, Radio diagnosis and Imaging, Nuclear Medicine, Medical Oncology, Hospital Cancer Registry, Population Based Cancer Registry, Preventive Oncology, Community Oncology, Library and Information Services, Medical Illustration and Photography, Psycho-social welfare, Communication, Maintenance and Transport. There are 858 persons on the staff of the Institute comprising of 144 doctors, 105 scientists, 140 technicians, 143 nurses, 76 administrative and 248 supporting staff.

The Institute, during 1989 (upto the end of October 1989) treated 1,66,727 out-patients, 3,872 in-patients, conducted 1,160 major and minor operations, took 3,25,208 x-rays screenings and CT Scan etc. as against 1,95,759 out-patients and 4,352 in-patients, 885 major and minor operations and 4,18,307 x-rays, screenings, etc., during 1988 and 1,49,436 out and 3,371 in-patients, 1,392 major and minor operations and 3,42,878 x-rays, screenings C.T. Scans etc. in 1987.

The Institute has a Mobile Cancer Education and Detection Unit in the Department of Community Oncology. The unit undertakes extensive outreach programmes for mass cancer education and early detection of cancer in the rural and urban areas, by conducting regular camps, using a special van fitted with mass miniature radiography and PAP test facility. From 1980 to 1988 the unit has conducted 101 camps and has screened 44,605 persons detecting 1,616 cancer cases.

The Institute imparts training in various branches of Oncology to nurses, under-graduates, internees and post-graduates of various medical institutions in the State. As on 31st of December 1988, a total number of 465 nurses, 722 under-graduates and 452 post-graduates had been trained. The Cytopathology laboratory of the Department of Pathology of the Institute conducts Cytotechnician and Cytotechnologist courses. The Bangalore University and Medical Council of India have approved the starting of post-graduate course of MD(Radiotherapy) and DMRT (Diploma in Medical Radiotherapy) since 1987. The Institute also has started the following courses for which the certificates are awarded by the Bangalore University. The courses are DM (Medical Oncology), M.Ch. (Surgical Oncology), DRP (Diploma in Radiation Physics), DNM (Diploma in Nuclear Medicine), B.Sc. Medical Technology (Laboratory), B.Sc., in Medical Technology (Medical Imaging), B.Sc. in Medical Technology (Radiotherapy). To extend the diagnostic and treatment facilities in the State, the Institute has initiated and promoted action for the establishment of six peripheral cancer centres at Mysore, Mangalore, Hubli, Belgaum, Gulbarga and Bellary.

The Government of Karnataka has constituted the *Karnataka Cancer Control Advisory Board* to coordinate the cancer control activities in the State. The Board

has recommended many measures for the Cancer Control activities. The *Karnataka Cancer Society* was inaugurated in Bangalore in 1968 to educate people about cancer. It organises lectures, seminars, cancer detection camps, etc. in Bangalore and outside Bangalore also.

National Tuberculosis Institute

The National Tuberculosis Institute in Bangalore was established in 1959 and was inaugurated in 1960 on the Bellary Road. The objectives of the National Tuberculosis Institute are to formulate and evolve a practicable, economically feasible and widely acceptable tuberculosis programme, train medical and para-medical workers to implement the programme and to undertake research. The main training function of the National Tuberculosis Institute is job oriented in-service training of medical and para-medical officials. It also organises educational activities such as workshops, seminars etc. There are special sections in the National Tuberculosis Institute to carry out its programmes and they are Epidemiological Section to carry out the Epidemiological studies, Sociological section to study the behaviour of sick persons, Control Section to conduct operational studies, Bacteriological Section to conduct laboratory investigations on bacteriological specimens, the X-ray Section to advice and assist in the selection, repair and maintenance of x-ray equipment, the Statistical Section to scrutinise and analyse the data collected by the various sections of the Institute and the Monitoring Section to guide the District Tuberculosis Programme. The Institute is headed by a Director and is a Central Government Unit.

The National Institute of Virology, Pune, has a field station at Bangalore located in the Victoria Hospital Complex where viruses of different diseases are studied. The centre at Bangalore has contributed to the understanding of the natural cycle of the Japanese Encephalitis.

The Southern Regional Occupational Health Centre, a unit of the National Institute of Occupational Health, Ahmedabad, was started in Bangalore in July 1977 with the idea of intensifying research in occupational health and also advice the industrial managements to cause a safe, healthy and comfortable environment for work. It is headed by a Deputy Director.

The Defence Bio-Engineering and Electro-medical Laboratory came into being in Bangalore in April 1982 by merging the electro-medical and Instrumentation Division of Electronics, Radar Development Establishment and Aero-Bio Engineering Unit. The Laboratory is headed by a Director and undertakes design and development of medical electronic system and also training programme for medical and para-medical personnel on medical instrumentation. It also provides technical guidance to local hospitals on medical electronic equipments, their repair and servicing. It is engaged in the design and development of indigenous items of aero-medical equipments.

Bowring and Lady Curzon Hospital

The construction of the building of the Bowring Hospital Shivajinagar, was started in 1866 on the plan of La Ribboisiere in Paris and it was occupied in 1868 and named after Mr. Bowring, the then Commissioner of Mysore. Earlier to 1900, the Bowring Hospital was financed by and was under the control of the Municipal Commission and in April 1900, it was taken over by the Government of India. During 1900 new wards were constructed and on 10th December 1900, the new building was formally opened by Lady Curzon and was named as Lady Curzon Hospital for Women and Children. In 1900 there were only three charge nurses, three sisters of Charity and three Indian nurses. In 1911, the two hospitals were placed in charge of a single Superintendent. In 1947, the hospital was transferred to the Government of Mysore from the British administration. The hospital with modern facilities and educated and trained doctors from England attracted large number of patients from the beginning. In 1923-24, in the Bowring hospital 14,564 out and 1,488 in-patients were treated and in the Lady Curzon Hospital 20,941 out and 2,688 in-patients had been treated. The Bowring Hospital had a training school for nurses and mid-wives. In 1928-29 the Bowring hospital treated 19,042 out and 1,355 in-patients and 346 major and 708 minor operations were performed in the hospital and in the Lady Curzon Hospital 16,693 out and 2,346 in-patients were treated, 133 major and 223 minor operations were performed during that year. The Bowring hospital had an x-ray unit during that year.

Sophisticated equipments and new VIP wards were added to the hospital during 1986, at the time of SAARC Summit in Bangalore, as the hospital was chosen to cater to any medical emergency during the summit. Some of the special features of the hospital among the Government hospitals are the Nuclear medicine department, where the technique of radio isotope scanning is used for thyroids, ultra sound scanning, Gastroenterology, AIDS surveillance centre, etc. The hospital has its own blood bank, modernised operation theatre, and is equipped with 20 KV capacity generator. About 800 to 1000 patients visit the out-patient department every day. The general wards have 686 beds and there are also special wards.

Victoria Hospital

Earlier in 1893, a separate Government hospital was opened in the city and was temporarily located in the district lock-up buildings until 1900, when it was transferred to the new building constructed for the purpose and was named as Victoria Hospital. The foundation stone of the Victoria hospital building was laid on 22nd June 1897 coinciding with the Diamond Jubilee of Queen Victoria and was opened on 8th Dec. 1900 by Lord Curzon. In the beginning there were only 100 beds. The building of the hospital including staff quarters and out-houses then cost Rs. seven and half lakhs. There were six units in the hospital, the out-patient, dental

x-ray, electro-therapy, ENT and venereal disease. The building of the original out-patient department was constructed in 1924 out of the generous donation made by Sir K.P. Puttanna Chetty. In 1923-24 it had an accommodation for 134 in-patients (90 males and 44 females) and the average daily out-patients was 19 males and 75 females. In 1938 the wards had 16 pavilions with 300 beds. In 1938, the number of out-patients were 1,21,873 with a daily average of 971.16 and the number of in-patients were 8,754. The hospital was associated with the University Medical School. Victoria hospital is a referral hospital in the State and is one of the biggest hospitals and has many branches of medicine and surgery. It is a teaching institution for the students of Bangalore Medical College. An artificial limb fitting centre was established in 1981-82. Many requirements of the hospital like distilled water are manufactured in the hospital itself. On an average more than 1,000 out-patients are registered in the hospital every day and there will be a continuous stream of patients standing in long queue. The total number of beds available in the hospital during Jan 1990 was 764. During 1989 upto the end of Oct. 89, in the hospital, 4,11,704 out and 18,779 in-patients were treated, 7,671 major and minor operations were performed, 31,652 x-rays and 10,246 screenings were made as against 6,62,551 out and 21,851 in-patients, 7,482 operations, 46,272 x-rays and 24,432 screenings during 1988 and 5,89,499 out and 21,461 in-patients, 3,446 operations, 39,366 x-rays and 20,985 screenings in 1987. The common diseases for which treatment sought were gastroenteritis, diabetes, tuberculosis, hypertension, heart diseases, asthma, etc.

Minto Ophthalmic Hospital

The Minto Ophthalmic Hospital in Chamarajapet was started as small dispensary in Chikpet in 1896 and later in 1897 was shifted to Lalbagh road where a 16 bed ward was available. In 1913, a building was raised in its present location with 100 beds and was called Minto Ophthalmic Hospital. A Children's ward called Seethamma Ward was added in 1925. In 1956, it became a teaching hospital and the number of beds was increased to 205 in 1960. A post-graduate diploma course was started in 1962 and an out-patient department was built in 1965 at a cost of Rs. 2.5 lakhs. Post-Graduate Department was started in the hospital in 1968. The building of the Cornea grafting Centre was constructed in 1975 at a cost of Rs. 9.5 lakhs. The hospital was upgraded to the status of a Regional Institute of Ophthalmology in 1981 with the increase of in the number of beds to 265. The hospital has to its credit the three successful operations performed of Cornea transplantation in 1936-37. During 1939-40, 57,292 patients attended the hospital and 8,302 operations were performed. The latest additions to the hospital are the modern Cornea Grafting Centre, a retinal clinic with facilities for micro-surgery, retinal angiography and photo-coagulation which can restore normal eye sight to some of the blind. Laser beam treatment is also available to treat injuries in the

most sensitive central areas of the eye. The mobile unit attached to the hospital under National Programme for Prevention and Control of Blindness is now separated from the hospital from 1987-88, and is under the control of the Divisional Joint Director of Health Services. An Ophthalmic Assistants Training Programme under the National Programme for Prevention and Control Blindness was started in 1981-82 and continued till 1988-89. The training period was of 2 years and each batch consisted of 15 trainees and five such batch of students were trained during this period. During 1988-89, in the hospital 1,22,066 out and 7,263 in-patients were treated, 41,455 refractions were made, 1,858 orthoptic and squint eyes were examined, 192 contact lens treatment given, 2,560 cornea, 2,480 glaucoma and 6,500 retinal treatment given and 475 subjected to laser treatment. In the surgical side 77 retinal detachment surgery, 6,000 major and 4,000 minor operations, 3,352 intraocular surgery, 257 extraocular surgery, 43 keratoplasty, 60 cornea grafting operations were performed and 670 ultrascanning was made. In 1990, it was under the control of the Director, assisted by a Resident Medical Officer, 11 Assistant Surgeons, one Nursing Superintendent Grade I, Lay-Secretary and other 54 office, medical and para-medical staff.

Vanivilas Hospital

The present building of the Vanivilas Hospital near K.R. Market, Bangalore was completed in 1935 with a bed strength of 250 exclusively for women and children. Earlier to this there was the Maternity Hospital started in 1880, which was shifted to new building and was named Vanivilas Hospital. Later Sajjan Rao Ward (for children) and other wards were built to accommodate more and more patients and the number of beds was increased to 536. The Hospital is a teaching institution attached to the Bangalore Medical College. The hospital is under the control of the Medical Superintendent assisted by two surgeons, 17 Assistant Surgeons, 8 Nursing Superintendents both grade I and II, three pharmacists, a laboratory technician, 105 staff nurses, 30 Senior head nurses and on the office side, a Lay Secretary, an Office Superintendent and 20 first and second division clerks and about 240 other subordinate staff. Some of the departments in the hospital are the Paediatric department, Cardiology department, Obstetric and Gynaecology department, etc. Under the Master Plan, a four-storeyed building is under construction for women patients to provide modern surgical facilities and a Central oxygenation facility. During 1981 upto the end of October 1989, 31,944 out-patients and 9,723 inpatients were treated, 5,900 deliveries were conducted, 1,116 major and 1,004 minor operations performed, 116 x-ray were taken in the women's wing of the hospital as against 38,077 out, and 11,961 in-patients 5,095 deliveries, 825 major and 1,183 minor operations, and 171 x-rays in 1988. In the children's wing 39,449 out and 6,070 in-patients were treated, 750 major and minor operations were performed during 1989 upto the end of October, as against 43,949 out and 9,063

in-patients and 765 minor and major operations in 1988. There were 109 T.B. patients under treatment in 1989 as against 146 in 1988. A post-partum centre is attached to the hospital where M.C.H. and Family Welfare Programmes are carried out. During 1989-90 upto the end of October 1989, nine vasectomy and 704 Tubectomy operations were performed, 852 IUD (Intra Uterine Device) placements made under Family Welfare Programme, and under M.C.H. Programme, 3,411 doses of DPT, 387 doses of D and T, 4,016 doses of TT (tetanus toxoid) for mothers, 3,411 doses oral polio, and 876 doses of anti-measles vaccine were administered, as against 27 vasectomy, and 544 tubectomy operations, 1,639 IUD placements under Family Welfare and 1,265 doses of DPT, 1,568 doses of D and T, 3,250 doses of TT for mothers, 1,639 doses of oral polio, and 1,579 doses of anti-measles vaccination during 1988-89. During 1989-90, 1,200 children and 3,274 mothers were supplied iron and folic acid tablets as against 8,990 children and 2,000 mothers during 1988-89.

K.C. General Hospital

The Kempa Cheluvamba General hospital near Malleshwaram Circle was started as a maternity hospital in 1939 with 40 beds and later in 1962, it was converted into a general hospital with 313 beds. The number of beds at present is 453. The hospital has medical, surgery, orthopaedic, ENT, Physiotherapy, gynaecology, ophthalmic, dental and other sections. A post-partum centre is attached to the hospital. It is administered by a medical superintendent assisted by other 340 staff members. During 1989 upto the end of October 1989, 2,34,304 out and 14,131 in-patients attended the hospital, 5,442 deliveries were conducted, 2,854 major and 2,833 minor operations were performed 17,447 x-rays and 1,025 screenings were taken as against 2,82,656 out and 17,943 in-patients, 6,517 deliveries, 3,134 major and 2,963 minor operations, 16,363 x-rays and 338 screenings during 1988. There were 136 T.B. and 94 leprosy patients under treatment during 1989 as against 86 TB and 151 leprosy patients in 1988. Under Family Welfare programme, during 1989-90 upto the end of October 1989, ten vasectomy and 1,072 tubectomy operations were performed and 1,373 IUD placements made as against 24 vasectomy, 1,512 tubectomy operations and 2,097 IUD placements during 1988-89. Under MCH programme during 1989-90 upto the end of October 1989, 1,183 doses of DPT, 275 doses of D & T, 1,189 doses of oral polio, 6,618 doses of anti-measles vaccine were administered as against 1,843 doses of DPT, 1,546 doses of D & T, 1,843 doses of oral polio, 745 doses of anti-measles vaccine during 1988-89. Iron and Folic acid tablets were distributed to 3,147 children during 1989-90 as against 3,143 in 1988-89 and 3,401 in 1987-88. A female health training centre is attached to the hospital.

Leprosy Hospital

The present Leprosorium on the Magadi Road must have been the same, Leper House opened in *peta* in 1845 in a small building. A larger and better building was built in 1857. There were 25 inmates in 1866 and 26 in 1874. The population of the asylum constituted 1/4 of the total number of leprosy patients known to have resided in Bangalore *peta* and the Cantonment. This Leprosy Hospital on Magadi road was called Communicable Diseases Hospital earlier to 1957 and in 1957-58, it was renamed as Central Leprosorium. In 1964-65, reconstructive surgery wing was constructed to correct the deformities of leprosy patients. The present bed strength of the Hospital is 260. It is managed by a Medical Officer assisted by seven doctors, 23 nurses and 57 other technical and administrative staff. There are x-ray, physiotherapy and laboratory facilities available in the hospital. Two urban leprosy centres are attached to this Hospital. During 1939-40, the Leprosy Asylum was attended by 156 patients. During 1989, upto the end of October 1989, 46,062 out-patients, 1,113 in-patients attended the hospital, 50 major and minor operations were performed, 295 x-rays and screenings were taken as against 57,943 out-patients, 1,211 in-patients, 60 major and minor operations and 268 x-rays and screenings during 1988. There were 133 T.B. and 134 Leprosy patients under treatment in 1989 as against 78 TB and 197 Leprosy patients in 1988.

The T.B. and Chest Diseases Hospital

The T.B. and Chest Diseases Hospital on the Old Madras Road is a special hospital run by the Government and it is one of the old medical institution in the city. The hospital has a bed strength of 234. It is administered by a Medical Superintendent assisted by the Lay Secretary, four Assistant Surgeons, one Resident Medical Officer and 82 other subordinate staff both medical and non-medical. During 1989 upto the end of October 1989, in the hospital 4,223 out-patients and 995 in-patients had been treated, 3,791 x-rays and 220 screenings were taken, 77 minor operations were performed as against 4,070 out and 1,189 in-patients, 4,074 x-rays and 1,062 screenings and 73 minor operations during 1988. During 1989, upto end of October 1989, 787 T.B. Patients were under treatment as against 1,118 in 1988 and 1,174 in 1987.

Lady Willingdon State T.B. Centre

The foundation stone of the building of the Lady Willingdon T.B. Dispensary on the Kempgowda Road was laid by the Jivaji Rao Sindhia, the Maharaja of Gwalior on 22nd June 1936 and the dispensary with 20 beds was opened on March 28, 1939. In 1959 it was converted to Lady Willingdon T.B. Demonstration and Training Centre and in 1982 it was upgraded as State T.B. Centre with a Joint Director of Health Services as its head. In addition to the training of medical and

para-medical staff, the centre has the additional responsibility of monitoring, evaluation and compilation of Epidemiological data and occupational research. The State TB Centre organises training for the medical students both undergraduates and post-graduates. The Centre is headed by the Joint Director (Tuberculosis) assisted by the Deputy Director (TB), Deputy Director (Bacteriology), Deputy Director Epidemiology, six health officers and Assistant Surgeons and 80 other staff which includes both technical and non-technical officials. During 1989, a total of 59,949 X-ray examinations were conducted and 8,580 sputum examinations detecting 8,842 new T.B. cases in the district as against 69,336 x-ray examinations and 7,080 sputum examinations detecting 9,370 cases in 1988 and 57,081 x-ray and 7,080 sputum examination detecting 9,827 cases in 1987.

S.D.S. Sanitorium

The Shanta Bai Devarao, Shivaram Tuberculosis and Chest Diseases Hospital near the NIMHANS was built in 1947 and was opened in 1948 with 50 beds. Surgical operations like thoracoplasty in stages, thoracoscopy, phrenic Avulsion, artificial pneumothorax, artificial pneumopneumoneum and cauterization are being performed after 1948 onwards. The total bed strength of this hospital is 470 (353 on the medical side and 117 on the surgical side). Resectional surgery and cardiac surgery and mitral valvotomy were started during 1960 and onwards. New buildings were added later. The Female wards building was got constructed by the Rotary Club, Children ward by the T.B. Association, and the ESI wards were built under the ESIS Scheme. In 1973, the post-graduate diploma course (DTCD) was started and from 1980 onwards the undergraduates of medical colleges are being posted for training for 15 days. The hospital also provides training facilities for post-graduates. The Hospital is managed by a Superintendent assisted by 14 Asst. Surgeons, 3 Nursing Superintendents, one Radiographer, 54 staff members (both Sr. & Jr.), three laboratory and x-ray technicians and 118 group 'D' Officials. During 1989 upto the end of Oct. 89, 18,071 out-patients and 2,678 in-patients were treated, 52 major and 975 minor operations were performed, 8,217 x-rays were taken as against 23,177 out-patients, 3,077 in-patients, 102 major and 856 minor operations and 5,480 x-rays during 1988.

HSIS Gosha Hospital

The HSIS Gosha Hospital, Shivajinagar is a Government Hospital for women and children started in 1925. It owes its origin to the liberal contribution by Sir Ismail Sait. It was meant for ghosha women in the beginning. A post-partum centre is attached to the hospital. It was administered by a Senior Medical Officer assisted by nine Medical Officers, one lay secretary, 33 group 'C' and 28 group 'D' staff. The number of beds available is 120. During 1989, 31,409 out and 18,839 in-patients

were treated in the hospital, 348 major and minor operations were performed, 2,933 deliveries were conducted, 198 x-rays and screenings were taken as against 31,360 out and 23,777 in-patients, 547 operations, 3,312 deliveries, 26 x-rays and screenings in 1988. Under Family Welfare Programme during 1989-90, 463 sterilizations and 500 IUD placements were made as against 648 sterilizations and 540 IUD placements in 1988-89 and 775 sterilizations and 537 IUD placements in 1987-88. Under MCH programme 1,642 doses of DPT, 1,288 doses of D & T, 2,466 doses of TT for mothers, 2,022 doses of oral polio and 725 doses of anti-measles vaccines were administered during 1989-90.

Jayadeva Institute of Cardiology

The Sri Jayadeva Institute of Cardiology, Bangalore, was started during 1979 in the Victoria Hospital and it became autonomous in 1984. The number of beds available in the Institute is 134. The Institute is managed by the Director, assisted by five Professors, 8 Assistant Professors, 21 Lecturers/Assistant Surgeons and 182 other administrative and technical staff. During 1989, upto the end of October 1989 34,707 out and 3,435 in-patients were treated, 815 major and 45 minor operations were performed as against 44,608 out and 3,717 in-patients, 717 major and 40 minor operations during 1988. Now working in the Victoria Hospital Complex, the Institute will soon have a campus on the Bannerghatta Road.

Venkateshwara Institute of E.N.T: The Sri Venkateshwara Institute of Ear, Nose and Throat is a government specialised institution started in Victoria Hospital Complex in 1975. It is also a teaching hospital for under-graduates and post-graduates of the Bangalore Medical College. The Institute is a part of the Victoria Hospital and the diseases of the Ear, Nose and Throat are investigated and treated here.

Sanjay Gandhi Hospital:

The Sanjay Gandhi Institute of Accident, Rehabilitation and Physical Medicine, Jayanagar started in 1984, is an autonomous institution receiving grants from the State Government. It was started with the objectives of providing immediate medical aid at the accident spot, treatment and rehabilitation to the accident victims and to provide timely medical aid. It is meant for traumacare only. The Institute is provided with ambulances fitted with wireless sets stationed at vantage points around Bangalore to rush to the accident spot with medical aid and para-medical staff. The Institute is equipped with modern operation theatre, x-ray plant, laboratory for pathological analysis, blood bank, etc. The x-ray unit, the intensive cardiac unit, the casualty department, etc., work round the clock to meet the emergencies. The Artificial Limb Rehabilitation Centre is in its final stage of completion. It is managed by the Superintendent assisted by Orthopaedic specialists, Neuro-plastic, general and other surgeons and specialists. There are 75 beds in the hospital. During 1987-88, there were 1,503 admissions (1,159 male and

183 female and 161 children) to the units, 1,437 discharges and was attended by 4,531 out-patients and there were 73 deaths as against 1,239 admissions, 1,175 discharges, 5,450 out-patients and 90 deaths during 1985-86.

General Hospital, Jayanagar

The General Hospital, Jayanagar was started in October 1985. It is a 200 beds hospital having x-ray, endoscopy, baproscopy and laboratory facilities. Specialist services in medicine, surgery, obstetrics and gynaecology, ENT, paediatrics, skin & STD, ophthalmology, dentistry, etc., are available. During 1989 upto the end of Oct. 89, 1,84,994 out and 7,353 in-patients were treated, 832 deliveries were conducted, 4,682 operations were performed, 13,728 x-rays and screenings were taken as against 2,86,113 out and 6,757 in-patients, 379 deliveries, 3,868 operations and 9,469 x-rays and screenings during 1988. Under MCH programme during 1989 4,485 doses of DPT, 796 doses of D&T, 5,187 doses of oral polio, 646 doses of anti-measles vaccine, 2,388 doses of BCG were administered as against 3,746 doses of DPT, 843 doses of D&T, 4,511 doses of oral polio, 491 doses of anti-measles vaccine and 1,724 doses of BCG during 1988. The total staff of the hospital is 309.

The Health and Family Welfare Training Centre was started in Bangalore during 1966, being shifted from Ramanagaram and is situated in the Leprosy Hospital compound in Magadi Road. It imparts inservice training to the medical and para-medical staff from the districts of Bangalore, Bangalore Rural, Kolar, Tumkur and Chitradurga. It offers an integrated training to medical officers of three months duration, communication training of one month duration to basic health educators and orientation training to junior and senior male health assistants of 10 days duration. It is a resource institution for development and evaluation studies. It is administered by a principal and has a staff totalling 40. It comes under the control of the Director of Health Services. Under various training programmes to different categories of trainees of different time duration, a total of 122 trainees in 8 batches were trained in 1989-90.

The population centre, Bangalore was established in 1973, as a part of India population project (Karnataka), receiving financial assistance from International Development Association (affiliated to World Bank) and the Swedish International Development Authority. It undertakes research in health and family welfare programme, population, health, nutrition, etc. It provides consultancy services and collaborates in research with National and International institutions. It is headed by a Director.

E.S.I. Scheme

The Employees State Insurance Scheme was introduced in the City in 1958 as per the E.S.I. Act 1958. A ESI hospital was started in Rajajinagar as per the

provisions of the Act to provide medical relief to the workers in factories and industries and other establishments and many dispensaries also were started in various parts of the city to provide out-patient facility and first aid to the insured persons and their family members.

E.S.I. Hospital, Rajajinagar: The ESI Hospital Rajajinagar was started in 1958 and became a general hospital with 414 beds in 1961 and subsequently the bed strength was increased to 500. The hospital is one of the referral hospitals in the City for the insured persons in and around Bangalore city providing specialist services. The hospital has specialised services in general medicine, general surgery, ENT, paediatrics, ophthalmology, obstetrics, dentistry, etc. Separate wards are provided for T.B. Patients. The hospital has an out-patient unit also. During 1989, 1,50,875 out and 1,32,775 in-patients were attended in the hospital, 1,434 deliveries were conducted 1,986 major and minor operations performed, 11,822 x-rays and screenings were taken as against 2,73,477 out and 1,58,775 in-patients, 1,445 deliveries, 1,540 major and minor operations, 18,450 X-rays and screenings in 1988. There were 10,389 T.B. patients under treatment in 1989. Under Family Welfare Services 653 sterilizations and 538 IUD placements were made in 1988-89. Under MCH programme during 1988- 89, 1,117 doses of DPT 1,129 doses of D&T, 1,308 doses of T&T for mothers, 921 doses of oral polio and 865 doses of anti-measles vaccine were administered. It was administered by the Superintendent assisted by 81 Medical Officers (Surgeons, Deputy Surgeons and Asst. Surgeons), 267 medical, para-medical and office staff and 421 Group 'D' officials including drivers.

The ESI Hospital, Indiranagar was started in July 1985 and has 210 beds and covers 25 E.S.I. Dispensaries. It is managed by a Medical Superintendent assisted by one Deputy Medical Superintendent, 14 Surgeons, three Deputy Surgeons, 29 Insurance Medical Officers and 418 other medical, para-medical, administrative and ministerial staff. During 1989 (upto October 89), 92,084 out-patients 5,011 in-patients were treated in the hospital, 564 deliveries were conducted, 553 major and 243 minor, 100 ENT, 107 eye operations were performed, 5,605 x-rays and 230 screenings were taken as against 1,24,604 out and 6,189 in- patients 607 deliveries, 592 major, 381 minor, 47 ENT and 165 Eye operations, 7,981 x-rays and 416 screenings in 1988. During 1989 (upto Oct. 89) 174 T.B. patients were under treatment as against 189 in 1988. Under Family Welfare Programme during 1989-90 (upto Oct 89), 3 vasectomy 131 tubectomy and 43 leproscopic operations were performed and 225 IUD placements made as against 4 vasectomy, 167 tubectomy and 61 leproscopic sterilisations and 228 IUD placements in 1988-89.

Under MCH Programme during 1988-89 1,203 doses of DPT, 132 doses of D and T, 847 doses of T.T. for mothers, 1,717 doses of oral polio, 180 doses of anti-measles vaccine were administered.

The ESI dispensaries in Bangalore City are located in following places and the number in bracket shows the number of insured persons attached to the

dispensaries during January 1990. Banashankari (3,521), Basavanagudi (5,249), Bommanahalli (5,354), Binnypet (4,497), City Market (1,763), Chamarajapet (4,146) Cottonpet (2,134), Cubbonpet (938), Dasarahalli (14,979), Dyavasandra (39,210), Frazer Town (6,457), Hosahalli-Vijayanagar (4,917), Hanumanthnagar (2,412), Jayanagar (7,700), Jayarajan Colony (2,582), Kengeri (1,568), Krishnarajapura (10,046), Magadi Road (8,199), Marathhalli (2,965), Mavalli (2,200), Matadahalli (3,906), Mysore Road (7,095), Palace Guttahalli (2,576), Peenya (2,729), Rajajinagar I (15,209), Rajajinagar II (4,134), Ramachandrapuram (1,613), Russel Market I (3,365), Russel Market II (2,360), Sheshadripuram (5,515), Shoolay (3,260), Soladevanahalli (2,185), Srirampuram (7,353), Subramanyanagar (1,353), Subramanyapura (1,979), Ulsoor (9,349), Viveknagar (5,577), Williams Town (3,125), Wilson Garden (10,955), White Field (Kadugodi 3,038) Yeshwanthapura (14,523), and Yelahanka (5,354). There are two Ayurvedic dispensaries attached to the ESI Hospitals at Rajajinagar and Indiranagar.

There are part-time dispensaries at Vartur and Jigani to which 640 and 510 insured persons are attached respectively. In addition to these, there are Employees Facility Dispensary at B.E.L. Hospital (1,509 insured persons), H.A.L. Hospital (1,122), HMT Hospital (1,204), I.T.I. Hospital (2,208) and Jindal (305). The total number of in-patients treated in the E.S.I. Hospitals in the district was 25,716 in 1988-89 as against 2,540 in 1987-88 and 23,340 in 1986-87. The total number of out-patients treated in the dispensaries during 1988-89 was 9,42,804 insured persons and 13,51,404 family members as against 9,00,276 insured persons and 15,77,880 family members in 1987-88 and 8,34,804 insured persons and 17,01,612 family members in 1986-87. (See Chapter XVII for more information).

Central Government Health Scheme

The Central Government Health Scheme was started on 16th February 1976 in Bangalore with only three dispensaries under its control and now there are ten dispensaries, a polyclinic, a dental unit, two Ayurvedic units and a Homoeopathic unit under the scheme in January 1990. It was headed by a Deputy Director, assisted by 65 medical officers of all category including Chief Medical Officer, 109 Class three officials consisting of technical and non-technical staff and 120 group D staff consisting of nursing attendants, peons, laboratory assistants, etc. The scheme covers all Central Government employees, their families, Central Government pensioners (civilians only), Members of Parliament, Retired Judges, ex-Governors, freedom fighters, retired I.A.S. and I.P.S. Officers. Specialised services are made available in various disciplines such as eye, skin, medicine radiology, etc. for the beneficiaries. During 1989-90 upto the end of October 1989, the number of beneficiaries were 1,54,405 Government officials and 7,619 pensioners as against 1,49,977 government servants and 11,063 pensioners in 1988-89 and 1,41,764

government officials and 7,002 pensioners in 1987-88 respectively. The Bangalore headquarters is located in Jayanagar III Block.

Corporation Hospitals and Dispensaries

The Bangalore City Corporation is maintaining 28 maternity hospitals with a referral hospital, two paediatric centres at Thimmiah Road and H. Siddaiah Road, twenty Allopathic dispensaries, one Ayurvedic and one Unani dispensaries and three mobile dispensaries in the City. The total number of beds in the maternity hospitals in 1990 was 722. During 1988-89, in these maternity hospitals 49,541 cases were registered and examined and 27,826 deliveries were conducted as against 46,722 registration and examination and 29,672 deliveries in 1987-88 and 45,984 registration and examinations and 28,166 deliveries in 1986-87. During 1987-88 the three mobile units visited slums and treated 7,403 patients. In the Ayurvedic and Unani dispensaries 14,705 patients has been treated. The Corporation is also maintaining Ambulance service. The total number of out-patients treated in the dispensaries run by the Bangalore City Corporation during 1989 was 3,07,954 as against 1,96,929 in 1987-88. The following are the name or the place of the maternity hospitals maintained by the Bangalore City Corporation in January 1990. The years in bracket indicates the year of starting of the hospitals followed by its bed strength. Challaram Maternity Hospital (1936; 24), Pobathi Maternity Hospital (1950; 24), Dasappa Maternity Hospital (1950; 24), Corporation Maternity Hospitals at Thimmiah Road (1957; 24), Manevarthepet (1959; 24) Cox Town (1966; 24), Sirsi Road (1961; 24), Ulsoor (1962; 30), Magadi Road (1962; 24) N.R. Colony (1962; 24), Jayanagar (1963; 24), Gavipuram Guttahalli (1963; 24), Bore Bank (1963; 24), R.C. Puram (1963; 24), Wilson Garden (1965; 24), Palace Guttahalli (1965; 24), M.R. Palya (1967; 24), Shanthinagar (1968; 24), Yeshwanthpur (1975; 20), Austin Town (1976; 30), Azadnagar (1976; 30), Banashankari II Stage (1976; 30), Goripalya (1976; 30), Hosahalli (1976; 30), H. Siddaiah Road (1976; 30), Yediyur (1978; 24), Kodandaramapuram (1980; 22) and Cottonpet (1981; 10). The Corporation dispensaries are at Adugodi, Bandimadi, Bagalur, City Corporation office, Cox Town, Domlur, Gandhi Bazar, Govindarajanagar, Hanumanthanagar, Jayanagar, Madivala, Mahalakshmi Layout (Ashokapuram), Nagappa Block, Neelasandra, Nehrupuram, Tannery Road, Tavarekere, Wilson Garden and Yediyur.

St. Martha's Hospital

The St. Martha's Hospital on the Nrupathunga Road was started in 1866 by the Sisters of Good Shepherd coming from Europe. In the beginning it was the only hospital in the city and was receiving grants from the Government and the City Municipality. In August 1887 the peta dispensary was merged with the hospital and the merger was continued till 1893. Now the total number of beds available is 575

(427 general and 136 private). It is administered by a Director assisted by one Medical Superintendent, one Resident Medical Officer, 65 Specialists, 45 Senior House Officers, 15 Ward sisters and 120 staff Nurses besides 55 office and other staff. The hospital has specialised services in general medicine, general surgery, plastic surgery, paediatric surgery, anaesthesiology, obstetrics and gynaecology, paediatrics, physiotherapy, ENT, Ophthalmology, dermatology, psychiatry, medico - social unit, radiology, dental and oral surgery. There are also facilities of blood bank and clinical laboratory. The hospital has casualty and medical records sections. The Prosthetic and Orthotic Centre started in 1969, with the assistance from the World Rehabilitation Fund, New York, trains technicians and fabricates appliances for disabled persons. In collaboration with the Indian Cancer Society, a Cancer Detection Centre was started in the hospital on 6-1-1988 and a total of 150 individuals had been screened in the centre upto 31-3-1988. A School of Nursing is also attached to the hospital. It was a teaching hospital for the students of St. John Medical College in the earlier years of the establishment of the College. During 1987-88, 21,904 in-patients were treated and the daily average of out-patients was 768.2 (total out-patients 2,35,079) as against 20,496 in-patients and 741.2 daily average of out-patients during 1986-87. During 1987-88, 1,361 major and minor operations were performed in the general surgical unit, 401 caesarean operations in obstetric and gynaecology unit, 821 operations in orthopaedics unit, 297 in ENT and 224 in ophthalmology unit; 2,717 deliveries were conducted and 22,101 x-rays and screenings were taken. Under MCH programme 2,070 doses of DPT, 192 doses of D & T, 5,536 doses of T.T. for mothers, 3,386 doses of oral polio, 326 doses of anti-measles vaccine and 205 doses of anti-typhoid vaccine were administered during 1989-90.

St. John's Medical College Hospital

The St. John's Medical College Hospital, owned and administered by the Catholic Bishop's Conference of India Society, for Medical Education, is a teaching hospital (at Koramangala), providing medical care to the needy. It was started in 1975, with 24 beds ward and has progressively developed into a 800 beds hospital. An average of 700 out-patients are treated daily. The hospital provides specialised services in abdominal and obstetrics ultrasound, foetal monitoring, angiography, colorectal surgery, cryo surgery, cystoscopy, deaddiction for alcoholism and drug dependance, diet counselling, echocardiography, electro-encephalography, gastrointestinal endoscopy, infertility clinic, kidney dialysis, lung function assessment, plastic surgery, physiotherapy, retinal angiography, cold-store mortuary, etc. The following facilities are available in the hospital: cardiology, casualty, dental surgery, dermatology and venereology, family welfare services, gastroenterology, general medicine, general surgery, genito-urinary surgery, leprosy, physiotherapy, radiology, neurology, neuro surgery, obstetrics and gynaecology, orthopaedics,

ophthalmology, paediatrics, plastic surgery, psychiatry, thoracic surgery, otorhinolaryngology, etc., There are three sub-centres at Bidadi, Dommasandra and Anekal, attached to this hospital. During 1989, in the hospital 2,12,763 out and 27,844 in-patients attended the hospital, 1,275 deliveries were conducted, 8,220 major and minor operations were performed and 42,624 x-rays and screenings taken. There were 3,098 leprosy patients under treatment in 1989. Under M C H programme during 1989-90 upto the end of December 89, 7,390 doses of DPT, 2,050 doses of D and T, 6,000 doses of TT for mothers, 7,480 doses of oral polio, 1,630 doses of anti-measles vaccine, 240 doses of typhoid vaccine were administered as against 5,620 doses of DPT, 1,340 doses of D and T, 2,800 doses of T.T. for mothers, 5,530 doses of oral polio, 1,120 doses of anti-measles vaccine and 180 doses of typhoid vaccine during 1988-89. There were 225 persons on the teaching staff, 787 non-teaching in the hospital attached to the College. A College of Nursing started in 1989 and one school of nursing started in 1980 are attached to the hospital.

The Church of South India Hospital

Originally called as the Zenana Hospital, the CSI Hospital was started in 1893 and is one of the oldest hospitals in the city located near the Cantonment railway station. It was started by Church of England Zenana Mission Society for specially treating Mohammadan gosha women but others also were treated. The present number of beds in the hospital is 200 and is managed by a Medical Superintendent assisted by 25 physicians and surgeons, 57 nurses, 28 para-medical, 34 administrative and 61 Class IV staff. All specialists services are available including urology and cardiology. The common diseases for which treatment is sought in the hospital are reported to be ischaemic heart diseases, diabetes mellitus, typhoid, gastro enteritis, infective hepatitis, etc. During 1989 upto the end of October 43,285 out-patients and 4,317 in-patients were treated in the hospital, 621 deliveries were conducted 470 major and 743 minor operations performed, 2,444 x-rays and screenings were taken as against 45,340 out and 4,734 in-patients, 737 deliveries, 398 major and 836 minor operations, 2,538 x-rays and screenings during 1988. There were 460 T.B. and 221 leprosy patients under treatment during 1989 upto the end of October 1989.

During 1989-90, upto end of October, 1989, under Family Welfare Programme one vasectomy and 391 tubectomy operations were performed, 272 IUD placements made as against one vasectomy and 803 tubectomy and 516 IUD placements in 1988-89. Under M.C.H. programme during 1989-90 upto the end of Oct 89, 653 doses of DPT, 702 doses D&T, 808 doses of oral polio, 113 doses of BCG, 103 doses of anti-measles vaccine were administered as against 700 doses of DPT, 707 doses of D & T, 805 doses of oral polio, 111 doses of BCG and 101 doses of anti measles vaccine during 1988-89.

The Sri Jetha Nand Hospital for the poor was started at Shanghnessy Road, in 1969 and has 17 beds. It is maintained by two doctors, three nurses, one com-

pounder, three Ayas, one ward incharge and one social worker. It has the facilities of X-ray, laboratory, ultra sound scanning and histopathology. During 1989 the hospital treated 8,320 out and 640 in-patients, attended 208 maternity cases, took 10 x-rays and screenings, 5 Ultra sound scanning; 30 sterilizations and 30 IUD placements were carried out under F.W. programme and under M.C.H. 110 doses of DPT, 12 doses of D&T and 749 doses of TT for mothers were administered. During 1989, 5,766 slum visits were made as against 5,924 during 1988.

The Bangalore West Lions Eye Hospital and Cornea Grafting Centre was started in 1984. The hospital on the H. Siddiah Road has 24 in-patients beds with an air conditioned operation theatre, consultation room, laboratory refractive room etc, where all types of sophisticated eye-surgeries are performed including cornea grafting. Facilities are available in the hospital for micro-surgery, contact lenses, Lions MNNT Eye-Bank, fluorescein angiography, yag laser photo-coagulation, computerised field analysis, argon laser photo-coagulation, blind rehabilitation services, intra ocular lens implantation, ophthalmic ultra sound scanning, Jindal Aluminium School Children Eye Screening Unit, etc. Netra Jyothi Mobile Ophthalmic Hospital, a constituent of Lions Hospital is an hospital on the wheels to serve the blind in rural and remote areas. This unit is self-sufficient and has 20 staff members organising free eye surgery camps in rural areas once in a week. The unit so far has conducted 114 free eye camps, taken 91,098 adult and 62,517 school boys screenings and performed 11,356 surgeries. The MNNT Eye Bank, with its 24-hour call service has enrolled more than 19,000 eye donors and has collected and distributed 734 eyes to grafting centres throughout South India. During 1989 upto October 1989, the hospital treated 63,062 out-patients, 1,309 in-patients performed 1,164 major and minor operations as against 17,516 out-patients, 757 in-patients, 798 major and minor operations in 1988. In the mobile unit 46,627 out and 4,175 in-patients were treated in 1989 (upto Oct. 89) and 4,175 major and minor operations were performed as against 50,588 out and 3,831 in-patients and 3,831 operations in 1988.

The Bangalore Kidney Foundation was started in 1979 as a Home Dialysis Centre with one dialysis machine, one technician and one nephrologist. The Foundation owes its existence to a Engineer- Scientist Dr. V.A. Bapat and a few others who are the trustees of the Foundation. Due to increase in demand for the Dialysis facilities, it was shifted to Sevakshetra Hospital in 1984 and later to its present building in Padmanabhanagar in April 1989. The present bed strength is 23 and will be 45 on completion of the Hospital. There are one full time Nephrologist, one Paediatric Nephrologist, two medical officers, three Junior Medical Officers and three visiting urologists, cardiologist, neurologist and psychiatrist. Attached to the centre is a well equipped laboratory. The Foundation is having haemodialysis, peritoneal dialysis, kidney biopsies, urological services including kidney transplantation facilities. It is recognised as a referral centre for

nephro-urological services by all public sector undertakings like HAL, HMT, BEL etc. The Foundation is the first to do kidney transplant surgeries in Karnataka. The Foundation in co-ordination with Sanjay Gandhi Accident Rehabilitation Centre and NIMHANS is in the process of implementing Cadaver Kidney Transplant Programme. On an average about 3,600 out-patients are treated every year and about 1,500 patients are admitted in the hospital. Upto 1989, the Foundation has done 115 kidney transplants and 500 other minor and major routine procedures.

The Bangalore Baptist Hospital was started in 1973 by the Foreign Mission Board of the Southern Baptist Convension, U.S.A. with primary objectives of service to all. The Hospital on the Bellary Road had 80 beds initially and 20 more beds were added in 1983. It has the facility of x-ray unit, ECG, laboratory, blood bank, ultra sound scanning, physiotherapy, endoscopy etc., and also specialists services in surgery, obstetrics and gynaecology, ophthalmology, orthopaedics and dentistry. The common diseases for which treatment was sought was acute, and chronic medical, surgical, paediatric and gynaecological problems. There were 19 doctors, 15 pharmacists, 62 nurses 114 ayahs, aides etc. and 28 Administrative staff during 1989 in the Hospital. During 1989, upto October 89, 58,275 out-patients and 4,431 in-patients had been treated in the hospital, 903 deliveries were conducted, 1,212 major and minor operations were performed, 4,301 x-rays and screenings were taken as against 68,171 out-patients, 5,081 in-patients, 1,029 deliveries, 1,394 major and minor operations, 4,480 x-rays and screenings during 1988. There were 1,000 T.B. and 629 leprosy patients, under treatment in 1989 against 1,440 T.B. and 749 leprosy patients in 1988. Under Family Welfare programme during 1989-90 (upto October) 2 vasectomy, 172 tubectomy operations had been performed, and 83 IUD placements made as against 312 tubectomy, 185 IUD placements in 1988-89. Under M.C.H. programme during 1989-90 upto October 1989, 368 doses of DPT, 25 doses of D and T, 348 doses of T.T. for mothers' 385 doses of oral polio, 37 doses of typhoid and 77 doses of anti-measles vaccine had been administered as against 684 doses of DPT, 26 doses of D&T, 549 doses of TT, 670 doses of oral polio 42 doses of typhoid vaccine and 174 doses of anti-measles vaccine during 1988-89.

The Saint Philomena's Hospital was started in 1937 by late Dr. Sister Veronica Pitt, an Australian who came to India in 1920, and gradually grew into a 250 beds hospital now on the Neelasandra Road. It is owned and operated by the sisters of the Society of J M J (Jesus, Mary and Joseph). The hospital has specialised units in medicines, surgery, obstetrics and gynaecology, orthopaedics, urology, ENT, ophthalmology, dentistry, skin, physiotherapy, ultra scanning with modern operation theatre and Casualty Department. The hospital has also a well developed x-ray, laboratory and an intensive care units. In the year 1951, a school of nursing

was started and later a female health workers course. In 1983 the General Nursing Training of a four year course was started and 30 students are admitted to the training course each year. The Hospital has an attached Health Centre at Nagavara 15 km from Bangalore. During 1989, it was administered by an Administrator assisted by 19 Senior physicians and surgeons and 12 Junior doctors and nearly 200 other technical, non-technical and ministerial staff. During 1989 (till Dec.) the hospital treated 1,28,617 out-patients, 12,412 in-patients, conducted 4,584 deliveries, performed 4,877 major and minor operations, took 14,591 x-rays and 2,241 scannings as against 1,11,113 out and 12,989 in-patients, 4,328 deliveries, 4,734 major and minor operations, 13,903 x-rays, 1,129 scannings during 1988. During 1989 there were 300 T.B. patients under treatment. Under Family Welfare programme during 1989-90 upto the end of December 1989, 34 tubectomy operations were performed and 136 IUD placements made as against 20 tubectomy operations and 166 IUD placements in 1988-89 and 15 tubectomy operations and 115 IUD placements in 1987-88. Under MCH programme 18,000 doses of DPT, 250 doses of D and T, 8,562 doses of TT for mothers, 30,000 doses of oral polio and 4,320 doses of anti-measles vaccinations were administered in 1988-89 (till Dec.).

The Seventh-Day Adventist Hospital in Bangalore was started in 1978 by the Seventh-Day Adventist Mission. The number of beds at present in this hospital at Pulikeshinagar (Frazer Town) is 27 and the hospital has facilities of laboratory, ultra-sound scanning, x-ray, physiotherapy, dentistry, ophthalmology and general medicine and surgery. The staff consists of surgeon, gynecologist, dentist and eye-surgeon one each and other 40 attendant workers. During 1989 upto Oct. 89, the hospital was attended by 10,427 out and 1989 in-patients and 353 deliveries were conducted 57 major and 200 minor operations performed, 912 x-rays were taken in the hospital as against 13,386 out and 2,076 in-patients, 369 deliveries, 78 major and 211 minor operations and 1,319 x-rays during 1988. Under Family Welfare programme during 1988-89, 33 tubectomy operations were performed as against 44 during 1987-88.

Srikrishna Sevashrama Hospital was started by Sri Krishna Service Mission in 1962 at Narasimharaja Colony, Bangalore and later in 1985 was shifted to its own building in Vth Block, Jayanagar, Bangalore. The bed strength of the hospital is 27 and there were 33 members on the staff. The facilities available are x-ray, Laboratory, ultra-sound scanning, incubators, psychotherapy, infertility clinic, etc. The Hospital has specialist services in general medicine and general surgery, E.N.T. ophthalmology, skin, orthopaedic, psychiatry, paediatrics, urology, neuro-surgery, ayurveda, homoeopathy, obstetric and gynaecology. It has a sub-centre at Agara Village. During 1989, the hospital was attended by 17,230 out and 2,385 in-patients, 690 deliveries were conducted, 7,493 maternity cases were attended as out-patients, 250 major and 290 minor operations were performed 1342 x-rays were taken as

against 13,060 out and 1,783 in-patients, 480 deliveries and 6,597 pregnant women out-patients, 220 major and 230 minor operations and 980 x-rays during 1988. There were 14 T.B. patients under treatment in 1989 as against 12 in 1988 and 10 in 87. Under the Family Welfare Programme during 1989-90 upto the end of December 1989, four vasectomy, 22 tubectomy operations were performed and 14 IUD placements made as against two vasectomy, 41 tubectomy and 25 IUD placements in 1988-89. Under MCH Programme during 1989-90 upto the end of December 1989, 290 doses of DPT, 290 doses of D & T and 690 doses of T.T. for mothers were administered as against 240 doses of DPT, 240 doses of D&T and 480 doses of T. T. during 1988-89. Enteric fever and tuberculosis are reported to be more common among the patients who attend the hospital. The hospital runs free out-patient department for the poor on Mondays and Saturdays.

The Sevakshetra Hospital was started in 1979 by the Canara Bank Relief and Welfare Society at Banashankari II Stage. The hospital has specialised services in general medicine, general surgery, obstetrics and gynaecology, paediatrics, ENT, ophthalmology, orthopaedics, skin, speech and hearing, physiotherapy, nephrology and dialysis service. The present bed strength of the hospital is 64. It has laboratory, x-ray, ECG, physiotherapy and ultra-sound scanning facilities. During 1989, upto the end of October, 18,694 out and 2,827 in-patients were treated, 352 deliveries were conducted, 265 major and 917 minor operations were performed, 4,202 x-rays and 769 screenings were taken as against 23,513 out and 4,586 in-patients, 503 deliveries, 255 major and 1,114 minor operations, 3,928 x-rays and 900 screenings during 1988. Under Family Welfare Programme during 1989-90, upto the end of October 89, one vasectomy, 67 tubectomy operations were performed, ten IUD placements made as against one vasectomy 72 tubectomy operations, and four IUD placements during 1988-89.

The Seth P.D. Hinduja Sindhi Hospital was started in 1962 as a dispensary and subsequently it became a 40 bed hospital, located at Sampangiram Nagar. The hospital is jointly sponsored by the Hinduja Foundation and Sindhi Youth Association. All clinical, diagnostic and therapeutic services are available in the hospital. Specialists services are available in general medicine, general surgery, gynaecology, orthopaedics, ophthalmology, ENT, paediatrics, dermatology, plastic surgery, vascular cardiothoracic surgery, cardiology, gastroenteritis, neurology, urology, radiology, dentistry and oncology. During 1989, 33,677 out-patients, 3,660 in-patients attended the hospital, 63 deliveries were conducted, 248 major, 991 minor operations were performed, 5,223 x-rays were taken as against 47,478 out and 3,177 in-patients, 527 major and 735 minor operations and 7,432 X-rays in 1988.

The H.A.L. Hospital was started in 1940 as a First Aid Centre and in 1952, an out-patient department was started. A maternity ward, a General ward and a T.B. Ward were started in 1953 with 20 beds in each ward and another general ward with 80 beds was attached to it in 1960. During that year, a 10-bed special ward, a

fully equipped major operation theatre, x-ray and pathology departments were started. Additional wards were attached to the Hospital in subsequent years and in 1989 the total bed strength was 212. There are 35 medical officers and 285 para-medical staff in the hospital. It has nine Ambulance rooms inside the factory and one Rural Health Centre. Specialists services are available in cardiology, medicine, surgery, thoracic diseases, chest diseases, neurology, orthopaedics, ENT, endoscopy, paediatrics, dermatology, ophthalmology, Ayurveda, Homeopathy, audiology and psychiatry. During 1989 (Upto Oct 1989), 2.02 lakhs of out and 4,800 in-patients were treated, 545 deliveries were conducted, 960 maternity cases were attended, 820 major and 940 minor operations performed, 15,081 x-rays and screenings were taken as against 2.94 lakhs out and 5,800 in-patients, 624 deliveries, 1,095 maternity cases, 984 major and 1,141 minor operations 14,926 x-rays and screenings during 1988. There were 61 T.B. patients under treatment during 1989 as against 73 in 1988. Under Family Welfare Programme during 1989-90 upto October 1989, 6 vasectomy, 219 tubectomy operations were performed and 37 IUD placements made as against 9 vasectomy, 273 tubectomy and 88 IUD placements in 1988-89.

The General Hospital of the Indian Telephone Industries Limited was opened during October 1958. There was only out-patient department in the beginning with two units with a first aid centre inside the factory premises. The average daily attendance was about 600-700 per day. Later the maternity and gynaec wards with ten beds, general wards with 30 beds and special wards with two single and double-bedded rooms were added and a major operation theatre, x-ray and physiotherapy units were set up. Ambulance service was introduced to pick-up emergency cases. The number of beds available today is 200. It is managed by Chief Medical Superintendent assisted by 35 physicians and surgeons, 265 office and para-medical staff. Specialists services are available in general medicine, cardiology, industrial health, radiology, dental surgery, dermatology, pathology, general surgery and urology, ENT, ophthalmology, orthopaedics, neurology, psychiatry, paediatrics, obstetrics and gynaecology, speech and audiology and ultrasonology. During 1989, upto the end of October 1,80,000 out-patients, 1,810 in-patients had been treated in the hospital, 390 deliveries were conducted, 2,400 minor and 588 major operations performed, 10,547 x-rays had been taken, 207 Barium meals studies were conducted as against 2,40,000 out-patients, 3,098 in-patients, 298 deliveries, 2,000 minor and 562 major operations, 11,912 x-rays and 168 barium meals during 1988. There were five T.B. patients under treatment during 1989 as against 18 in 1988 and 22 in 1987. Under Family Welfare Programme during 1989-90, upto the end of October 89, two vasectomy, 105 tubectomy sterilizations were performed and 177 IUD placements made as against 3 vasectomy and 127 tubectomy sterilizations and 120 IUD placements in 1988-89.

The Chinmaya Mission Hospital was started in 1969 as a small out-patient clinic and became a hospital of 20 beds in 1970. The number of beds was increased to 60 later. It has got specialised services in ENT, ophthalmology, obstetrics and gynaecology, paediatrics, neurology, general medicine, general surgery etc.

The Arogya Hospital was established by the branch of the internationally recognised Maha Bodhi Society in 1956 in Bangalore by the Ven. Sri Acharya Buddharakkita. The Society is a spiritual centre and has sponsored the Arogya Foundation (India) which is devoted to the health programmes among which are included Mahabodhi Burns Casualty and Emergency Centre, (Victoria Hospital), Mahabodhi Burns Council, Mahabodhi Eye Bank, & Leprosy Clinic, Hospital Library Service, and T.B. Patients Centre. The other health activities include prison programme, manufacturing artificial limbs for the handicapped, Yoga therapy, etc. The Rural Health and Service Centre of the Society at Sakalavara has become a model project coordinating medical and social programmes. The Arogya Health and Service Centre has become a hospital in Bangalore.

The Basaveshwara Hospital was started in 1979 on the outskirts of the city on a hillock near Kengeri under the auspices of the Basava Samithi, with the objectives of providing free treatment for the rural poor. This free dispensary has spent Rs. 27,500 for providing medicines during 1988-89. There is a plan to start a 30-bed hospital on a 1.5 acre plot.

The Institute of Speech and Hearing, Hennur Road, Bangalore was started in 1978. It provides corrective and rehabilitative services to those suffering from speech and hearing impediments and facilities are offered in audiometry and speech therapy, distribution of hearing aids, etc. The Institute is also engaged in screening of students in schools in and around Bangalore and in conducting camps in rural areas. The Institute has started an Integrated school for the deaf in Rashtriya Vidyalaya where 55 hearing impaired children are integrated with normal children and a Special School for the hearing impaired consisting of pre-school training. It has undertaken correspondance therapy for out-station children in speech therapy, a unique programme of its kind in the country.

The public and private sector undertakings such as the Hindustan Machine Tools, Ltd., the Bharat Electronics, Ltd., the Bangalore Water Supply, and Sewerage Board, the Sports Authority of India, the Bangalore University, the Kirloskar Electric Company, etc., have their dispensaries and hospitals for their employees. The private medical colleges have teaching hospitals attached to them. There are many non-resident Indians Organisations in the city financed by the non-resident Indians which are bringing forth highly sophisticated hospitals in Bangalore city and some of them are the Manipal Hospital (near the Airport), the Bangalore Hospital (Cauvery Circle), Lakeside Hospital (Ulsoor), Appolo-Mallya Hospital (Vittal Mallya Road), Kaveri Medical Centre, Cosmic Harmony Hospital, Yellamma Dasappa Hospital (K.H. Road) etc. There are also many private

laboratories like Medinova (Infantry Road) which provides comprehensive medical check-up.

INDIAN SYSTEMS OF MEDICINE.

The Indian systems of medicines, the Ayurveda, the Unani, Sidda, Yoga, etc. were very popular in the earlier days and even to-day continue to be popular among the masses. Some People, suffering from chronic diseases approach the specialists of these systems as a last resort of their trial. There are Ayurvedic, Unani and Homoeopathic hospitals and dispensaries in the city run by Government and private agencies and quite a good number of Ayurvedic physicians are practising in the district. The Government institutions are the Jayachamarajendra Ayurvedic Hospital, the Government Unani and Homoeopathic hospitals, the Ayurvedic dispensaries at Bannerghatta, Legislatures home, the Ayurvedic sections at the ESI hospitals at Rajajinagar and Indiranagar and the Ayurvedic and Unani dispensaries of the Bangalore City Corporation. The Ayurvedic dispensaries come under the administrative control of the District Health and Family Welfare Officer, Bangalore district. During, 1986-87 drugs worth Rs. 58,560 were supplied to the Government Ayurvedic dispensaries in the district as against drugs worth Rs. 49,695 during 1985-86. The following are the Pandits of the district who have been awarded gold medals under a scheme started in 1985-86: Y. Parthasarayana Pandit (1985), M. Mahadeva Shastry (1986), and K.R. Srikanta Murthy (1989) all in Ayurveda; A.R.A. Acharya (1985) and K.E. Peters (1986) for Homoeopathy; P.V. Narayana Reddy (1985) and H. Srinivasaiah (1989) for Nature Cure and Yoga. The following Pandits and Hakims are the recipients of pension for their service in the Indian Systems of medicine (the award was instituted in 1981); N. Gundappa, Ayurveda (1981), M.V.R. Swamy, Homoeopathy (1981); M. Gopalakrishna Rao, Ayurveda (1984), Vinayaka Rao Bapat, Ayurveda (1983); K.B. Chikkanarayanappa, Nature Cure and Yoga (1985); Abdul Hameed Khan, Unani (1986); B.V. Ananda Rao, Nature Cure and Yoga (1987).

An Ayurvedic Academy was started in Bangalore with the objectives of studying, propagating and providing training in Ayurveda, to arrange medical camps, lectures, seminars and conferences. It is governed by a Council of members. The *Central Indian Medicinal Plants Organization* was started in Bangalore in 1960, one of the zonal centres of the Central organization at Lucknow. It demonstrates the agro-techniques, distillation techniques and economic methods of producing essential oils. It also offers free technical advice to the farmers.

The Government Central Pharmacy was founded in Bangalore in 1958 by the Govt. of Karnataka to manufacture and supply Ayurvedic and Unani medicines. It has an herbal garden and has the four sections of Raw Drug, Ayurvedic preparation, Unani preparation and packing and forwarding. It is under the control of a Chief Superintendent. A Drug Testing laboratory is attached to the Pharmacy (under central grant). The Pharmacy also trains Ayurveda and Unani Pharmacists,

the scheme started in 1979. During 1986-87 the Pharmacy supplied Ayurvedic drugs worth Rs. 32,77,078 and Unani drugs worth Rs. 16,03,328 as against Ayurvedic drugs worth Rs. 32,01,642 and Unani drugs worth Rs. 10,53,081 during 1985-86.

The Jayachamarajendra Ayurvedic Hospital was started in 1924 with 12 beds together with the Unani system. It was named Jayachamarajendra Ayurvedic Hospital in 1943. The Kaveri Bai Srinivasa Rao Research wing was started by the donation contributed by late L.S. Venkaji Rao in his parents' name. The present building of the hospital was built in 1948, research wing in 1955 and the children's wing in 1962. The hospital has separate departments for Ayurveda, Siddha, Yoga, etc. and special units for Panchakarma Therapy, X-ray, Ophthalmology, etc. With the starting of the Ayurvedic College it has become a teaching hospital for undergraduates and post-graduates in Ayurveda. The number of beds is 315 (Ayurveda 225, Unani 75, Yoga 5 and Siddha 10). *The Government Unani College* was started in 1975. A nurse training school and a dental unit are also functioning attached to the Ayurvedic College. A herbarium on a plot of 37 acres of land near Bangalore is being developed. The hospital conducts Yoga classes for asthma and diabetic patients. During 1989-90, 5,23,636 out and 6,024 in-patients were treated, 13 deliveries were conducted 712 X-rays and 1,662 screenings were taken as against 4,93,351 out and 5,992 in-patients, 18 deliveries, 648 X-rays and 1,529 screenings in 1988-89. There were one Resident Medical Officer, 22 Medical Officers of Class II and III, Research and Assistant Research Officers one each and 165 other medical, para-medical, office and other staff in the hospital during January 1990. The hospital conducts training camps for diabetic and asthma patients in Yoga Section. The Unani unit started in 1980 by the Government of India undertakes research. A Unani wing of the Government Unani Medical College is attached to this hospital.

The Ayurveda Prathistana Jayanagar was started in Bangalore during 1961 and took charge of the Ayurvedic College in the same year which had been earlier started by the Ayurvedic Academy in 1958. The Prathistana maintained the College till 1972 and closed the college. The hospital has an in-patient ward with 10 beds. The dispensary follows classical Ayurvedic treatment only. It is managed by three physicians and three subordinate staff. The treatment is absolutely free. During 1989, 1,02,455 out-patients were treated as against 1,01,582 in 1988 and 93,504 in 1987.

The Government Homoeopathic Hospital in Bangalore was started in 1975 with 25 beds, where treatment is given for skin, cardio-vascular, respiratory and cerebro-spinal diseases also. During 1989, 1,11,715 out and 125 in-patients were treated in the hospital and 800 minor operations were performed as against 34,214 out and 167 in-patients and 650 minor operations in 1988. There were four tuberculosis patients under treatment in 1988 and two in 1989. There were one physician grade one, and two physicians of grade III who were assisted by three

staff nurses, two pharmacists and 20 other office and other staff during January 1990.

Institute of Naturopathy and Yogic Sciences

The Institute of Natrupathy and Yogic Sciences was founded by S.J. Jindal Trust in 1979, 16 km away from Bangalore on the Bangalore-Tumkur Road. The Institute has been recognised by the Indian Council of Medical Research for purposes of research. The Institute covers an area of 40 acres of land overlooking a placid lake with neem, eucalyptus, mango, coconut and palm trees and papaya and banana gardens. The Institute offers natural and yogic exercises like hydrotherapy, mud-therapy, chromotherapy, heliotherapy, yogasanas and meditation, spinal bath, oil massage, steambath or a hot foot bath, electro powder massage, plantain leaf bath etc. Of the many diseases for which the treatment is sought, some of the important diseases are migraine, myopia, sinusitis, bronchial asthma, ulcers, hyperacidity, abdominal disorders, amoebiasis, dysentery, colitis, gastro-enteritis, hepatitis, menstrual disorders, diabetes mellitus, hypertension, insomania, anxiety neurosis, psoriasis, allergic dertmatitis, spondylitis, arthritis, gout, etc. The Institute is equipped with x-ray, laboratory and physiotherapy sections. There are 163 beds for the in-patients. The Institute aims to promote drugless treatment/therapy to suffering humanity, according to the cardinal principles of nature cure and yoga. During 1989, upto the end of october 1989, 1,818 out and 1,676 in-patients had sought treatment in the institute and 1,098 x-rays and 82 screening were taken as against 1,920 out and 2,130 in-patients, 1,865 x-rays and 110 screenings during 1988. There were 123 staff members in the Institute during January 1990.

Nature Cure hospital: The Nature Cure Hospital, Jayanagar, Bangalore was started during 1966 by the Karnataka Prakruthi Chickitsa Prachar Trust to provide medical help by nature cure system for curing diseases. The number of beds available is 30 and there are separate wards for male and female patients. It is managed by a Chief medical officer assisted by one lady medical officer and other 19 office and technical staff. During 1989 upto end of October, 4,010 out-patients and 3,549 in-patients had been treated in the hospital as against 6,779 out and 5,759 in-patients in 1988 and 6,948 out and 5,667 in-patients during 1987.

The Vivekananda Kendra, Chamarajpet, Bangalore, founded in 1978 by the Vivekananda Rock Memorial Committee conducts Yoga classes and also undertakes Yoga Therapy. It also organises special yoga camps to treat diabetes, asthma, etc. *The Rastrothana Sharirika Shikshana Kendra,* Jayanagar, started in 1972, as a wing of the Rastrothana Parishat conducts classes in yoga therapy and Karate and gymnastic classes for children. There are many yoga schools in the city such as Bihar school of Yoga, Pathanjali Yoga Kendra, Sindhi Samadhi yoga kendra, etc.

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 the leprosy control, the Malaria Eradication, the Tuberculosis Control, Family Welfare, Maternal and Child Health Services, Health Education, etc., are carried out through the Primary Health Centres. They act as nuclei of rural health services. Generally there will be two medical officers one being the Lady Medical Officer in these primary health centres, who are assisted by pharmacists, lady health visitors, health inspectors both junior and senior, staff nurses, laboratory technicians, auxiliary nurse midwives, basic health educators and multipurpose health workers both male and female. During 1989-90, there were 16 primary health centres in the district, the PHCs at Kaggalipura and K. Gollahalli covering 28,500 population (minimum) and the PHC at Singasandra covering a population of 1,60,000 (maximum). As per the guidelines, there should be a primary health centre for a population of 30,000. Generally each primary health centre is supplied with drugs worth Rs. 30,000 annually. The table on the page 818 shows some information about these PHC for the year 1989-90.

Primary Health Units

The different types of medical institution such as Local Fund Dispensaries, Combined dispensaries, Reduced Scale Local Fund Dispensaries, Taluk Board Dispensaries, Medical Sub-centres etc, were all renamed as Primary Health Units (PHU) in 1978 and were brought under a single nomenclature. In these primary health units, generally there will be two medical officers, one being a lady medical officer but in smaller dispensaries there will be only one medical officer. Like the PHCs these PHUs also carry out all health programmes of the Central and State Governments. These PHUs generally cover a population of 15 to 20 thousand people and drugs worth Rs. 20,000 are supplied annually. There were 48 Primary Health Units in the district during 1989-90 and some information about them are given in table on pages 819 to 822.

Nurses' Training

There are nursing schools attached to the Bowring and Lady Curzon Hospital, Victoria Hospital, St. Martha's Hospital, St. John Medical College Hospital, C.S.I. Hospital, St. Philomenas Hospital, M.S. Ramaiah Medical College Hospital, Chinmaya Mission Hospital, Dr. Ambedkar Medical College Hospital and Kempegowda Institute of Medical Sciences, where a diploma course of three and half years in nursing is offered to the trainees. The College of Nursing offers a four years degree course to the students. There is a midwifery school at Command Hospital, Air Force and Health supervisors/Lady Health Visitors training at Vani Vilas Hospital, Lady Health workers training at K.C. General Hospital. Diploma in Psychiatric Nursing and Diploma in Neuro Nursing are being conducted at the National Institute of Mental Health and Neuro-Sciences, Bangalore.

FAMILY WELFARE

The concept of small family norm was conceived in the princely State of Mysore as early as 1930 and a family planning clinic was opened in Vanivilas

Primary Health Centres as in 1989-90

Sl. No.	Location	Popula- tion covered	Year of start- ing.	No. of Beds avail- able	Patients treated		Mater- nity cases atten- ded.	Oper- ations	Family wel- fare		Lepro- sy cases under treat- ment.	T.B. cases	MCH Programme			Oral Polio	Sub- centres.
					In	Out			Ster- liza- tion	IUD			DPT	D&T	TT		
1.	Abbigere	30,000	1976	Nil	Nil	8,200	Nil	Nil	-	-	-	-	-	-	-	-	6
2.	Anekal	65,790	1940	20	365	25,467	339	218	711	588	423	107	2,446	2,324	2992	2446	9
3.	Attibele	30,000	1930	3	195	11,059	113	75	169	79	115	23	391	710	391	322	6
4.	Begur	30,000	1925	6	Nil	5,392	-	378	155	208	62	11	301	877	1,178	301	6
5.	Bettahalasur	38,830	1963	6	341	10,562	554	Nil	308	298	59	51	1,075	1,039	1,075	1,075	7
6.	Dommasandra	52,730	1963	10	122	17,794	149	42	423	299	203	28	1,268	813	1,288	1,268	10
7.	Hesarghatta	1,05,000	1966	6	996	97,502	816	-	1,727	1,342	72	383	4,597	4,368	4,597	4,597	24
8.	Jigani	30,000	NA	-	-	5,296	Nil	Nil	Nil	Nil	Nil	16	Nil	Nil	Nil	Nil	10
9.	K. Gollahalli	28,500	1987	-	-	8,211	Nil	Nil	185	228	30	37	793	771	903	793	6
10.	Kadugondanahalli	1,30,000	1968	6	50	20,047	-	-	1,444	1,380	94	108	2,557	4,319	2,768	2,557	26
11.	Kaggalipura	28,530	NA	6	-	9,548	426	349	663	568	59	33	1,142	1,194	869	1,142	8
12.	Konanakunte	44,319	NA	6	Nil	14,615	789	967	967	709	108	20	1,862	1,403	1,541	1,862	7
13.	Singasandra	1,60,500	1970	6	Nil	8,312	45	-	1,590	824	190	29	4,099	1,989	6,267	4,099	28
14.	Sonnenahalli	30,000	1989	-	-	2,896	Nil	Nil	123	56	-	-	303	298	275	275	3
15.	Tavarekere	30,000	1972	-	Nil	2,185	454	Nil	215	179	45	12	701	564	544	701	5
16.	Vartur	30,000	1902	2	Nil	10,790	42	28	225	156	6	8	449	449	449	449	8

Primary Health Units in Bangalore City as in 1989-90

Location	Year of starting	No. of Beds	Patients treated		Maternity cases attended	Operations	Family welfare		MCH Programme			Oral polio	Leprosy patients.	T.B. patients.	Sub Centre
			In	Out			Sterilization	IUD	DPT	DT	TT				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Balepet								NA							
Basavanagudi	1968	Nil	Nil	8227	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	56	
Chamarajpet															
Cottonpet		Nil	Nil	15,361	Nil	Nil	22	92	258	36	78	258	Nil	71	Nil
Frazer Town															
Ganigarpet								NA							
Gavipuram-Guttahalli	1966	Nil	Nil	10,251	-	-	6	15	Nil	Nil	Nil	Nil	Nil	81	Nil
Jayanagar	1967	Nil	Nil	8,341	Nil	2	20	93	Nil	Nil	40	Nil	3	27	Nil
Kalasipalyam	1967	Nil	Nil	10,867	Nil	Nil	23	2	Nil	Nil	Nil	Nil	Nil	78	Nil
Karnataka Govt. Secretariat	1954	Nil	Nil	14,630	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Legislatures Home								NA							
Legislatures Home Ayurvedic.								NA							
Malleswaram								NA							

BANGALORE DISTRICT

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mavalli	1951	Nil	Nil	17,784	Nil	30	41	34	Nil	Nil	Nil	Nil	45	56	Nil
Munireddypalya	1944	4	Nil	13,492	Nil	Nil	1	42	28	22	-	70	Nil	50	2
Police Hospital, Magadi Road	1963	Nil	Nil	15,546	-	-	8	6	70	45	96	70	Nil	868	Nil
Police Hospital, Mysore Road	1968	6	-	15,000	Nil	Nil	Nil	16	157	36	157	124	Nil	Nil	Nil
Rajajinagar															
Sadat Dispensary (Cant.)	NA														
SHC (Male) Dispensary	1956	Nil	Nil	9,156	Nil	Nil	2	27	31	Nil	Nil	31	Nil	569	Nil
SHC (Female) Dispensary	1956	Nil	Nil	3,254	Nil	Nil	Nil	68	112	87	62	26	Nil	25	Nil
Seshadripuram	1957	Nil	Nil	6,969	Nil	Nil	20	38	18	21	21	30	-	263	Nil
Sonnenahalli	1961	Nil	Nil	13,824	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	275	Nil
Ulsoor	NA														
Velumudaliar Dispensary	-	Nil	Nil	12,945	-	-	22	69	262	38	40	95	Nil	11	Nil
Vishweshwara puram	1940	Nil	Nil	3,766	Nil	Nil	21	50	Nil	Nil	Nil	Nil	Nil	100	Nil

Primary Health Units in the district excluding Bangalore City as in 1989-90

Location	Year of starting	No. of Beds	Patients treated		Mater-nity cases attended	Opera-tions	Family welfare		MCH Programme			Oral polio	Lepro-sy patients.	T.B. pati-ents.	Sub Centre
			In	Out			Sterili-zation	IUD	DPT	DT	TT				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Agrahara Colony	1982	4	Nil	5,315	40	Nil	117	130	345	641	-	235	30	4	2
Bagalur									NA						
Bannerghatta	-	Nil	Nil	8,627	234	Nil	91	76	222	381	287	-	60	5	3
Chandappa Circle									NA						
Devarajeevana-hally	1989	Nil	Nil	27,159	Nil	Nil	53	47	376	116	669	376	3	7	2
Doddanekkundi	1979	-	-	12,156	Nil	Nil	84	57	959	849	599	-	10	Nil	
Gottigere									NA						
Herohalli	1970	Nil	Nil	13,143	Nil	Nil	196	167	629	1,996	2,461	2,461	15	15	7
Jeevanbhimanagar	1979	6	50	28,400	15	-	74	108	693	248	246	693	6	10	-
Kadugodi	1962	12	490	19,973	50	-	230	58	765	915	630	765	64	18	8
Kengeri	1940	Nil	Nil	24,756	145	Nil	258	16	561	381	561	353	23	54	Nil
Kodichikkanahalli	1981	Nil	Nil	4,556	Nil	Nil	44	25	109	118	38	Nil	Nil	8	
Kodigehalli	1977	Nil	Nil	2,631			88	75	356	225	342	356	48	5	
Kaval Byrasandra	1970	Nil	Nil	8,783	Nil	Nil	71	54	887	692	438	-	72	3	1

BANGALORE DISTRICT

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Krishnarajapura	1955	12	55	13,663	27	21	675	374	4,447	2,158	2,430	4,447	45	39	4
Makali	-	Nil	Nil	18,339	Nil	Nil	154	135	519	433	466	519	15	20	5
MarsurNA.....														
N.P. DispensaryNA.....														
Peenya	1970	Nil	Nil	8,473	Nil	Nil	195	119	512	657	316	420	Nil	42	6
SarjapuraNA.....														
Siddapura	1982	Nil	Nil	5,625	Nil	Nil	105	71	274	212	303	274	565	6	
Sondekoppa	1955	8	44	18,286	18	Nil	121	87	477	470	504	477	12	Nil	2
SoladevanahalliNA.....														
Yelahanka	1939	8	Nil	18,144	618	Nil	388	419	873	229	1,223	1,873	61	55	

Hospital at Bangalore in that year with the objectives of advising the couples for spacing and preventing unwanted births. But the programme was launched on a massive scale only during the Second Five Year Plan. The designation of the District Health Officer was changed as the District Health and Family Planning Officer in view of the duties and responsibilities entrusted to him of the programme. A district level Family Planning Bureau was started in 1964 to programme, guide and chalk out Family Planning activities in the district. The nomenclature of Family Planning was changed to Family Welfare in 1978. The approach was clinical in the beginning which was changed to extension in 1964 and then to target oriented and finally into target oriented and time bound. All medical institutions in the district, both Government and private are engaged in the successful implementation of the programme. Associations like the Rotary Clubs, Lions Clubs are also involved in the programme. Many incentives, both in cash and kind have been made available to the acceptors of Family Welfare programme. The All-India Hospital 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 MCH and FW Programmes. The programme includes antenatal, neonatal and post-natal services, Immunisation services and prophylaxis against nutritional anaemia and blindness. The post-partum centres in the district are the Bowring and Lady Curzon Hospital, the Vani Vilas Hospital, the K.C. General Hospital, HSIS Gosha Hospital and the ESI Hospital, Rajajinagar. There are 36 Family Welfare Centres in Bangalore City and most of them are attached to the Maternity hospitals maintained by the Bangalore City Corporation. In 1989-90, the district stood first in the performance of F.W. programme in the State. The following table shows the achievements and the percentage of achievement of the Family Welfare Programme in the district for the years 1985-86, 1986-87, 1987-88, and 1988-89. The percentage of achievements are given in brackets.

Year	Sterilizations	IUD	C.C. Users	Oral Pill Users
1985-86	27,379 (103.0)	17,498 (139.0)	5,669 (36.0)	1,869 (37.7)
1986-87	39,280 (119.4)	24,752 (146.2)	9,775 (74.3)	1,428 (24.1)
1987-88	36,247 (110.1)	25,599 (137.5)	14,181 (68.5)	5,416 (91.3)
1988-89	35,912 (117.5)	27,365 (138.6)	19,040 (92.0)	6,194 (101.4)

The following table shows the achievements of Family Welfare Programme in the Bangalore City Corporation Maternity Homes and Family Welfare Centres for the years 1986-87, 1987-88 and 1988-89.

	1986-87	1987-88	1988-89
Sterilizations	10,595	12,383	9,935
I.U.D.	5,691	6,943	7,242
M.T.P.	2,705	4,270	4,754

There are 36 Urban Family Welfare Centres run by the Bangalore City Corporation in Bangalore City.

Family Welfare Action Committees: There are Family Welfare Action Committees at the taluk level, sub-division level and the district level which are chaired by the respective Tahsildars, Assistant Commissioners and the Deputy Commissioners respectively. There is also a Committee for Financial Assistance to Acceptors of Family Welfare Programme which considers the application for legal aid in cases of fatality occurring during the Family Welfare Camps. The maximum amount of compensation of Rs. 5,000 has been enhanced to Rs. 10,000 from third of June 1985. During 1988-89 there were two deaths and the compensation paid was Rs. 20,000 as against four deaths and Rs. 40,000 compensation during 1987-88 in the district. In 1989-90 upto the end of January 1990, four deaths were reported and the compensation was yet to be settled.

Family Welfare Bureau: The Family Welfare Bureau attached to the Health and Family Welfare Office consists of both medical and paramedical staff. It has the Education unit, the Sterilization unit and the Evaluation unit. The Medical Officer of Health now upgraded and designated as the 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 at the head office and Block Health Educators at the level of Primary Health Centres. The activities of the unit consists of planning, implementation and evaluation of health activities, organisation of Family Welfare leaders' camps, folk media programmes like *Harikatha*, *lavani* songs, etc., exhibitions, supply of educational materials, debates and advertisements etc. The Sterilization unit consists of one staff nurse and an O.T. attender. The unit assists in conducting mini and mass sterilization camps. There is one senior statistical assistant in the Evaluation Unit, who compiles the statistics and also conducts sample tests.

During 1988-89, the education unit of the Bureau conducted 15 folk-media activities, organised 65 Leaders Training Camps, 2 post-graduate students debates on Family Welfare, 63 lectures on population education to women and 624 film strip shows. Under health education during 1987-88, the health wing of the Bangalore City Corporation had arranged 339 film shows, 1,700 group discussions, four exhibitions, three T.V. programmes, four A.I.R. programmes and seven leadership training programmes.

The following is the list of Nursing Homes and hospitals in Bangalore City in the Corporation area recognised by the Department of Health and Family Welfare for the purposes of family welfare activities: The Desai Nursing Home, Kumarapura Road; Gunasheela Surgical and Maternity Home, Basavanagudi; Rajakrupa Nursing Home, Chamarajapet; Sevakshetra Hospital, Banashankari II Stage; Sri Krishna Sevashrama Charitable Hospital, Vth Block, Jayanagar; Bangalore Baptist Hospital; Dr. Sita Bhatija's Nursing Home, Langford Gardens; Deepak Nursing Home, Malleshwaram; Lakshmi Nursing Home, Sheshadripuram; Arathi Nursing Home, Jayanagar; Kumud Nursing Home; Jayanagar; Sushrutha Nursing Home, Kanakapura Road; Manjunatha Nursing and Maternity Home, Malleshwaram; Shilpa Nursing Home, Jayanagar; Sushruta Maternity and Nursing Home, Malleshwaram; Adarsha Nursing Home and Lab. Banashankari I stage; North Side Hospital, Opp: Malleshwaram Railway Station; Ramamani Nursing and Maternity Home, West of Chord Road; Rajalakshmi Polyclinic & Nursing Home, Jayanagar; Palace Nursing Home, Kumara Park West; Sri Sai Clinic, and Maternity Home, Rajajinagar; Gurukrupa Nursing Home, West of Chord Road; Leela Nursing Home, Malleshwaram; Republic Nursing Home, Langford Gardens; Deepak Nursing Home, Kanakapura Main Road, Jayanagar; Deepti Nursing Home, Lakasandra; Geetha Nursing Home, Basavanagudi; B.M.S. Nursing Home, Basavanagudi; Dr. Sattur Shushrushalaya Nursing Home, West of Chord Road; Rashmi Nursing Home, West of Chord Road; Agadi Nursing Home, Wilson Gardens; Anugraha Vittal Nursing Home, Basavanagudi; Varalakshmi Nursing Home, Rajajinagar; Surgical Nursing Home, Double Road; Amarajyothi Nursing Home, Indiranagar; Syamala Nursing Home, Domlur Layout; Santosh Nursing Home, Madras Bank Road; Cambridge Nursing Home, Ulsoor; Ramakrishna Nursing Home, Jayanagar; Kasturba Medical Centre for Women and Children; Shastry Memorial Hospital, Vijayanagar; Maruti Nursing Home, Sheshadripuram; Sri Rama Nursing Home, Cubbonpet; Gururaja Nursing Home, Banashankari III Stage; Bindu Nursing Home, Gandhinagar; Srinivasa Nursing and Maternity Home, Vijayanagar; Parkview Nursing Home, Vijayanagar (Hosahalli); Saraswathi Clinic and Maternity Home, Bull Temple Road; Chamundi Maternity and Nursing Home, Vijayanagar; Karthik Nursing Home, Wilson Gardens; Chinmaya Mission Hospital, Indiranagar; Sharada Kripa Nursing Home, Kumara Park West; Shanti Surgical Nursing Home, Jayanagar; Jubilee Nursing Home, Chamarajapet; Subamma Maternity Home, Domlur Layout; Family Nursing Home, Rajajinagar; Sree Maternity Home, Rajajinagar; Supriya Nursing Home, Magadi Road; Rasheeda Nursing Home, Kalasipalyam; Maiya Nursing Home, Jayanagar; Kamala Nursing Home, Hanumathanagar; Ratnam Nursing Home, Jayanagar; Sekhar Nursing Home and Orthopaedic Centre, N.R. Colony; Asra Nursing Home, Kalasipalyam; Sri Jayalakshmi Nursing Home, Yelahanka; Ideal Nursing Home, Nandidurg Road; J.B.S. Nursing Home, Jayanagar; Seventh Day Adventist Hospi-

tal, Mosque Road; Pandus Hospital, B.P. Wadia Road; Vishwa Bharathi Nursing Home, Hanumanthanagar; Mekhri Nursing Home, Lalbagh Road; Kalasa Nursing Home, Chamarajpet; Indira Nursing Home, Banashankari II Stage; Sandhya Nursing Home, West of Chord Road; Kaveri Nursing Home Cubbonpet; Chandra Nursing Home, Basavanagudi; Soubhagya Nursing Home, Mysore Road; Venkateshwara Nursing Home, V.V. Puram; Magdum Hospital, Airport Road, HAL; Jayashree Nursing Home, Sampangiramanagar; Srikrishna Nursing Home, Wilson Gardens; Vijayanagar Nursing Home, Magadi Chord Road; Pragathi Nursing Home, West of Chord Road; Saraswathi Hospital, Banashankari II Stage; Kadnur Nursing Home, Basavanagudi; Raghavendra Nursing Home, Banashankari I Stage; Raghavendra Nursing Home, Mahalakshmi Layout; Model Nursing Home, Malleshwaram; Satyanarayana Surgical and Maternity Home, Sheshadripuram; Ashoka Nursing Home, Ulsoor; Venkateshwara Clinic & Lab Mariyappanapalya; Asha Nursing Home M.L. Layout; Vinayaka Nursing Home, H.A.L. II Stage; Bharathi Nursing Home, Basavanagudi; Gayathri Nursing Home, Jayanagar; Shanbhag Nursing Home, Basaveshwaranagar; Asha Prem Khatija's Nursing Home, Vithal Mallya Road; Chaya Nursing Home, Malleshwaram; Vijaya Nursing Home, Indiranagar; Maithri Nursing Home, K.R. Puram; Sumathi Nursing Home, Mathikere; Sushrutha Nursing Home, Yelahanka; Ramakrishna Nursing Home, Vyalikaval; Lalbagh Nursing and Maternity home, Jayanagar; and Aswini Surgical Nursing Home, Jayanagar (Total 105).

Family Planning Association of India (FPAI): The Bangalore branch of the FPAI was started in 1955, being the first branch in the State. In 1976, the branch undertook a study on the participation of voluntary organisations at the primary health centre level at Malur in implementing the Family Welfare Programme at the request of the Population Centre, Bangalore. The activities of the branch are of two folds, the educational and the service. Under educational unit programmes like population education, family planning education, sex education, counselling, research, training, women's development, etc., are included and under service unit are included a Family Planning Centre with 20 beds ward and six urban Family Planning Centres at Kodandaramapuram, Wilson Gardens, Banashankari, Sreeramapuram, Subramanyanagar and Palace Guttahalli. Each centre covers a population of 50,000 and is maintained by one Lady Medical Officer assisted by one lady health visitor and five other staff. Under education unit there are formal and non-formal sectors. In the formal sector students of high schools, colleges and training institutions are involved in discussion, lectures, film shows and other activities and in the non-formal sector the youths and others are involved in the programme.

During 1988, in the formal sector 196 talks and discussion were arranged involving 7,680 students and trainees, 46 film shows were arranged to benefit 2,800

students and in non-formal sector 131 talks and discussions benefited 5,270 persons and 860 attended 18 film shows and 990 persons attended 19 seminars and programmes arranged by other agencies. Under Family Life Education Programme seminars were arranged for Nursing school students and general medical practitioners. During 1988, two seminars, three training programmes, one baby show and one Health check-up camp had been organised. Some of the old Mahila Mandals were reactivated and a series of educational and developmental programmes for various Mahila Mandals were organised under Women's Development Project. During 1988, two seminars were organised which were attended by 125 women, and 24 women attended a training of Motivators, 32 cultural programmes benefited 1,545 women, two guest lectures were organised, 15 Skill Development Training Classes were attended by 300 women; six income generating activities were organised which benefited 180 women and 125 women were benefited by other educational programmes. The branch started Women's Skill Development Centres in 1986, under which training was imparted to 447 women trainees in different skills.

In the Urban Family Welfare Centres during 1988, 8,019 persons were motivated for adoption of Family Planning methods, and medical check-up was done for 12,063 women and 39,503 children. In these centres 4,113 (28% of the target) were sterilized, IUD placements were made for 3,261 (118%) women, condoms and oral pills were distributed to 4,228 (146.1%) and 2,159 (260%) women respectively. Under MCH programme, 694 doses of DPT and Oral polio, 741 doses of D&T, 842 doses of TT, 748 doses of BCG and 661 doses of anti-measles vaccine were administered during February 1990. In the Sterilization Unit during 1988, 43 vasectomy, 901 tubectomy, 427 MTP with Tubectomy operations were performed 321 MTP were carried out and 302 IUD placements made.

Maternal and Child Health Programme (MCH)

The Maternal and Child Health Programme (MCH) is one of the earliest schemes introduced in the State. The Medical Department started the Bureau of Maternal and Child Health in 1934. The MCH Programme includes the nutrition programme, the immunisation programme against tuberculosis, diphtheria, pertussis, tetanus, distribution of Iron and Folic Acid tablets etc., and also training of mid-wives. Keeping in view of the importance of MCH programme, a post of the District Immunisation Officer has been created who works under the District Health and Family Welfare Officer and is involved in the effective implementation of administration of vaccines of anti-epidemic diseases like diphtheria, pertussis, tetanus, T.B. etc. The following table shows the achievements and the percentage of achievements of the administration of vaccines in the district under the MCH programme for the years 1985-86, 1986-87 1987-88, and 1988-89.

Particulars	Years			
	1985-86	1986-87	1987-88	1988-89
DPT	79,694 (112.2)	86,665 (126.5)	96,266 (114.8)	84,716 (102.1)
D&T	67,021 (154.6)	61,727 (133.6)	79,706 (130.4)	73,975 (105.7)
TT for Mothers.	68,790 (106.8)	67,559 (98.6)	83,838 (95.9)	86,380 (98.8)
TT for children	NA	NA	NA	31,756 (72.2)
Oral Polio			94,492 (113.8)	84,717 (102.1)
BCG	63,505 (74.5)	66,318 (96.8)	68,798 (82.9)	68,798 (82.9)
Iron and Folic Acid Tablets for mothers.	79,997 (112.7)	96,112 (101.8)	1,19,316 (105.7)	1,06,415 (91.6)
Iron and Folic Acid Tablets for children	75,406 (106.2)	79,930 (84.6)	97,150 (81.0)	92,222 (44.1)
Anti-measles			18,593 (74.4)	43,099 (51.9)

Source: Status Reports, Department of Health and Family Welfare

The figures in brackets indicate the percentages of achievements.

During 1988-89 a total of 150 *dais* were trained as against 136 during 1987-88 and 17,945 deliveries were conducted both institutional and others as against 17,472 in 1987-88 in the district.

The table below shows the achievements made under Immunisation Programme in the Corporation area by the Medical Institutions run by Government, Bangalore City Corporation and Private agencies during the year 1986-87, 1987-88 and 1988-89

Particulars	1986-87	1987-88	1988-89
DPT	77,320	79,637	66,585
D&T	59,171	66,264	54,171
TT	59,622	74,582	59,462
Oral Polio	77,325	79,637	66,565
BCG	56,669	23,528	47,430
Anti Rabis	48,930	41,200	42,100
Anti-Measles	-	11,612	26,331

Source: Annual Reports of Bangalore City Corporation

I.C.D.S

The Integrated Child Development Services Scheme (ICDS) was launched on 2nd October, 1975 in the country. It is a multi- sectoral programme and involves several departments and the beneficiaries are children below six years, pregnant and lactating women and women in the age group 15 to 44 years. The infrastructure of ICDS is an additional facility which can be profitably used to supplement the health, nutrition and family welfare activities. Its objectives are to improve the nutritional and health status of children in the age agroup of 0-6 years to lay the foundation for proper psychological, physical and social development of the child and to reduce the incidence of mortality, morbidity and malnutrition. A package of services is rendered in the Anganawadies in villages through Anganavadi workers. The medical officers of the concerned Health Centres and Units visit these Anganawadies to 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. They are also advised supplementary diet for malnutrition. The children and mothers are also administered preventive toxoids like BCG, DPT, Oral Polio etc. There are four Integrated Child Development Projects in the district, two projects, one Central sector and the other the State sector in Bangalore City and the third in Anekal taluk. The fourth project is yet to be started in Yelahanka. There are two District Advisors, one for the Bangalore City projects and the other for the Anekal project and the District Health and Family Welfare officer is the Chief Advisor. There are 37 Medical Officers of Health, 31 Lady Health Visitors and 98 auxiliary Nurse Midwives involved in these projects, in the district. There are 137 Anganawadis in the Bangalore Urban Project under Central sector and 100 Anganawadis each in the Bangalore Project under State sector and the Anekal Project. The following table shows the achievements in these projects under immunisation programme for the years 1988-89 and 1989-90 upto the end of December 1989. The percentages of achievements are given in the brackets.

Particulars	1988-89				1989 upto the end of Dec.89.			
	Bangalore City		Anekal	Total	Bangalore City		Anekal Project	Total
	Central sector	State sector			Central sector	State sector		
BCG	5,577	5,649	10,913	22,139	1,027	1,158	3,684	5,269
				(86.01%)	(78.1)	(49)	(76)	
DPT	6,557	7,388	9,902	23,847	2,290	1,522	3,517	7,329
				(94.30%)	(98)	(65)	(73)	
Oral Polio	6,557	7,388	9,926	23,871	2,290	1,522	3,517	7,329
				(94.31%)	(98.1)	(65)	(73)	
TT for Mothers	3,124	5,573	8,936	17,633	1,297	1,528	3,051	5,876
				(62.5%)	(51)	(65)	(63)	
Anti-Measles	5,125	4,992	7,637	17,754	1,615	1,388	2,457	5,460
				(72.9%)	(69.1)	(50)	(57)	

Drugs Control

The Department of Drugs Control is administered in the district by the Assistant Drugs Controller for Bangalore, Tumkur and Kolar districts, assisted by six Drug Inspectors in the district. The Acts, Rules and Regulations administered by the Department in the district are the Drugs and Cosmetics Act, 1940 and Rules thereunder; the Drugs (Price Control) Order, 1979; The Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954 and Rules thereunder; the Pharmacy Act, 1948 and Education Regulations thereunder; the Import Trade Regulations for the Grant of Essentiality Certificate to the Pharmaceutical Industries; the Dangerous Drugs Act, 1930; in so far as distribution of Narcotic Drugs viz., codeine, morphine, pethadine and medical opium; the Poisons Act, 1919 and Karnataka Poisons Rules 1966; Medicinal and Toilet Preparations Act, 1955; and the Narcotics and Psychotropic Substances Act, 1985. During 1989, there were 1,040 Chemists and Druggists in the district 14, in Anekal and 1,026 in Bangalore City. The total number of registered licenced establishments in the district in 1989 was 2,228. (23 in Anekal tq. and 2,205 in Bangalore City). During 1988-89, in the Drugs Testing Laboratory 324 samples from the district were analysed of which 282 samples were found to be of standard quality. As on first of January 1990, there were 809 licenced drug manufacturers in Bangalore district and 55 loan licences in the district. The following were the names of registered blood banks in Bangalore City; Bangalore Lions Service Trust, Madhavanagar; Bangalore Medical Service Trust, Cunningham Road; Dr. B. Shivaji Rao's Blood Bank, Shanthinagar; Kidwai Memorial Institute of Oncology, Hosur Road; Mediquest Diagnostic Centres and Blood Bank, K.H. Road; Shiva Blood Bank and Clinical Lab., Malleshwaram; Vaexoid Pharmaceuticals Pvt. Ltd. Blood Bank Transfusion Services, Sheshadri Road; Dr. V.N. Krishna Murthy's Clinical Laboratory, Jayanagar; There are four licenced drugs repacking units and two licenced approved laboratories in Bangalore and the laboratories are the Sriram Institute for Industrial Research and Sanford Pharma Tech. Pvt. Ltd.

The Bangalore District Branch of the Indian Medical Association is very active in the district which organises medical check-up camps in the rural areas, distributes drugs freely to the needy poorer class.