CHAPTER XVI

MEDICAL AND PUBLIC HEALTH SERVICES

Survey of Public Health and Medical facilities in early times

The district is divided into plains and the hilly country above Ghats—chiefly inhabited by Khonds and Savaras. During the hot weather of March to May the heat in the interior is intensive, as the numerous rocky hills absorb and retain an immense amount of heat. December is the coldest month of the year. The portions above the Ghats are unhealthy and notorious for malaria and blackwater fevers. In the plains, Khallikot ex-zamindari and many portions of Ghumusar subdivision, especially those adjoining the agency tracts, are unhealthy. Fever and enlarged spleen are common complaints in the unhealthy parts of the district. On the whole the climate is moderate.

There is no systematic records regarding the public health and medical facilities of the Ganjam district in the early times. An organised system of medical and public health began in the erstwhile Madras presidency with establishment of the Indian Medical Department in 1786 A. D. The department was administered by a Board consisting of a physician general, a surgeon general and an Inspector of Hospitals with a secretary attached. The local representative of the Department was the Zilla or the Civil Surgeon who became in 1883 the District Medical and Sanitary Officer. In the early stages, he was primarily concerned with the provision of medical relief to European officers at headquarters with the additional responsibility of rendering medical assistance to prisoners in jails. In those days vaccination was the only form of medical aid provided by Government and whenever an epidemic broke out in virulent form medical relief was made available through the agency of practitioners of Indian system of medicine. The Indian Act XXVI of 1850 and the Madras Town Improvement Act, 1865 did not provide medical service in towns, but the Madras Town Improvement Act, 1871 placed the responsibilities of medical relief in towns and municipalities. Similar provision was also made in the Madras Local Funds Act of 1871 making the Local Boards responsible for opening medical institutions in non-municipal areas. This Act followed by the enactments of 1884 and 1920 brought about some perceptible changes in the nature and extent of medical facilities in the district.

The first Government hospital of the district was established in 1881 at Sorada and a dispensary at Garabandha was opened in 1892. The Subdivisional Hospitals of Bhanjanagar and Chhatrapur were established in 1901 and the Subdivisional Hospital of Paralakhemundi was opened at Brahmapur in the year 1907 and the Mission hospital was established at Serang in 1923. Both the hospitals were managed by the Christian Missions. Besides, there were also a few hospitals managed by the local bodies. Some departments also established their own hospitals for the treatment of their employees. Till 1948, there were only 19 hospitals and dispensaries in the district.

Prior to the establishment of these institutions there, probably no public hospital or dispensary existed in the district. Owing to educational and cultural backwardness, people were reluctant to accept the modern medical system. On the other hand due to lack of good communication and inadequate number of medical institutions the impact of the system could not reach the people residing in the interior parts of the district. Public health programmes did not exist at that time. People had faith in the indigenous system of medicines, witchcraft and sorcery for certain epidemics like cholera and small-pox and in treatment of certain diseases, like schizophernia, lunacy and epilepsy.

In early days people had a belief that the infectious diseases like small-pox and cholera generally occurred due to the wrath of village deities. The inhabitants of maliahs or the high lands, however, had their own beliefs and methods of treatment. To ensure good health, the Meriah or human sacrifice before the deities was prevalent among the Khonds. No medicine was ordinarily given to the patients.

Prior to the introduction of the modern systems of healing, Ayurvedic system was popular mainly among the people of the plains. Easy availability of the herbs used for medicines and the cheapness of the system contributed towards its popularity. The Vaidyas and Kavirajas were the chief exponents of this system. After the introduction of the Allopathic system and due to lack of state patronage the importance of Kaviraji system gradually declined.

Although modern Allopathic system was widely accepted, a section of people mostly uneducated and poor, have still recourse to the use of indigenous herbs and plants having therapeutic qualities. The system of Adhia i.e., lying prostrate

before a deity till one's wish is fulfilled, is often adopted by poor and illiterate patients after desperately trying various systems of medicine to get rid of chronic diseases.

At present health care services have been mainly provided in the urban areas. But bulk of our population live in rural areas where medical facilities are inadequate. However, gradually steps are being taken by the Government to extend medical facilities to those areas. Prior to 1910 there were only five hospitals and dispensaries in the district. But by the end of 1978 the number of hospitals, dispensaries and primary health centres increased to 94 which still seems meagre when compared with the increase in population.

VITAL STATISTICS

Being one of the oldest districts of the State, it had the benefit of the registration system for collection of vital satistics from a long time. As the district was a part of the Madras Presidency before merger with Orissa on 1st April, 1936., the Madras Registration of Births and Deaths Act, 1899 (Act. III of 1899) was in force in the district. Formerly information about vital occurrences in the district were collected by village head men in the rural areas. They reported monthly to the Taluk officer, who forwarded those returns direct to the Director of Health Services. There were 10 towns in the district according to 1961 Census records. Out of them, the Municipal towns of Brahmapur and Paralakhemundi were treated as urban areas for the purpose of collection of these statistics. After abolition of the system of village head man, the collection of the vital statistics in rural areas was vested on the Grama Panchayats.

The Orissa Grama Panchayat Act,1948, provided registration of births and deaths as one of the obligatory functions of the Grama Panchayats. The village Choukidar was responsible for collection of vital events, but the police and Grama Panchayat authorities together exercised a lot of diarchal control over him, resulting in deterioration of the system. After abolition of the Choukidari system in 1965, various attempts were made for accurate collection of information.

The State Government issued an Ordinance on 10th January, 1967, known as the Orissa Grama Rakhi Ordinance, 1967, subsequently replaced by the Orissa Grama Rakhi Act, 1967 on 29th July, 1967 and the Orissa Grama Rakhi Rules, 1967 on 11th May, 1969 under which Grama Rakhis, besides other duties, were required to report births and deaths occuring

within their jurisdictions to the officer-in-charge of the respective police stations at 15 day's interval. In urban areas the registration of births and deaths was looked after by the sanitary staff of the urban body. They, in turn were made responsible to submit the monthly return direct to the Director of Health Services, Orissa for central compilation.

In the meantime, the Central Government passed the Registration of Births and Deaths Act, 1969 (Act No.18 of 1969) which has been enforced in the State with effect from Ist April. 1970. As per the provisions of section30 of this Act, the State Government with the approval of the Central Government framed the Orissa Registration of Births and Deaths Rule, 1970. As per the new system the officers in-charge of police stations and out-posts for rural areas and the Health Officer, in his absence, the Executive Officer of the urban local body are appointed as Registrar of Births and Deaths in their respective jurisdictions. The Chief District Medical Officer and the Assistant District Medical Officer (P. H.) are declared as the District Registrar of Births and Deaths and the Additional District Registrar of Births and Deaths respectively, while the Director of Health Services, Orissa acts as the Chief Registrar. The head of the household has been made responsible to report on the vital occurrence within a stipulated time. Provisions like late registration charge and fine upto fifty rupees have' also been provided for negligence in reporting the events.

The Statement in Appendix I contains vital statistics of the district for ten years from 1977 to 1986 whereas the figures relating to number of deaths due to different causes have been included in Appendix II. This indicates a large number of deaths in rural areas each year, particularly form diseases like dysentery, T.B., whooping cough and tetanus.

Diseases Common to the District

Previously the diseases peculiar to the district were chiefly malarious fevers and beriberi, rheumatism, diarrhoea, dysentery, dyspepsia and skin disease. Cholera was not endemic; but existed as an imported disease from Puri during Rath Yatra festival. During second decade of the last century, the severity of the fever caused Ganjam town to be given up as the district headquarters. The disease was so severe that the population of this town estimated at 30,000 in 1815 had diminished to 6,000 in 1818.

T. J. Maltby has given the following interesting account of the symptoms of the fever then :

"The fever is sometimes preceded by a cold fit or ague lasting half an hour to two hours, when it is followed by the hot stage with great restlessness. Gastric irritability, and sometimes delirium take place. The hot stage lasts from two to three hours, and is followed by free perspiration, which leaves the patients considerably weakened and prostrated".*

The impact of science on the society and introduction of modern medical facilities have changed the situation to a great extent. Incidence of malaria, small-pox and cholera has become rare. Diseases common to the district at present are fever, dysentery and filariasis. Cases of tuberculosis, cancer, heart and other diseases reported for treatment in various hospitals and dispensaries are also not negligible. The tribals in hilly regions suffer from yaws.

An account of some of the diseases prevailing in the district is given below.

Fever

In common with other parts of the State, people in the district suffer greatly from fever. The hilly tracts possess an unhealthy and malarial climate.

Deaths from fever are recorded all the year round, but mortality is generally greater in the rainy season and particularly in the months of August, September and October. A total number of 5,65,347 malaria cases were reported to have been treated at the hospitals and other medical institutions in the district during the years 1951-60. The total number of deaths from fever during the years 1971-80 was 89,822. The greatest mortality from fever was in the year 1978, when 10,333 persons lost their lives.

Dysentery and Diarrhoea

This disease prevails after the hot season with arrival of the rains but not to a very great extent. The symptoms are not severe and are easily cured. The use of polluted water, eating of new rice as soon as it is reaped and the general ignorance of the people are the chief causes of this disease. In spite of various public health measures undertaken at present, it is surprising that, the incidence of dysentery was high during the period 1978 to 1986, except for a few years. In the year 1978, the total death due to dysentery and diarrhoea was recorded as 1,187 whereas in the year 1980 the total death was 1,215. In the year 1981, total death decreased to 1113. But in the year 1986, total death again increased to 1,242.

*Ganjam District Manual 1918—p. 161.

Cholera

During the decade 1951—60, both cholera and small-pox were prevalent in the district. Cholera was endemic during this decade, but deaths during 1957 and 1960 were few, being only 64 and 39 respectively. The greatest mortality from cholera was in the year 1951 when 1,978 persons lost their lives. But after ten years, i.e., during the period from 1971 to 1980, the total deaths was 84 only. In the year 1985, only 3 persons died of cholera and in the year 1986 only one person died of this disease.

Various public health measures have been undertaken to control the incidence of cholera in the district. Pioneer among them are the Cholera Control Programme introduced in the year 1970 and the Cholera Combat Team in the year 1979. Advance measures like stool sample collection, inoculation and house disinfection are undertaken in the suspected areas in order to prevent spread of the disease.

Small-pox

In the year 1951, the total death due to small-pox was 1450. The highest mortality was in the year 1958 when as many as 7,924 persons died due to this disease. But now-a-days the incidence of small-pox is totally checked. From the year 1971 to 1974, only 449 persons died for the cause of small-pox. In the years 1971 and 1972 the number of deaths was 182 and 25 respectively. From 1975 to 1986, no death case had been reported. More about the control of small-pox finds mention elsewhere in the chapter.

Leprosy

The district records highest endemicity in the State for Leprosy. The Chief District Medical Officer is in overall charge of anti-leprosy activities in the district. He implements these programmes with the help of the Assistant District Medical Officer (P. H.). The Leprosy Control Programme is undertaken through Leprosy Control Units-Survey, Education and Treatment Centres (S. E. T.). In the year 1983, the total death from the disease was 46 whereas after three years, i.e., in 1986 the death due to leprosy decreased to 35. Details about the treatment and other facilities provided to the leprosy patients will be found in a later section of this chapter.

Tuberculosis

T.B. was not a common disease in the past. But now-a-days mainly due to air pollution more and more people are suffering from this disease in the district. In the year 1983, the total death

from tuberculosis was 300, which increased to 376 in 1985 and to 385 in 1986. In order to eradicate the disease various control measures have been undertaken in the recent years which will find place in a later section of the chapter.

The table furnished in Appendix III shows number of patients treated and died of different diseases in the hospitals and dispensaries of the district from 1977 to1986.

PUBLIC HOSPITALS AND DISPENSARIES

Administrative Set-up

The overall charge of the medical administration of the district is vested with the Chief District Medical Officer who was previously known as the Civil Surgeon. His headquarters is located at Brahmapur. In the past the District Health Officer was in charge of public health organisation. Under the present set-up, there are three Assistant District Medical Officers, one in charge of Medical, another in charge of Family Welfare and the third in charge of Public Health organisation of the district.

They are assisted by a number of doctors, and other technical and non-technical staff. Under the National Malaria Eradication Programme (N.M.E.P.) there is one District Medical Officer to implement the Malaria Control Programme in the district. For the subdivisions, the Chief District Medical Officer is assisted by three Subdivisional Medical Officers (Junior Class I) posted at the subdivisional headquarters of Chhatrapur, Bhanjanagar and Paralakhemundi for both administrative and technical supervision. The Chief District Medical Officer, in addition to his supervisory responsibility, also acts as the District Registrar under the Registration of Births and Deaths Act, 1969.

At present (1987-88) there are twenty public hospitals (allopathy) in the district. All the hospitals except one, are managed by the Health and Family Welfare Department, Orissa. The hospital at Benthapalli is looked after by the Harijan and Tribal Welfare Department. In addition, there are one Mission Hospital at Seranga and a Christian Hospital at Brahmapur managed by the Christian Missions. Besides, the Police Hospital and Jail Hospital located at Chhatrapur and Brahmapur respectively are managed by the Home Department, Orissa. There are also one Railway Hospital, one Red Cross Hospital, one Municipal Hospital at Brahmapur managed by the Railway authority, Red Cross committee and Brahmapur Municipality respectively. Thus the total number of hospitals of all categories in the district comes to twenty-seven. To provide medical relief to the rural people,

twenty-nine Primary Health Centres, one in each of the Community Development Blocks, have been established. There are also eleven Additional Primary Health Centres in the district. For all practical purposes, these Primary Health Centres are regarded as miniature hospitals. In the Primary Health Centres, provision for accommodating indoor patients are also available. They serve as a nucleus both for curative and preventive measures and make *bona fide* health services available within the easy reach of the rural people. Rural Family Welfare Centres are also attached to the Primary Health Centres. The Rural Health Centre situated at Digapahandi is managed by the Maharaja Krushna Chandra Gajapati Medical College Hospital, Brahmapur.

The total number of beds (both male and female) available in the above hospitals, Primary Health Centres and those managed by private bodies was 577 in 1980. It increased to 1,680 in 1987.

There are twenty-two dispensaries, two Mobile Health Units, five Medical Aid Centres and 17 Subsidiary Health Centres in the district. All the above institutions are managed by the Health and Family welfare Department, Orissa.

The total number of patients (both indoor and outdoor) treated for different diseases in different hospitals and dispensaries of the district for the period from 1984-85 to 1986-87 is given below :

Year	Indoor	Outdoor
1984-85	5,14,045	30,89,514
1985-86	5,66,038	25,07,015
1986-87	5,51,356	25,62,551

A list of medical institutions with their locations, year of establishment etc. is given in Appendix IV. Detailed information relating to some of the principal hospitals of the district are furnished below.

Maharaja Krushna Chandra Gajapati Medical College Hospital, Brahmapur

The Maharaja Krushna Chandra Gajapati Medical College Hospital, Brahmapur, has been named after the memory of Maharaja Krushna Chandra Gajapati of Paralakhemundi. The hospital came into existence during March 1964 with the conversion of the District Headquarters Hospital, Brahmapur.

The following is a list of different Departments/Units/Sections of the hospital sanctioned from time to time along with their respective bed-strength.

Name of Departments/ Units/Sections	No. of units	Total bed strength as per distribution of beds
Medicine	5	176
Surgery (General)	4	150
Obst. & Gynaecology	3	79
Skin & V. D.	..	20
Paediatrics	2	50
Orth. Surgery	2	50
Opthalmology	..	100
E. N. T.	..	35
Dental	..	6
Psychiatry	..	16
Urology	..	12
Nephrology	..	15
Paediatric Surgery	..	12
Chest Clinic (T. B.)	..	16
Infectious Diseases	..	30
Casualty	..	12
Plastic Surgery	..	12

In addition to the above facilities, there is a Blood Bank Unit of the Orissa Red Cross Blood Bank functioning within the hospital compound. The unit is managed by an Assistant Surgeon along with other technical staff. The Blood Bank functions round the clock.

There is *"Post-partum"* unit under the administrative control of the Principal of the College for birth control and family welfare. There are 11 special cabins and 2 staff cabins in the hospital.

The Registrars of the different departments are the administrative heads of their respective departments. They are in the rank of Junior Teachers. There is one Superintendent who is incharge of the overall administration of the College hospital. He is assisted by one Administrative Officer (Senior Class-I of Orissa Administrative Service) and one Principal Tutor, one Chief Matron, one Physicist, one Store Medical Officer, 11 Assistant Surgeons, 2 Lady Assistant Surgeons, 14 L. T. R. M. O., 16 Pharmacists,

8 Laboratory Technicians, 6 O. T. Assistants, 2 V. D. Investigators, 8 Radiographers, 2 Medical Technicians, 8 X-Ray Attendants and other ministerial staff.

Besides, there are also members of the teaching staff working in the Medical College. The following statement contains information about number of senior and junior teachers posts sanctioned for this College upto the end of 1988-89.

Name of the Discipline	Professor	Associate professor	Asst. professor	Lecturer
1. Anatomy	1	3	4	7
2. Physiology	1	2	4	7
3. Biochemistry	1	2	2	3
4. Pharmacology	1	2	3	5
5. Pathology	1	4	4	16
6. Microbiology	1	1	2	3
7. S. P. M.	1	2	4	3
8. Medicine	3	2	10	9
9. Paediatrics	1	1	4	2
10. T. B. and C. D.	..	1	1	1
11. Skin and V. D.	1	..	1	1
12. Psychiatry	..	1	1	1
13. Surgery	3	1	8	7
14. Orth. Surgery	1	1	2	4
15. Opthalmology	2	1	8	3
16. E. N. T.	1	–	2	1
17. O & G	2	2	6	3
18. F. M. T.	1	1	1	2
19 Anaesthesiology	1	2	3	9
20. Dentistry	1	..	1	1
21. Radio Diagnosis	1	1	2	1
22. Radiotherapy	1	1	1	1
23. Cardiology	..	1	1	4
24. Cordiotherapic Surgery	1	..	1	1
25. Plastic Surgery	..	1	1	1
26. Genito Urinary Surgery	..	1	1	1
27. Paediatric Surgery	..	1	1	1
28. Endocrinology	..	..	1	1
29. Nephrology	..	1	1	1

The units such as clinical laboratory, casualty, radiology are kept open round the clock. The casualty unit has been provided with 10 observation beds.

An ophthalmic mobile unit with its staff is functioning in ophthalmic institute, and ophthalmic camps are organised by philanthropic institutions for providing door treatment for the ophthalmic patients.

As many as seven super specialised units function in this Medical College Hospital. These are (i) paediatric surgery, (ii) plastic surgery, (iii) cardiology, (iv) cardio-thoracic surgery, (v) nephrology, (vi) urology, and (vii) endocrinology.

Operation theatres are available for the departments like general surgery, orth.surgery, cardio-thoracic surgery, ophthalmic and E. N. T. This apart, there is also an emergency operation theatre which functions in odd hours for emergency cases, in addition to normal deserving operation cases.

There is a school in the Hospital for imparting training in Nursing and Mid-wifery. Paramedical Training facilities are also available in this Medical College Hospital. There is also a Lady Health Visitors' Training Centre under the control of Superintendent of the said training centre. To accommodate the trainees there are two hostels .

The following table indicates number of patients treated in the Maharaja Krushna Chandra Gajapati Medical College Hospital, Brahmapur from 1979 to 1984.

Year	Indoor			Total
	Male	Female	Children	
(1)	(2)	(3)	(4)	(5)
1979 ..	1,10,000	80,394	56,932	2,47,326
1980 ..	1,13,339	73,812	52,716	2,39,867
1981 ..	1,30,803	85,175	63,596	2,79,574
1982 ..	1,28,788	84,670	65,245	2,78,703
1983-1984 1-1-1983 to 31-3-1983 ..	41,934	23,700	12,020	77,654
1-4-1983 to 31-3-1984 ..	1,60,222	61,456	46,756	2,88,464

Year	No. of patients treated				Daily average of patients	
	Outdoor					
	Male	Female	Children	Total	Indoor	Outdoor
(1)	(6)	(7)	(8)	(9)	(10)	(11)
1979	1,53,041	60,805	58,409	2,72,255	677	746
1980	1,63,473	70,736	60,399	2,94,658	655	805
1981	1,72,510	86,537	67,486	3,26,533	766	895
1982	1,60,846	86,240	66,836	3,13,472	763	859
1983-1984 1-1-1983 to 31-3-1983	39,024	20,646	17,098	76,768	863	853
1-4-1983 to 31-3-1984	1,58,033	85,100	65,897	3,09,030	790	847

City Hospital, Brahmapur

City Hospital, Brahmapur was started on 28th January, 1974 in the old district headquarters hospital building after shifting of the M. K. C. G. Medical College Hospital to its own campus. The Chief District Medical Officer, Ganjam is the Superintendent of the institution. Like other district headquarters hospitals of the State, the Assistant District Medical Officer (Medical) acts as the Deputy Superintendent. The Chief District Medical Officer is assisted by as many as twenty-six doctors who are attached to different wards. The present staff of the hospital, besides the number of doctors mentioned above, constitute five Pharmacists, eighteen Nurses, three A. N. M.s, six Technicians and fifty-four Class-IV employees. The hospital is mainly divided into (1) operation theatre, (2) an X-Ray block, (3) male medical and surgical ward, (4) female medical and surgical ward, (5) labour ward, (6) pathology, (7) paediatric (Male and Female), (8) O. P. D. (Male and Female) with Dipensing, (9)tuberculosis clinic and tuberculosis ward, (10) A. N. M. and Health Workers' Training Centre. Attached to it there function antenatal and postnatal clinic, anaesthesia, ophthalmology, and ear, nose and throat (E. N. T.) clinic.

Specialist services in the field of medicine, surgery, obst. and gynaecology, anaesthesia, opthalmology, ear, nose and throat, pathology and paediatric are also available in the hospital. Ambulance service is provided to serious patients on payment.

An Auxiliary Nurse and Mid-wifery Training Centre was started at this hospital since January 1977 with training facilities for forty students. The period of training is one and a half years. Hostel

accommodation for twenty trainees are available temporarily in the hospital campus. The staff constitutes one Sister Tutor and four Class IV employees.

The following table indicates the number and daily average of indoor and outdoor patients treated in the hospital during the years 1984-85 to 1986-87.

Year	Indoor	Daily average	Outdoor	Daily average
(1)	(2)	(3)	(4)	(5)
1984-85	31,434	86	1,22,579	336
1985-86	22,216	61	1,00,660	276
1986-87	24,457	67	1,04,420	289

Subdivisional Hospital, Chhatrapur

The Government Subdivisional Hospital, Chhatrapur, was established in the year 1901. The Subdivisional Medical Officer is in charge of the hospital and is assisted by six doctors, two pharmacists, seven nurses, two laboratory technicians, one radiographer, and other Class III and Class IV staff. He acts directly under the control and supervision of the Chief District Medical Officer, Brahmapur.

In addition to the above mentioned permanent staff of the hospital, there are also four specialists in medicine, paediatric, surgery and obstetric and gynaecology,

Besides the administrative block, the hospital consists of an out-patient block, an operation theatre, a post-mortem room, a surgical ward, a labour ward, a medical ward and an infectious ward. The bed strength of the hospital is 56, out of which 26 are for male and 30 for female patients. Since 1st January, 1980 a six-bedded sterilisation ward has been functioning in the hospital under the British Aid Programme.

The hospital is provided with an X-Ray plant, family planning clinic, pathological laboratory. Anti-rabies treatment facilities also exist.

The statement given below indicates the number and daily average of indoor and outdoor patients (both new and old cases) treated in the hospital during 1984-85 to 1986-87.

Year	No. of outdoor patients		No. of indoor patients	
	Treated	Daily average	Treated	Daily average
(1)	(2)	(3)	(4)	(5)
1984-85	53,974	13,091	147·8	35·8
1985-86	46,013	12,006	126·0	32·9
1986-87	40,337	14,546	110·5	39·9

Subdivisional Hospital, Paralakhemundi

In the year 1916, a twelve-bedded hospital was constructed by the Paralakhemundi Municipality at Paralakhemundi. After formation of the Orissa State (Province) on 1st April, 1936, the management of the hospital was taken over by the provincial Government. Thereafter the hospital was upgraded as a referral hospital with 50 beds.

A Subdivisional Medical Officer is in charge of the hospital and is assisted by one Assistant Surgeon, one Lady Assistant Surgeon, three Pharmacists, eight nurses, one laboratory technician, two Dhais and other employees. In addition to the above permanent staff, there are three specialists in surgery, obstetric and gynaecology and medicine.

The hospital provides accommodation for 70 patients (male 50, female 16 and under sterilisation unit 4 females) and is mainly divided into an out-patient department, operation theatre, blood bank, post-mortem centre, surgical ward, medicine ward, labour room etc. The hospital is equipped with an X-Ray plant and a pathological laboratory. Attached to the hospital is a family welfare clinic, a leprosy clinic and a tuberculosis clinic. Facility for anti-rabies treatment is also available.

The number and the daily average of indoor and outdoor patients treated in the hospital during the period from 1984-85 to 1986-87 are furnished below.

Year	Outdoor	Daily average	Indoor	Daily average
(1)	(2)	(3)	(4)	(5)
1984-85	52,230	143	19,146	52·4
1985-86	62,523	171.3	21,271	58·3
1986-87	50,362	137.9	21,530	58·9

Subdivisional Hospital, Bhanjanagar

The Subdivisional Hospital, Bhanjanagar was established in the year 1901. Now this hospital is running as a fifty-bedded hospital, 30 for males and 20 for females. Besides this, a ten bedded maternity and children hospital established under the British Aid Programme is functioning in its own building which is situated about two kilometres away from the subdivisional hospital.

The Subdivisional Medical Officer, Bhanjanagar who is in charge of the hospital is assisted by 7 assistant surgeons, 2 pharmacists, 9 staff nurses, 3 laboratory technicians, one radiographer and other Class III and Class IV staff. In addition, there are also four specialists in medicine, surgery, O & G. and paediatrics.

The hospital consists of an outdoor patient department, an operation theatre, a *post-mortem* shed, a surgical ward, a labour ward and male and female wards (medical).

The hospital is also provided with facilities like an X-Ray plant, a pathological laboratory, a blood bank, facilities for tuberculosis and anti-rabies treatment.

Besides the above mentioned facilities, one maternity and child welfare centre and one secondary health centre are attached to this subdivisional hospital. The secondary health centre provides for maternity and child health services in the urban areas of Bhanjanagar and its surroundings and is managed by 4 sub-centres. The sub-centres are managed by the Auxiliary Nurse Mid-wives and Dhais.

The statement given below indicates the number and daily average of indoor and outdoor patients treated in the hospital during the last three years (1984-85 to 1986-87).

Year	Indoor	Daily average	Outdoor	Daily average
(1)	(2)	(3)	(4)	(5)
1984-85 ..	3,736	10·23	57,113	156·47
1985-86 ..	3,134	8·57	65,282	178·83
1986-87 ..	3,212	8·8	54,710	149·89

Christian Hospital for Women and Children, Brahmapur

To serve the poor and the needy irrespective of caste, creed and religion, one Dr. Ottmann opened a clinic at old Brahmapur in the year 1900. The clinic was later converted to the present Christian Hospital for Women and Children and started functioning in its own building from 1907. From that year also a school to train nurses started functioning in the hospital which got Government recognition in 1930. The hospital celebrated its golden jubilee in the year 1950.

The hospital is managed by the Eastern Regional Board of Health Services, Church of North India. The source of income of the hospital is derived from the fees collected from patients and the grant from the Eastern Regional Board of Health Services, Church of North India.

There are four doctors, 2 pharmacists, 2 laboratory technicians, 2 bible women, 7 administrative staff, one tutor, one operation theatre attendant and other Class III and Class IV staff in the hospital.

The total number of beds in the hospital is 166 out of which 80 are for females and 86 for children. Facilities for the treatment of all types of diseases relating to women and children are available in this hospital.

The following table indicates the number and daily average of indoor and outdoor patients treated in the hospital from 1984-85 to 1986-87.

Year	Indoor	Daily average	Outdoor	Daily average
(1)	(2)	(3)	(4)	(5)
1984-85 ..	42,323	115·67	28,932	91·26
1985-86 ..	42,235	115·71	30,978	97·70
1986-87 ..	41,793	114·5	31,588	99·64

Police Hospital, Chhatrapur

The Police Hospital, Chhatrapur was established in the year 1949. The purpose of the hospital is to provide outdoor treatment facilities to police personnel and their family members as well as indoor treatment to the police personnel only. The hospital is managed by the Home Department of Government of Orissa and the expenditure is incurred from the Police Welfare Fund.

One Assistant Surgeon is in charge of the hospital and he is assisted by two male nurses, one pharmacist and other Class IV staff. The number of beds available in the hospital is 16.

Ayurvedic and Homoeopathic Institutions

The Ayurvedic and Homoeopathic systems of treatment are now becoming popular under the patronage of the State Government. As these systems of treatment are less expensive, it is gradually becoming popular in the district. In order to develop these systems of treatment, a Directorate has been created by the State Government since the 1st September, 1972 which manages the Ayurvedic and Homoeopathic institutions in the district.

Ayurvedic Institutions

There are 35 Government Ayurvedic dispensaries in this district. For the supervision of all the Ayurvedic dispensaries located in the district, one circle office has been opened in Brahmapur since 1st September, 1981. An Inspector of Ayurvedic is incharge of the office who inspects these dispensaries periodically.

As per the statistics available, 3,59,612 patients were treated in the above dispensaries in the year 1986. Out of 35 Government dispensaries, 26 dispensaries have been functioning in the houses donated by local people, 5 dispensaries are accommodated in the department buildings and the remaining 4 dispensaries are functioning in rented houses.

A list of the Ayurvedic dispensaries with their date of establishment is given in Appendix V.

Homoeopathic Institutions

There are 30 Government Homoeopathic dispensaries in the district, out of which two dispensaries function in the buildings donated by local people, four are accommodated in their own buildings and the rest in rent-free accommodations arranged by local people. One Medical Officer and one Homoeopathic Assistant chiefly constitute the staff of each dispensary. For treatment of patients medicines of the value of Rs. 1,000 for each dispensary are supplied by the Government.

As per available statistics 5,75,099 patients were treated in the above dispensaries during the year 1986. Besides, one Homoeopathic dispensary attached to the Khallikot Public Health Centre is functioning since 22.11.1979.

A list of the Homoeopathic dispensaries of the district with their date of establishment is given in Appendix VI.

Maternity and Child Welfare

There are as many as five Maternity and Child Welfare Centres in the district. They are located at Bhanjanagar, Paralakhemundi, Asika, Sorada and Brahmapur. The Brahmapur Centre was established in 1930. The centres located at Bhanjanagar, Paralakhemundi, Asika and Sorada are managed by the Government of Orissa, whereas the centre at Brahmapur is run by a Managing Committee through grants-in-aid received from the State Government. Besides the above centres, the rural areas are also covered by a number of sub-centres.

The Assistant District Medical Officer (Family Welfare) is directly responsible for the proper management of these centres. He is assisted by the Medical Officer in charge of the Primary Health Centre, the Lady Health Visitor, the Auxiliary Nurse-Midwives, Dhai and Famale Attendant. Each of the sub-centres is managed by one full-time trained Dhai and one part-time Ayah.

The centres function thrice a week in the after-noons. Services are offered by these centres both through clinical and domiciliary methods. The staff conduct door-to-door visits for attending anti-natal and post-natal cases. Complicated cases are usually referred to the specialists in the district headquarters hospital. At these centres and also in homes, I. U. D. insertions are conducted. Tetanus toxide and prophylaxis against nutritional anaemia (Folifer tablet) are given to the expectant mothers. Advice is given to the ladies who have got bad obstretic history for regular check up. Apart from the above services, the patients are also imparted talks on health education and the utility of family planning. Children under 5 years are examined in the centres and are given proper treatment and advice. Triple antigent and D. T. (Diphtheria Tetanus) are given to the children besides oral polio vaccines and booster doses. Prophylaxis against nutritional anaemia and vitamin 'A' solution to prevent blindness are also given. The utility and necessity for adopting family planning methods and to contact the clinic regularly are highlighted.

Private Hospitals and Nursing Homes

Besides the Government institutions, a number of private dispensaries and clinics under different systems of medicine function in the district. But their actual number could not be determined due to the non-availability of authentic records. Their number

is increasing day by day. Generally, the allopathic practitioners are seen in large numbers in urban areas but the homoeopathic and Ayurvedic practitioners are more or less evenly distributed in urban and rural areas.

Family Welfare

The Family Welfare Programme was officially introduced in the State in the year 1956. In the beginning the programme was confined to providing services at the clinics situated in urban areas only. Gradually it was extended and after 1963-64 it was spread all over the State.

The Family Welfare Programme is implemented in the district under the administrative control of the Health and Family Welfare Department and follows the organisational pattern recommended by the Central Government.

At the State level, the Directorate of Family Welfare is headed by a Director, who remains in overall charge of the programme in all the districts of the State.

In the district, there is a District Family Welfare Bureau consisting of officers and staff (as per Government of India pattern) who look after the planning and implementation of the programme in the district. The Assistant District Medical Officer (Family Welfare) who is in charge of the District Family Welfare Bureau works under the overall supervision and control of the Chief District Medical Officer.

There are twenty-nine Primary Health Centres in the district. One Rural Family Welfare Centre is attached to each Primary Health Centres. In urban areas, post-partum centres (in Medical College and District Headquarters Hospital) along with Urban Family Welfare Centres at different places provide necessary services to the urban population. Funds for sterilisation advance are provided to all Hospitals, Dispensaries and Mobile Units to conduct sterilisation operation. The staff of the institutions are also given incentive money for such activities.

Each Primary Health Centre has a number of sub-centres functioning under it and each sub-centre which is managed by one Auxiliary Nurse Midwife/Multipurpose Workers (female)

caters to the needs of 5,000 to 8,000 population. Besides, there is also a multipurpose worker (male) which covers a population of 5,000.

At the village level there is a Community Health Visitor (C.H.V.) for 1,000 population who is employed by the community and paid an honorarium of Rs. 50/- per month by the Medical Officer. Under the Traditional Birth Attendant Scheme, there is one Traditional Birth Attendant (Dhai) for each village who is trained to conduct deliveries in scientific manner and is supplied with UNICEF kit.

The I. U. C. D. insertion and sterilization operation are made available at the block level. Clinical and other follow-up services are also rendered to the beneficiaries. Complicated cases are referred to the consultant gynaecologists for advice. The sterilization operation is relatively more popular. The recanalization facility available in medical college hospitals goes further in raising popular faith in this kind of operation. Financial benefits like compensation for loss of wages and transport charges are given to those who undergo vasectomy or sterilization operation. The male Government servants who accept vasectomy methods are provided with free medical services and leave from duty for six working days. The female Government servants who take to family planning operation are allowed 14 days of special casual leave. In addition, recently Government have issued Green Cards providing a number of benefits to the persons having not more than two children undergoing vasectomy or tubectomy operations below their reproductive age. The benefits given to the Green Card holders by the Government are given below:

(a) 5% of all houses both in rural and urban area in respect of whether they are built by Government or by Housing Board.

(b) 8 decimals of land are allotted to them free of salami.

(c) 5% of Lower Income Group House and Middle Income Group House Loans are granted to the Green Card Holders.

(d) 5% of seats are reserved for the children of Green Card Holders for taking admission in Medical Colleges, Engineering Colleges, Politechnic including I. T. I..

(e) Two advance increments (incentive allowance) are given to the Government employees.

From 1964-65 to 1980-81, 1,48,367 sterilization operations were performed and 42,525 I. U. C. D. (Intra-Uterine Contraceptive Device) insertions made in the district.

The following table indicates the progress of achievement made under the Family Welfare Programme during the period from 1982-83 to 1986-87 in the district.

Year	Sterilization		Intra-Uterine Device insertion	
	Target	Achieved	Target	Achieved
(1)	(2)	(3)	(4)	(5)
1982-83 ..	20,200	*(a) 1,396 **(b) 8,249	4,340	3,041
1983-84 ..	24,040	(a) 1,172 (b) 13,281	7,680	3,762
1984-85 ..	24,040	(a) 986 (b) 12,345	7,680	6,176
1985-86 ..	21,320	(a) 3,361 (b) 16,300	10,150	8,354
1986-87 ..	25,110	(a) 1,264 (b) 12,551	11,160	10,650

Year	Conventional Contraceptive users		Oral Pill users		Medical Termination of pregnency cases done
	Target	Achieved	Target	Achieved	
(1)	(6)	(7)	(8)	(9)	(10)
1982-83 ..	8,480	7,359	1,620	383	1,150
1983-84 ..	11,100	10,990	4,250	693	1,259
1984-85 ..	20,200	9,417	3,660	937	1,213
1985-86 ..	15,940	11,360	3,650	1,707	1,033
1986-87 ..	16,740	15,238	4,018	2,760	1,111

For the family welfare message to reach the remote corners of the district through mass media and extension approach, the agricultural-off-seasons are selected for intensive service activities as majority of the people live in the villages who, owing to their educational and cultural backwardness, seldom approach the Family Planning Centres for advice. The services of the audio-visual

* (a) Vasectomy
** (b) Tubectomy

team attached to the District Family Planning Bureau are utilised in educating the rural folk for the acceptance of the small family norm. Besides, various other steps like cinema show, mass meeting, exhibition etc. are being undertaken to popularise the programme of family welfare among the rural and urban people.

Nutrition Programme

For implementation of the Nutrition Programme, a State Nutrition Division was established in 1959 under the direct control of the Director of Health and Family Welfare Services, Orissa.

The main object of the programme is to improve the nutritional status of the vulnerable population by supplying food, nutrients and by preventing infection. The State Government have implemented supplementary feeding programme for pre-school (primary) children, pregnant and lactating mothers through the Community Development and Rural Reconstruction Department. The supplementary feeding programme was launched throughout the State to supplement the calories and protein intake of the vulnerable sector of population. It is implemented through Special Nutrition Programmes, Integrated Child Development Services (I. C. D. S.), M. C. H. feeding programme and Upgraded Special Nutrition Programme. The supply of nutrients is being done through the Maternity and Child Health Programme in form of vitamin 'A' and folifar tablets. By immunization programme, efforts are also being made to protect the children from infection.

During 1986 a diet and nutritional assessment survey was done in this district. Besides the survey, nutrition and health education was given to mothers in Anganwadi Centres through posters, and also by exhibiting charts of balanced diet for pregnant mothers and children. The facts about the low cost balanced diet out of locally available foods as recommended by the Food and Nutrition Board was explained to mothers and recipe demonstrations were also given to mothers about weaning food. Each of the survey teams was provided with 10 sets of questionnaire to visit 10 houses, the objective being informative and educative. They also educate the mothers about breast feeding, weaning foods, food during pregnancy and environmental sanitation etc.

The Deputy Director of Health Services (Nutrition) is in overall charge of the Nutrition Programme. He acts under the direct control of the Director of Health and Family welfare Services.

In order to assist the Deputy Director (Nutrition), there are two Nutrition Medical Officers (both are in Gazetted rank), one Nutrition Officer and one Lady Nutritionist, two Lady Diet Surveyors, three Sanitary Inspectors and other Class III and Class IV employees.

Health Education

According to the pattern prescribed by the Government of India, the Health Education Bureau which was started in the State in 1960 is attached to the Director of Health and Family Welfare Services, Orissa. At the national level, the Central Health Education Bureau formulates plans for health education activities for the country. Similarly the State Health Education Bureau prepares annual plan for health education activities in the State. Government of Orissa so far have not sanctioned Health Education Bureau at the district level as has been established in other States on the recommendation of Central Health Education Bureau. Since July 1983, the State Health Education Bureau has been amalgamated with Mass Education and Media Wing of the State Family Welfare Bureau. The set-up of Family Welfare Wing at the State, District, Block and Village level have taken up health education as part of their activities. The District Family Welfare Audio-Visual Unit also undertakes health education through films and film strips. At the level of the Community Development Blocks, the Block Extension Educator (F. W.) undertakes health education work. However, the Health Publicity Unit goes round the State as and when necessary and through audio-visual media, mass and group programmes imparts health education to public. Besides, health instructions at school is imparted by trained Health Educators. In large fairs and festivals health education is provided to the public through audio-visual media, posters, leaflets, booklets on different diseases designed and printed by the Health Education Bureau. The services of Health Publicity Assistants and Health Educators are also utilised during natural calamities and epidemics.

SANITATION

Administrative set-up

At present subordinate to the Chief District Medical Officer, the Assistant District Medical Officer (Public Health) is directly in charge of the Sanitation and Public Health Organisation. The sanitation and public health measures of the Municipalities are managed by the Health Officers, sanitation including all public health activities of Notified Area Councils are maintained by the Sanitary Inspectors. These officers are responsible to and work

under the Assistant District Medical Officer (P. H.). Separate conservancy staff are maintained by the respective municipalities and Notified Area Councils.

In rural areas, the medical officers of the Primary Health Centres are in charge of sanitation under the supervision of the Assistant District Medical Officer (P. H.). They are assisted by three Sanitary Inspectors each. The other workers subordinate to them are the Vaccinators, Special Cholera Workers, Surveillance Workers and Disinfectors. With the help of the above staff, the medical officers look to the sanitary conditions in the area under them.

Activities of Health and Sanitary Organisation

Various organisations function in the district to improve and maintain the health and sanitary conditions. Their activities may be broadly divided into three categories namely, prevention and control of principal communicable diseases, providing protected water supply and drainage system and other miscellaneous functions like slum clearance, etc.

A brief account of different programmes for the maintenance of health and sanitation in the district is furnished below.

Cholera Control Programme

The Cholera Control Programme was introduced in the district during the year 1970. Under this programme there are as many as 25 Sanitary Inspectors, 43 Disinfectors, 22 Cholera Supervisors and 71 Special Cholera Workers who work in the different Primary Health Centres of the district. They work directly under the supervision of the Medical Officers of the Primary Health Centres. Normally they supervise regular chlorination of wells and other drinking and domestic water resources, ensure surveillance over outbreak of cholera in the villages, inoculate the vulnerable groups of population as a preventive measure against cholera and gastro-enterities and look to the health education of the masses. They also collect stool samples where outbreak of cholera is suspected and take precautionary measures sufficiently ahead.

From 1st September, 1979 a Cholera Combat Team, in charge of a medical officer, is functioning at the district headquarters under the control of the Chief District Medical Officer. To assist the medical officer in his work there are one Sanitary Inspector, two Special Cholera Workers, two Auxiliary Nurse Midwives and one Laboratory Technician. The team attends to cases of outbreak of cholera and other epidemics in the district.

In addition to the Cholera Combat Team at the district headquarters, one Assistant Health Officer and the Medical Officer in charge of the Mobile Field Hygiene unit are aiso looking after the Epidemic Control Programme. Sometimes the Professor of Microbiology in the department of Pathology, Maharaja Krushna Chandra Gajapati Medical College, Brahmapur visits the epidemic area for necessary investigation and gives suggestion for epidemic control measures. Advance control measures are also undertaken regularly with the help of existing Multipurpose Workers.

The achievements (both advance measures and control measures, including gastroenterties) under the programme during the period from 1980-81 to 1985-86 are given in the following table.

Year	Inoculation	Disinfection		
		Wells	Ghats	Houses
(1)	(2)	(3)	(4)	(5)
1980-81 ..	2,79,707	94,034	423	1,071
1981-82 ..	1,75,688	76,380	163	610
1982-83 ..	3,11,881	63,432	189	567
1983-84 ..	2,42,769	61,165	113	412
1984-85 ..	2,49,782	64,176	109	175
1985-86 ..	7,20,304	69,545	70	336

National Small-pox Eradication Programme

Previously small-pox was the most fatal disease in the district. Many people used to lose their lives due to the disease. The highest mortality was recorded in the district in the year 1958, when as many as 7,924 people lost their lives.

But after the introduction of the Small-pox Eradication Programme in the year 1970, the occurence of death due to small-pox gradually decreased and finally disappeared. The International Commission for Small-pox has certified India as a small-pox free country since April 1977.

As the Small-pox Eradication Programme has achieved its goal, the staff engaged in the Programme have taken up new activities of immunisation against childhood communicable diseases under the Expanded Programme on Immunisation from 1978.

National Malaria Eradication Programme

In the past, 15 Malaria Control Units were functioning in the State and the Malaria staff were confined to Malaria work only. Subsequently the plan of operation was changed and the units were merged with the Multipurpose Health Programme in 1977. Now the Multipurpose Health Workers are doing the Malaria control work in addition to the other Control Programmes.

520 Multipurpose Workers are working in twenty-nine Primary Health Centres of the district. They make door-to-door visits in the villages and collect blood samples from the suspected patients. The blood slides are examined in the primary health centres' laboratory and radical treatment is given to the malaria positive cases.

0.75 per cent of the total area of the district was under consolidated phase and 0.25 per cent was under the attack phase. The area under attack phase is served annually with two rounds of D. D. T. spray. Besides, monthly and fortnightly surveillance is also conducted in the area. In the area included under the consolidated phase, regular surveillance is also carried out and focal spray planned when malaria positive cases are detected.

Blood slides are collected from fever cases and radical treatment is given to the Malaria positive cases in 105 medical institutions and 34 Malaria Centres. To prevent death from malaria in the remote corner of the district, 1,191 drug distribution centres and 2,379 fever treatment depots have been opened where anti-malaria drugs are given at the time of need to the patients.

High incidence of malaria is seen in the Primary Health Centre areas of Badagada, Polasara, Dharakot, Gallery, Mohana, R. Udayagiri, B. Khajuripada, Rayagada, Gumma, Bomakei and Khallikot in the district.

The Chief District Medical Officer is in overall charge of the implementation of the National Malaria Eradication Programme in the district. The District Malaria Officer acts as the Programme

Officer under him. A list of other staff except the ministerial and non-technical personnel engaged for implementation of the programme is furnished below.

Particulars of staff (1)	No. (2)
Assistant Malaria Officer (Gazetted)	1
Assistant Malaria Officer (Non-Gazetted)	1
Malaria Inspector	12
Leave Reserve Laboratory Technician	2
Laboratory technician	30 (one in each P.H.)
Multipurpose Worker	520
Surveillance Worker	233

The activities of the programme are given below from 1982 to 1986.

(a) surveillance

Year	Blood slide collected	Blood slide examined	Total positive	Total Radical Treatment	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1982	3,33,860	3,14,118	45,167	44,401	Rest positive could not be treated as they were found absent.
1983	2,79,822	2,76,656	36,108	31,809	
1984	2,80,318	2,80,165	38,975	35,806	
1985	2,86,098	2,86,098	32,572	29,735	
1986	2,93,045	2,93,045	38,301	34,522	

(b) spray

Year	Round	Total No. of P. H. Cs. sprayed	Population covered in lakhs
(1)	(2)	(3)	(4)
1982	1st	24	9·9
	2nd	24	1·63
1983	1st	29	2·10
	2nd	21	1·00
1984	1st	26	1·99
	2nd	25	1·62
1985	1st	11	6·28
	2nd	11	6·88
1986	1st	29	1·998
	2nd	29	1·985

National Filaria Control Programme

Two National Filaria Control Programme Units, located at Chhatrapur and Paralakhemundi, and one Filaria Clinic attached to the National Filaria Control Programme Unit, Chhatrapur are functioning in the district. The National Filaria Control Programme, Chhatrapur Unit functioning since 1971-72, covers the Chhatrapur Notified Area Council area and the Brahmapur Municipality area. Consequent upon the establishment of Urban Malaria Unit at Brahmapur during 1977-78, the function of the National Filaria Programme, Chhatrapur Unit has been limited to the Chhatrapur Notified Area Council area. Another National Filaria Control Programme Unit has been established at Paralakhemundi during 1978-79.

The National Filaria Control Programme is a centrally aided programme. The operational guidelines of the programme are issued by Government of India. The pattern provides 50% assistance, and is restricted to urban areas only. The activities undertaken by the units of the programme are as follows:

(i) Anti-larval operation to check rising trend of mosquito population by way of destroying aquatic forms of mosquitoes, (ii) detection of microfilaria carriers and their treatment in order to reduce the microfilaria load from the community, (iii) assessment of the results of anti-larval measures as well as chemotherapeutic measures by way of collection of entomological data.

The Subdivisional Medical Officer, Chhatrapur is in charge of the Chhatrapur Unit and the Health Officer, Paralakhemundi Municipality is in charge of the Paralakhemundi Unit. The other staff engaged in the district for implementation of the scheme include three Filaria Inspectors, four Superior Field Workers, three Insect Collectors and two Laboratory Technicians.

Antilarval operation is undertaken in both the towns once a week in all the breeding places with mosquito larvicidal oil or organ phosphorus compounds. Thus every month each breeding place is treated four times to prevent emergence of adult mosquitoes from the aquatic farms. Mosquitoes are collected and examined for determination of mosquito density, infection and infectivity rate. Blood samples are collected during the period from 8 p.m. to midnight for detection of the microfilaria carriers and treatment given to reduce the microfilaria load from the community.

The activities of the two units from 1983 to 1987 are given in the following tables.

Year	M. H. D. of C. Fatigan		Mosquito infection rate		Mosquito infectivity rate		B. S. collected and examined	
	Chhatrapur	Paralakhemundi	Chhatrapur	Paralakhemundi	Chhatrapur	Paralakhemundi	Chhatrapur	Paralakhemundi
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1983	137·9	76·4	1·8	1·2	0·4	0·2	565	..
1984	110·7	120·6	1·4	4·8	0·5	3·7	620	..
1985	126·6	126·4	2·2	2·4	1·4	2·6	640	..
1986	78·2	92·08	2·2	2·7	0·6	0·3	543	..
1987	128·7	64·2	0·4	7·2	1·2	5·3	..	..

Year	B. S(+) for M. F.		M. F. rate		Disease	
	Chhatrapur	Paralakhemundi	Chhatrapur	Paralakhemundi	Chhatrapur	Paralakhemundi
(1)	(10)	(11)	(12)	(13)	(14)	(15)
1983	20	..	2·1	..	3·3	..
1984	18	..	2·2	..	1·6	..
1985	17	..	2·6	..	1·4	..
1986	14	..	2·5	..	2·7	..
1987	..	..	..	..	..	..

Tuberculosis Control Programme

The District Tuberculosis Officer is directly in charge of the Tuberculosis Control Programme. He works under the control of the Chief District Medical Officer and is assisted by a number of technical and non-technical personnel. In the preventive wing, the B. C. G. team consists of a team leader and seven

technicians. On the curative side, the Tuberculosis Control Programme consists of one Assistant Surgeon, two Health Visitors, one X-Ray Technician and one Laboratory technician.

As per the National Sample Survey conducted in 1958, it was estimated that an average of 1·8 per cent of population was suffering from tuberculosis and 0·4 per cent had sputum positive cases in the district. Domicilliary treatment of tuberculosis patients and house to house B. C. G. vaccination was undertaken to check the disease. So far, 47 T. B. sub-centres in 47 peripheral institutions have been opened to supply drugs to T. B. patients. There are 13 tuberculosis isolation beds in the Maharaja Krushna Chandra Medical College and 6 observation beds in the District T. B. Centre, Brahmapur where the tuberculosis patients are given indoor treatment. For the treatment of tribal people, there is a 10-bedded tuberculosis ward at Paralakhemundi.

The District T. B. Officer tours throughout the district and makes survey camps in the selected slum areas for detection of tuberculosis cases. The detected cases are given treatment on the spot and advised to take regular drugs from the nearest primary health institutions. One Mass Media Officer is posted in the district who with his touring team demonstrates by showing films and exhibiting posters, and also gives teachings in primary health institutions. There is a District School Health Officer who gives talks on health education to children for prevention of tuberculosis. B.C.G. vaccination was being given by B.C.G. Technicians to people mostly in the age group of 0—19 years. Now Multipurpose Workers are giving B.C.G. vaccination under the guidance of B.C.G. Technicians. Stress is being given to cover more in the infant age group of 0—3 years. In the year 1986, 57,650 people were given B.C.G. vaccinations in this district.

The achievement of the programme from 1983 to 1986 is given below.

	1983	1984	1985	1986
Total Sputum examination	7,441	9,340	10,132	11,241
Total Sputum positive	576	611	660	630
Total No. of X-Ray done	3,332	2,544	2,935	4,040
Total No. of X-Ray positive	1,421	1,390	1,356	2,077
Total No. of T. B. patients deputed	2,371	2,359	2,300	3,040
Total No. of T. B. patients cured	618	687	701	635

Anti-Leprosy Work

The anti-leprosy work is carried on by State Government as well as by voluntary agencies. The main object of the anti-leprosy work is to give health education, conduct population survey, detect and offer treatment to the patients. The Control Programme is undertaken by the establishment of Leprosy Control Units and Survey, Education and Treatment (S. E. T.) centres.

The Chief District Medical Officer is in overall charge of anti-leprosy activities in the district and he implements this with the help of Assistant District Medical Officer (P. H.). The Zonal Leprosy Officer (Junior Class I) posted at Brahmapur, supervises all the control units of the district.

There are nine leprosy colonies and one rehabilitation centre in this district. The leprosy colony located at Paralakhemundi is managed by the Hind Kustha Nivaran Sangha. The bed strength of the colony is 80. The Government grant-in-aid forms its chief source of income.

There are two hospitals for the treatment of leprosy patients. One of these hospitals is attached to the Subdivisional Hospital, Paralakhemundi whereas the other is attached to the Rural Health Centre, Chhatrapur (Ex-Damien Foundation Project). Both the hospitals with a total bed strength of 30 are managed by the State Government with effect from the 1st November, 1986.

One 50-bedded hospital is functioning at Babanpur (Asika) in the name of the Regional Leprosy Training and Research Institute by the Government of India.

Besides, there are seven Leprosy Eradication Units at Brahmapur, Chhatrapur, Khallikot, Bhanjanagar, Asika, Hinjilicut and Paralakhemundi. Two Rural Health Centres are also functioning at Chhatrapur and Paralakhemundi. One upgraded Urban Leprosy Unit is functioning at Brahmapur for Municipal areas.

Through the various leprosy institutions in the district 4,514 cases were detected and registered for treatment during the year 1986-87.

Yaws Control Programme

In Paralakhemundi Subdivision the anti-yaws operation was conducted from 1st June, 1967 to 31st May, 1968. In course

of the operation, 66,351 persons were covered of whom 61,197 were examined. As a result 119 cases were detected and given treatment. Among them 45 persons were cured. Since then no such operation has been undertaken.

Veneral Disease

In most of the hospitals and dispensaries in the district, facilities are available for the treatment of patients suffering from veneral disease.

Prevention of Food Adulteration and Water Pollution

Under the provisions of the Central Prevention of Food Adulteration Act, 1954, which came into force in the State of Orissa in 1959, the Director of Health and Family Welfare Services, Orissa acts as the authority for food and health of the State. The main object of the Prevention of Food Adulteration Act, 1954, is to prevent adulteration of food and to ensure purity of food sold to the general public. Under the Director of Health and Family Welfare Services, there are 3 full-time Food Inspectors in the district. For the better implementation of the Act, the Medical Officers of Brahmapur and Paralakhemundi Municipalities designated as Health Officer have been declared as part-time Food Inspectors. The Chief District Medical Officer, Ganjam, is authorised by the Government to accord written consent for the institution of prosecution for offences under the prevention of the Food Adulteration Act within his jurisdiction including Municipalities and Notified Area Councils.

The duties of a Food Inspector are to inspect, as frequently as may be prescribed by the local health authority, all establishments licensed for the manufacture, storage or sale of an article of food within the local area assigned to him. He can lift the samples of any article of food, which is suspected to be adulterated or misbranded. The food samples collected by the Food Inspectors are examined in the State Public Health Laboratory.

During the last 4 years (1983—86), 361 food samples collected from the district were examined in the Laboratory under the Prevention of Food Adulteration Act, of which 57 were found adulterated.

The table below shows the number of water samples collected from the district during the period 1983—87 and the result of their examination.

Year	Chemical analysis		Bacteriological examination	
	Total cases examined	No. found unsatis-factory	Total cases examined	No. found unsatisfactory
(1)	(2)	(3)	(4)	(5)
1983	72	40	73	61
1984	84	31	91	47
1985	72	46	72	31
1986	75	51	75	37
1987	74	53	75	41

School Health Services

The School Health Services aim at early detection of diseases of the school-going Children and their treatment and prevention. The other activities of the organization include promotion of health of the school-going children and maintenance of adequate hygienic surroundings. Health cards are issued to the students who suffer from diseases and require investigation and special treatment. Common diseases found among the students of this district are :

(a) Vitamin A & B defficiency

(b) Skin disease (Hypopigmented patches)

(c) Dental Carries

(d) Tonsil

(e) Defective Vision

(f) Worm infection

The School Health Services, Southern Circle started functioning on 15th May, 1954 at Bhubaneshwar attached to the Health Directorate. On 8th February, 1957 the headquarters

of the School Medical Officer was shifted from Bhubaneshwar to Brahmapur. The School Medical Officer, Southern Zone, Brahmapur and the Lady School Medical Officer with headquarters at Bhubaneshwar inspect the schools of the district. The Chief District Medical Officer controls the School Health Services Organination.

The statement given below indicates the total number of schools covered, number of students examined, number of students found suffering from several diseases in the district during the years from 1983 to 1987.

Year	No. of schools covered	No. of students examined	No. of students found suffering
(1)	(2)	(3)	(4)
1983	465	28,282	7,798
1984	475	36,745	13,064
1985	299	24,247	12,378
1986	124	9,516	4,771
1987	447	36,834	13,054

Drug Control

The office of the Drugs Inspector, Ganjam Range, Brahmapur started functioning in the year 1964 having jurisdictions over Ganjam, Koraput, Phulabani and Kalahandi districts. In order to reduce the work-load of the office, Kalahandi and Phulabani districts were separated from this range in the year 1970-71. Again in the year 1974, the district of Koraput was excluded from this range. The office is in charge of a Drugs Inspector of Class-II rank of the State Service. The Drugs Controller, Orissa, Bhubaneshwar is the head of the drugs control administration under whom the Drugs Inspector works. The organisation looks after the standards of the allopathy, homeopathy and Ayurvedic drugs and manufacturing of cosmetics and their sale and distribution. Besides, the administration also scrutinises objectionable drug advertisements, enforces the provisions of the Dangerous Drugs Act working in liaison with the excise authorities, ensures drug's price display and price control, and issues essentiality certificates to the pharmaceutical industries.

The activities of the Ganjam range from 1982 to 1986 are furnished below.

Year	Inspection of sales premises	No. of samples drawn	No. of prosecutions launched
(1)	(2)	(3)	(4)
1982	196	52	Nil
1983	206	97	Nil
1984	189	45	1
1985	133	92	Nil
1986	150	56	Nil

The analysis of the drug samples is made in the Central Drugs Laboratory.

Underground Drainage and Protected Water Supply

The Public Health Organisation looks to the supply of protected water in the district. The Superintending Engineer, Public Health Circle, Brahmapur is in charge of protected water supply works in Ganjam along with three other districts i. e., Koraput, Phulabani and Kalahandi. There are four Public Health Divisions, viz., Bhanjanagar Public Health Division, Bhanjanagar; Rushikulya Project Public Health Division, No. I, Brahmapur; Rushikulya Project Public Health Division No.II, Chhatrapur and Brahmapur Public Health Division, Brahmapur functioning in the district under the Public Health Circle, Brahmapur. There are also two Territorial Public Health Divisions located at Brahmapur and Bhanjanagar which work under the control and supervision of the above mentioned Superintending Engineer. Each of the Divisions is in charge of an Executive Engineer. The Divisions are divided into subdivisions and the subdivisions are divided into sections. The subdivisions and sections are placed under the Assistant Engineers and Junior Engineers respectively.

In the district of Ganjam five urban water supply schemes have been taken up out of which four schemes, namely, (1) water supply to Paralakhemundi, (2) reorganisation of Brahmapur water supply, (3) water supply to Bhanjanagar and (4) Joint

water supply project for Brahmapur have been completed. The augmentation of Brahmapur Water Supply Scheme (Distribution System) is in progress.

An account of each of the schemes is given below :

Water Supply to Paralakhemundi

The Paralakhemundi Water Supply Scheme was prepared in the year 1954 with an estimated cost of Rs. 15·93 lakhs and was designed to provide water to a population of 40,000. Subsequently the cost of the scheme was revised in the year 1958 to Rs. 21·01 lakhs. The scheme has since been completed and put to commission from the 23rd September, 1960.

The source of water of this scheme is river Mahendra Tanaya from where the water is pumped directly from an intake-well. During the summer season, there is acute shortage of water in the river due to pumping for irrigation purpose.

By the end of 31st March, 1988, 1381 numbers of house connections and 189 stand posts were provided in the town. The quantity of water supplied to the town was 3·20 million litre per day.

Re-organisation of Water Supply to Brahmapur Town

A scheme to re-organise water supply to Brahmapur town was prepared in the year 1953 with an estimated cost of Rs. 50·14 lakhs which was subsequently revised in 1961 to Rs. 60·95 lakhs. The scheme was prepared with a view to providing water to a population of 1,00,000 by 1981. But according to the Census of 1981, the population of Brahmapur town has already reached 1,62,550.

The major component of the scheme is the provision of a impounded reservoir at Dakhinapur. This scheme, executed as far back as 1905, is supplying 1·5 million gallons of water per day to the town against the present demand of 4·5 M. G. D. The scheme relating to the re-organisation of water supply which was completed in January 1980 failed to supply adequate water required for the town. Hence the Municipality entered into an agreement with the joint Water Supply Scheme for supply of water to the town.

Joint Water Supply Project

Joint Water Supply Project, Brahmapur is an urban water supply scheme meant for providing bulk water supply to its participants viz., (i) M/s. Indian Rare Earths Ltd., Chhatrapur

(ii) Military Cantonment, Golabandha, (iii) Brahmapur University, Bhanja Vihar and (iv) Brahmapur Municipality area. This scheme has been executed by the Rushikulya Project Public Health Division, No. I, Brahmapur (now defunct) and the Rushikulya Project Public Health Division No. II, Chhatrapur (renamed as Rushikulya Project Public Health Division, Chhatrapur since 1. 5. 1984) which were created exclusively for survey, investigation, execution and maintenance of the project.

Prior to creation of these Project Divisions, there was no water supply arrangement to the M/s. Indian Rare Earth Ltd. and to the Military Cantonment, Golabandha (Gopalpur-on-sea). However, before commissioning of the Joint Water Project, a temporary water supply arrangement was made by the Rushikulya Project Public Health Division No. II to the Military Cantonment from the existing pond with effect from 1st July, 1982 which was subsequently augmented from 1st February, 1983 by installing some tube-wells. The Brahmapur University was getting water from tube-wells with power pumps installed in its campus. The Brahmapur Municipality was getting water from the Dakhinapur impounding reservoir as stated earlier.

An extensive survey and investigation on the source of water supply was made for the project. In order to ascertain ground water potentiality of the Rushikulya river basin, investigation was conducted by the Lift Irrigation Corporation of Orissa. The Public Health Engineering Organisation appointed M/s. Ground Water Consultants, Bombay for drilling 100 test holes at different places of the seven probable sites selected by them. Three of the sites were finally selected for location of the collector wells.

The object of the Joint Water Supply Project is to provide bulk water supply to its participants as per details given below:

(i) Brahmapur Municipality	..	4·7 MGD
(ii) Indian Rare Earth Ltd., Chhatrapur	..	3·0 MGD
(iii) Military Cantonment, Golabandha	..	1·0 MGD
(iv) Brahmapur University, Bhanja Vihar		0·1 MGD
Total		8·8 MGD

The Collector Wells No.I, II and III are completed in all respects including installation of vertical turbine pumping sets. All the three wells are already commissioned and water supply is being effected to M/s. Indian Rare Earth Ltd., from the 26th May,

1983, to Military Cantonment and Brahmapur University from the 16th May, 1984 and to Brahmapur Municipality from the 1st January, 1985. The total cost of the project is Rs. 812 lakhs. The population covered by the project is about 2 lakhs.

The Executive Engineer, Rushikulya Project Public Health Division, Chhatrapur is in over-all supervision of survey, investigation, execution and maintenance of the Joint Water Supply Project. This division has four subdivisions which are placed under the Assistant Engineers and Junior Engineers.

Water Supply to Bhanjanagar Town

Since 1st May, 1966 the water supply was effected to this town at a total cost of Rs. 4,38,600 lakhs on rural pattern. Subsequently, a new scheme for the town was prepared to supply water to a population of 24,500 to be attained in the year 2001. The total cost for the scheme was estimated at Rs. 24·96 lakhs which was approved by the Government on the 18th May, 1978. The scheme has not yet been completed due to non-receipt of the share from the Urban Local Body. The present water supply to the town is 1,80,000 million litres per day through 136 stand posts and 313 house connections. Besides, 28 tube-wells have also been installed in the town. The source of water is the Russelkonda reservoir which was constructed in 1894.

Rural Water Supply

No attention was given to the problem of providing drinking-water to the rural inhabitants until the implementation of the Five-Year Plans in 1951. They were generally depending on water from the tanks, pools, wells and rivers, etc. To overcome these difficulties different schemes have been undertaken at different times during the past few years.

Twenty-nine Rural Water Supply Schemes have been implemented in the district out of which thirteen are in the Notified Area Council areas and other sixteen are in Grama Panchayat areas. An account of some of the rural water supply schemes located in the Notified Area Council areas are discussed below.

Water supply to Asika

Water Supply Scheme estimated at Rs. 1·943 lakhs was administratively approved by the Government on 9th March, 1963 for Asika town. This scheme was completed and commissioned on 2nd October, 1964. The source of water of this scheme is the

river Rushikulya. At present one percolation well and one tube-well are supplying water to the town. An augmentation scheme in the urban pattern has been prepared for an amount of Rs. 28·32 lakhs but the same has not been taken up yet.

The water is being supplied through 100 stand posts and 245 house connections. At present 1·30 million litres of water per day is being supplied daily. Besides, 17 tube-wells have been sunk to meet the demand.

Water Supply to Bellaguntha N. A. C.

This scheme has been completed and water supply has been effected from 2nd November, 1963. The total expenditure for the scheme was Rs. 2.50 lakhs. The source of water of the scheme is the river Badanadi. The designed population of the scheme was 7,115 and the present water supply is about 0·5 million litre per day. Water is supplied through 69 stand posts and 78 house connections. Besides, there are 20 tube-wells.

Water Supply to Chhatrapur

Water Supply Scheme to Chhatrapur estimated at Rs. 3,41,800 has since been completed and water supply is being effected from 11th Aprll, 1964. The source of water is an impounded reservoir. Chhatrapur town, being the headquarters of this district has got constant demand for more and more water supply. The source being a swamp is unable to meet the demand. Therefore, this town was taken as a participant in the Joint Water Supply Project. At present the water is provided to the Notified Area Council from Kaliabali reservoir of Joint Water Supply Project. A sum of Rs. 30·54 lakhs has been administratively approved by the Government for laying of gravity main pipes from Kaliabali reservoir site to Chhatrapur N. A. C. along with other essential works. The scheme has been completed and the water supply has been effected from 10th July, 1987 at the rate of 2·25 million litres per day. There are 78 house connections, 61 tube-wells and 62 stand posts at present in working condition.

Water Supply to Chikitipentha

This scheme estimated at Rs. 2,60,000 has since been completed and put to commission from 12th April, 1974. The source of water supply is the river Bahuda. The Present water supply to the N. A. C. is 30 million litres per day. There are 60 house connections, 25 tube-wells and 35 stand posts at present in working condition.

Water Supply to Digapahandi

The Water Supply Scheme to Digapahandi town was prepared during the year 1966 at an estimated cost of Rs. 1,08,000. The water is being supplied to the town with effect from 26th January, 1967. The source of water is an infiltration well of 10′ diameter and 30′ deep. At present 39 stand posts and 24 tubewells are suppling water.

Water Supply to Ganjam

This scheme costing Rs.2,91,600—has since been completed and commissioned from 5th December, 1966. Originaly the source was a spring tank. But as the same was found to be a failure it has been discarded. At present water is being supplied to this N.A.C. from the tube-well sunk by M/s. Jayashree Chemicals Ltd. The present daily water supply is 0·18 million litres per day. There are 24 tube-wells 2 shallow wells, 2 house connections and 34 stand posts in the town.

Tube Well Scheme

Tube-wells have been installed in different villages by different institutions, private parties and the Government. Upto 31st March, 1987 there were about 4,073 identified villages and 890 unidentified villages in the district with drinking water problem. During this period 6,820 tube-wells were sunk in identified drinking water problem villages. Besides, 467 tube-wells were also provided in unidentified problem villages. This apart, tube-wells were also sunk under different programmes. In the year 1987-88, under the Minimum Needs Programme, 183 tube-wells were sunk in identified villages. Under the Accelerated Rural Water Supply Programme 336 tube-wells were sunk and in Special Central Assistance Programme 4 tube-wells were sunk in identified villages. In unidentified villages under Drought Programme 23 tube-wells were sunk in 1987-88.

None of the towns of the district has been provided with underground sewerage systems till 1987.

Slum Improvement and clearance

Growth of slums which is common in the modern cities and towns not only destroyes the beauty of the towns and cities but also pollutes the surroundings. For the improvement of slum areas and for rehabilitating the slum dwellers of the

district the Slum Improvement and Clearance Scheme has been in operation in Bhanjanagar, Hinjilicut, Asika and Kabisuryanagar Notified Area Councils. The achievements made under the scheme in the above mentioned towns till the end of the financial year 1986-87 are furnished in the following table.

Name of the Notified Area Council/ Municipality	Year of operation	Total amount sanctioned	Number of tenements completed	Number of persons settled
(1)	(2)	(3)	(4)	(5)
Bhanjanagar ..	1977-78	39,125	6	6
Hinjilicut ..	1972-73	48,287	6	6
Asika ..	1967-68	1,22,100	14	14
Kabisuryanagar..	1966-67	1,17,340	2 (double storyed)	18
Paralakhemundi..	1960-61	..	35	35

At present, Government grants are provided to the urban bodies under the scheme of Environmental Improvement of Urban Slums. Under this scheme, Paralakhemundi and Brahmapur Municipalities received grants of Rs.1,25,000 and Rs. 2,50,000 respectively in the year 1986-87. Gopalpur Notified Area Council also received grants of Rs. 1,25,000 in the same year. These grants were mainly utilised by the local bodies for construction of internal roads and drains, providing street lights, installation of water taps and community sanitary latrine and bath-rooms etc., in the urban slum areas.

APPENDIX I

Vital Statistics of the district

Year	Births			Deaths			Infant Deaths		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1977	8,367	20,940	29,307	2,301	13,574	15,875	507	1,796	2,303
1978	8,749	21,723	30,472	2,472	14,161	16,633	508	1,910	2,418
1979	9,673	17,906	27,579	3,025	13,337	16,362	566	1,650	2,216
1980	10,329	17,316	27,645	2,878	12,617	15,495	504	1,387	1,891
1981	10,054	31,934	41,988	2,871	12,148	15,019	614	2,150	2,764
1982	11,691	40,362	52,053	2,992	13,464	16,456	692	2,854	3,546
1983	11,122	38,904	50,026	3,168	14,490	17,658	761	2,870	3,631
1984	11,425	40,782	52,207	3,569	16,023	19,592	791	3,033	3,824
1985	11,337	40,844	52,181	3,334	15,012	18,346	742	2,893	3,635
1986	12,149	45,838	57,987	3,207	14,617	17,824	706	3,231	3,937

Year	Birth rate per 1,000 population			Death rate per 1,000 population			Infant mortality rate per 1,000 birth		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
(1)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1977	24·46	9·56	11·57	6·73	6·20	6·27	60·60	85·77	78·58
1978	25·00	9·79	11·86	7·06	6·38	6·47	58·06	87·93	79·35
1979	24·94	7·97	10·58	8·43	5·93	6·28	58·51	92·15	80·35
1980	28·14	7·60	10·45	7·84	5·54	5·86	48·79	80·09	68·40
1981	26·74	13·84	15·65	7·64	5·27	5·60	61·07	67·33	65·83
1982	30·45	17·28	19·14	7·79	5·76	6·05	59·19	70·71	68·12
1983	28·30	16·45	18·14	8·06	6·13	6·45	68·42	73·77	72·58
1984	28·49	17·04	18·68	8·90	6·69	7·01	69·23	74·37	73·25
1985	27·72	16·85	17·79	8·95	6·19	6·26	65·45	70·83	69·66
1986	29·06	18·69	20·20	7·67	5·96	6·21	58·11	70·49	67·89

APPENDIX II

Statement showing the number of deaths due to different diseases in the district from 1983 to 1986

Sl. No.	Name of the disease	1983			1984			1985			1986		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Cholera	..	1	1	..	..	..	..	3	3	..	1	1
2.	Typhoid	1	375	376	5	316	321	9	229	138	..	101	101
3.	Food Poisoning	..	3	3	..	7	7	..	5	5	..	2	2
4.	Dysentery	150	1,194	1.334	174	1,250	1,424	220	1,168	1,388	176	1,066	1,242
5.	Tuberculosis	124	176	300	133	178	311	141	235	376	115	270	385
6.	Leprosy	3	43	46	3	36	39	..	43	43	3	32	35
7.	Diptheria	2	2	4	2	4	6	2	2	4	..	1	
8	Whooping cough	7	165	172	4	212	216	4	130	134	5	106	111
9.	Tetanus	122	164	286	67	143	210	105	152	257	126	137	263
10.	Poliomyelitis	1	15	16	29	13	22	6	10	16	3	8	11
11.	Measles	1	67	68	9	163	172	..	36	36	7	90	97
12.	Rabies	..	10	10	6	6	12	3	7	10	..	15	15
13,	Malaria	5	388	393	40	274	314	27	182	209	14	225	239
14.	Cancer	19	210	229	24	123	147	16	138	154	19	138	157
15.	Diabetes Mellitus	9	24	33	7	44	51	8	63	71	2	27	29
16.	Anaemia	26	1,034	1,060	22	1,396	1,418	6	1,487	1,493	14	1,625	1,639
17.	Meningitis	5	1	6	2	3	5	14	4	18	7	2	9
18.	Heart attack	53	344	397	92	342	434	112	439	551	95	485	580
19.	Premonia	24	14	38	18	35	53	23	17	40	18	35	53
20.	Influenza	4	117	121	..	141	141	..	73	73		0u	67
21.	Bronchitis and Asthma	43	411	454	39	402	441	27	471	498	34	438	472
22.	Jundice	6	88	94	6	105	111	9	132	141	6	150	156

Sl. No.	Name of the Diseases	1983			1984			1985			1986		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
23	Lever diseases ..	108	53	161	66	31	97	13	73	86	3	79	82
24	Ulcer ..	18	100	118	9	221	230	7	239	246	3	191	194
25	Appendicitis ..	1	2	3	1	..	1	..	5	5	..	3	3
26	Syphilis and Urinary system ..	6	356	362	1	63	64	1	11	12	2	4	6
27	Abortion ..	1	6	7	3	2	5	1	2	3	1	1	2
28	Complicated pregnancy and Child birth. ..	48	24	72	16	26	42	40	25	65	22	23	45
29	Birth injuries ..	106	36	142	130	56	186	17	109	126	115	91	206
30	Paralysis ..	3	62	65	14	60	74	6	87	93	8	92	100
31	Senility ..	63	746	809	37	1,413	1,450	65	1,441	1,505	95	1,894	1,989
32	Others not classified	2,130	8,092	10,222	2,530	8,629	11,159	2,381	7,791	10,172	2,249	6,867	9,116
33	Bites ..	4	61	65	6	32	38	3	45	48	1	48	49
34	Accidental burns ..	5	16	21	4	12	16	8	16	24	1	9	10
35	Falls Drawing ..	3	7	10	2	14	16	1	12	13	3	10	13
36	Accidental poisoning ..	2	12	14	5	1	6	..	6	6	1	11	12
37	Transport accident ..	4	22	26	12	10	22	3	4	7	9	15	24
38	Other accidents ..	61	34	95	67	188	255	56	198	254	48	243	291
39	Suicide ..	..	10	10	3	8	11	..	6	6	..	13	13
40	Homicide ..	..	5	5	1	64	65	....	16	16	1	3	4
		3,168	14,490	17,658	3,569	16,023	19,592	3,334	15,012	18,346	3,207	14,617	17,824

APPENDIX III

No. of patients of principal diseases treated and died in the Hospital and Dispensaries in the district from 1978 to 1986.

Year	Malaria			Dysentery			Typhoid		
	Outdoor	Indoor	Death	Outdoor	Indoor	Death	Outdoor	Indoor	Death
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1978	64,101	1,271	28	2,50,676	2,154	39	4,567	750	18
1979	58,539	2,057	32	2,63,962	2,120	26	6,613	830	15
1980	73,606	2,618	43	2,79,643	3,960	126	5,946	1,014	15
1981	74,170	3,086	49	2,76,218	7,171	77	7,964	1,186	18
1982	99,632	1,868	43	2,67,500	2,146	47	6,468	1,025	25
1983-84	90,136	1,327	47	3,01,921	2,794	69	5,920	831	16
1984-85	1,00,040	2,775	55	2,77,008	2,948	44	5,993	709	11
1985-86	89,667	3,770	61	2,41,687	3,512	57	6,099	786	18

Year	Yaws			Filariasis			T. B.			Tetanus		
	Outdoor	Indoor	Death	Outdoor	Indoor	Death	Outdoor	Indoor	Death	Outdoor	Indoor	Death
(1)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1978	90	5	..	30,008	367	1	3,734	1,047	55	561	324	117
1979	47	3	..	35,695	391	..	5,272	1,332	105	723	506	156
1980	..	..	..	38,908	738	11	8,429	1,968	109	803	489	196
1981	1	1	..	33,677	339	1	7,304	1,453	123	588	418	150
1982	2	1	..	44,090	1,257	1	6,660	1,534	138	639	476	163
1983-84	6	1	..	38,840	699	..	7,596	1,729	1,126	103	456	201
1984-85	..	..	..	43,218	594	..	6,622	1,579	155	796	408	160
1985-86	1	1	..	37,334	450	..	6,795	1,526	140	779	377	123

Year	Cancer			Heart Diseases			Others		
	Outdoor	Indoor	Death	Outdoor	Indoor	Death	Outdoor	Indoor	Death
(1)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
1978	11,289	1,238	91	3,762	791	115	18,77,536	45,068	1,370
1979	8,705	945	86	4,871	899	92	19,29,881	48,977	1,330
1980	11,387	1,089	70	5,763	643	150	19,17,589	50,034	1,354
1981	4,026	1,239	70	4,725	1,351	174	20,24,537	44,299	1,174
1982	3,914	1,622	87	4,991	1,199	133	19,65,800	53,244	1,464
1983-84	4,067	1,213	80	12,938	1,495	160	20,98,729	55,467	1,500
1984-85	2,642	907	65	12,155	1,634	186	21,30,605	49,314	1,622
1985-86	1,988	788	68	11,572	1,478	185	18,16,390	54,827	1,600

APPENDIX IV

Name, location, year of establishment, etc., of Medical Institutions in Ganjam District

Name and location	Year of establishment	Number of		
		Doctors	Pharmacists	Nurses
(1)	(2)	(3)	(4)	(5)
1. M. K. C. G. Medical College Hospital, Brahmapur.	1970	..	..	..
2. City Hospital, Brahmapur.	1974	27	5	18
3. Subdivisional Hospital, Bhanjanagar.	1901	12	2	9
4. Subdivisional Hospital, Chhatrapur.	1901	11	2	7
5. Subdivisional Hospital, Paralakhemundi.	1916	6	3	8
6. Government Hospital, Asika.	1948	1	1	1
7. Government Hospital, Sorada.	1881	2	2	4
8. Government Hospital, Chandragiri.	1960	1	1	1
9. Government Hospital, Chikiti.	1957	1	1	1
10. Government Hospital, Hinjilicut.	1929	1	1	1
11. Government Hospital, Mujagada.	N. A.	1	1	1
12. Government Hospital, Ballipadar.	1943	1	1	1
13. Government Hospital, Bismagiri.	N. A.	1	1	1
14. Government Hospital, Pudamari.	N. A.	1	1	1

Name and location	Year of establishment	Number of		
		Doctors	Pharmacists	Nurses
(1)	(2)	(3)	(4)	(5)
15. Government Hospital, Nuagad.	1947	1	1	..
16. Government Hospital, Kodala.	1954	1	..	1
17. Government Hospital, Surangi.	N. A.	1	1	1
18. Government Hospital, Bellaguntha.	1946	1	1	1
19. Government Hospital, Pattapur.	1960	1	1	..
20. Harijan and Tribal Welfare Hospital, Banthapalli.	1966	1	1	1
21. Police Hospital, Chhatrapur.	1949	1	1	1
22. Jail Hospital, Brahmapur	..	..	..	..
23. Railway Hospital, Brahmapur.	..	..	..	..
24. Municipal Hospital, Brahmapur.	..	..	..	..
25. Christian Hospital, Seranga.	..	..	..	..
26. Christian Hospital, Brahmapur. (For women and children)	..	..	..	..
27. Red Cross Hospital, Brahmapur.				
PRIMARY HEALTH CENTRES				
Brahmapur Subdivision				
1. Kukudakhandi P. H. C.	1965	1	1	..
2. Keluapalli P. H. C.	N. A.	1	1	..
3. Adapada P. H. C.	1972	1	1	..
4. Girisola P. H. C.	1966	1	1	..
5. Patrapur P. H. C.	1962	1	1	..
6. Bomkei P. H. C.	1973	1	1	..

Name and location	Year of establishment	Number of Doctors	Pharmacists	Nurses
(1)	(2)	(3)	(4)	(5)
Bhanjanagar Subdivision				
7. Gallery P. H. C..	1967	1	1	..
8. Gobara P. H. C.	1966	1	1	..
9. Jagannathprasad P H. C.	1953	1	1	..
10. Buguda P. H. C.	1964	1	1	..
11. Badagada P. H. C.	1964	1	1	..
12. Ballisira P. H. C.	1962	1	1	..
13. Dharakot P. H. C.	1962	1	1	..
14. Seragad P. H. C.	1962	1	1	..
Paralakhemundi Subdivision				
15. Gumma P. H. C.	1965	1	1	..
16. Gurandi P. H. C.	1966	1	1	..
17. B. Khajuripada P. H. C.	1965	1	1	—
18. Kashinagar P. H. C.	1958	1	1	—
19. Rayagada P. H. C.	1931	1	1	..
20. Mohana P. H. C.	N. A.	1	1	..
21. R. Udayagiri P. H. C.	1962	1	1	..
Chhatrapur Subdivision				
22. Khandadeuli P. H. C.	N. A.	1	1	..
23. Khallikot P. H. C.	1959	1	1	—
24. Polasara P. H. C.	1966	1	1	—
25. Sumandala P. H. C.	1966	1	1	..
26. Kabisuryanagar P. H. C.	1964	1	1	..
27. Bellagam P. H. C.	1964	1	1	..
28. Municipentha P. H. C.	N. A.	1	1	..
29. Bhatakumarada P. H. C.	1965	1	1	..
Additional Primary Health Centres				
1. Ganjam A. P. H. C.	N. A.			
2. Purusottampur A. P. H. C.	N. A.			

Name and location	Year of establishment	Number of		
		Doctors	Pharma-cists	Nurses
(1)	(2)	(3)	(4)	(5)
3. Gopalpur A. P. H. C.	N. A.			
4. Balipadar A. P. H. C.	N. A.			
5. Tarasingi A. P. H. C.	N. A.			
6. Nuapada A. P. H. C.	N. A.			
7. Baranga A. P. H. C.	1987			
8. Jarada A. P. H. C.	1958			
9. Pitala A. P. H. C.	N. A.			
10. Gaiba A. P. H. C.	1960			
11. Birikota A. P. H. C.	N. A.			
DISPENSARIES				
Brahmapur Subdivision				
1. Bhanja Bihar	1979	1	1	..
2. Pattapur Dispensary	1955	1	1	..
3. Surala Dispensary	1948	1	2	..
4. Thumba Dispensary	N. A.	1	1	..
5. Sidheswar Dispensary	1954	1	1	..
6. Padmanabhapur Dispensary	1936	1	1	..
Bhanjanagar Subdivision				
7. Gangapur Dispensary	N. A.	1	1	..
8. Korachuli Dispensary	1954	1	1	..
9. Gazilbadi Dispensary	1910	1	1	
10. Goudagotha Dispensary	1965	1	1	..
11. Manikayapur Dispensary	1959	1	1	..
Paralakhemundi Subdivision				
12. Garabandha Dispensary	1982	1	1	..
13. Khandava Dispensary	1964	1	1	..
14. Koinpur Dispensary	1969	1	1	..
15. Ramagiri Dispensary	1927	1	1	..
16. Cheligodo Dispensary	1963	1	1	..

Name and location	Year of establishment	Number		
		Doctors	Pharmacists	Nurses
(1)	(2)	(3)	(4)	(5)
Chhatrapur Subdivision				
17. Rambha Dispensary	1935	1	1	..
18. E. S. I. Dispensary, Ganjam.	N. A.	1	1	..
19. B. N. Pur Dispensary	1967	1	1	..
20. Hattiotta Dispensary	1965	1	1	..
21. Budhama Dispensary	1969	1	1	..
22. Narendrapur Dispensary.	1950	1	1	..
Subsidiary Health Centres				
1. Huma Subsidiary Health Centre.	1985	..	..	..
2. Kanhaipur Subsidiary Health Centre.	1983	..	..	..
3. Beguniapada Subsidiary Health Centre.	1985	..	..	..
4. Pratapur Subsidiary Health Centre.	1979	..	..	..
5. Somma Subsidiary Health Centre.	1985	..	..	..
6. Chirikipada Subsidiary Health Centre.	1982	..	..	..
7. Athagadapatha Subsidiary Health Centre.	1985	..	..	..
8. Talasingi Subsidiary Health Centre.	N. A.	..	..	—
9. Kankarada Subsidiary Health Centre.	1978	..	..	..
10. Sahaspur Subsidiary Health Centre.	1985	..	..	..

Name and location	Year of establishment	Number of		
		Doctors	Pharmacists	Nurses
(1)	(2)	(3)	(4)	(5)
11. Sumandi Subsidiary Health Centre.	1986	..	..	..
12. Khairaguda Subsidiary Health Centre.	1983	..	..	..
13. Banka Subsidiary Health Centre.	1983	..	..	..
14. Alasu Subsidiary Health Centre.	1978	..	..	..
15. Chhamunda Subsidiary Health Centre.	1985	..	..	..
16. Jagamohan Subsidiary Health Centre.	1986	..	..	..
17. Badabadangi Subsidiary Health Centre.	1980	..	..	..
MEDICAL AID CENTRE				
1. Kullada Medical-Aid Centre.	1975	..	..	..
2. Bhetanoi Medical-Aid Centre.	1977	..	..	..
3. Jahada Medical-Aid Centre.	1975	..	..	..
4. Dengapadar Medical Aid Centre.	1975	..	..	..
5. Karadakana Medical-Aid Centre.	1975	..	..	..
MOBILE HEALTH CENTRE				
1. Nominiguda Mobile Health Unit.	..	..	..	..
2. Adaba Mobile Health Centre Unit.	..	..	..	..

APPENDIX V

Name and year of establishment of Ayurvedic Dispensaries in the district.

Name of the Dispensary (1)		Year of establishment (2)
1. Gunthapada Dispensary	..	1948
2. Khaira Dispensary	..	1972
3. Nimina Dispensary	..	1956
4. Badabarsingh Dispensary	..	1975
5. K. Nuagarh Dispensary	..	1972
6. Mangalpur Dispensary	..	1975
7. Mahaguda Dispensary	..	1967
8. Turum Dispensary	..	1981
9. Rugum Dispensary	..	1966
10. Suramani Dispensary	..	1948
11. Panchabhuti Dispensary	..	1951
12. Gerada Dispensary	..	1953
13. Talasara Dispensary	..	1967
14. Betrapali Dispensary	..	1972
15. A. Barida Dispensary	..	1979
16. Athagarhapatna Dispensary	..	1972
17. Baulagaon Dispensary	..	1957
18. Aitipur Dispensary	..	1972
19. Gochhabadi Dispensary	..	1967
20. Kendubadi Dispensary	..	1972
21. Jakar Dispensary	..	1972
22. Rumagarh Dispensary	..	1972
23. Ralab Dispensary	..	1980
24. Sikula Dispensary	..	1967

Name of the Dispensary (1)		Year of establishment (2)
25. Arokhapur Dispensary	..	1986
26. Humma Dispensary	..	1943
27. Gajapatinagar Dispensary	..	1956
28. Turubadi Dispensary	..	1958
29. Badadumula Dispensary	..	1979
30. Kaithakhand Dispensary	..	1942
31. Gautami Dispensary	..	1974
32. Hansarali Gunasagar Dispensary	..	1980
33. Khareda Dispensary	..	1956
34. Chandipur Dispensary	..	1987
35. Adava Dispensary	..	1956

Name and year of establishment of Homoeopathic Dispensaries in the district

1. Kaniari Dispensary	1979
2. B. Nuapali Dispensary	1972
3. Sodak Dispensary	1972
4. Baghadi Dispensary	1972
5. Kalamha Dispensary	1972
6. Budheisuni Dispensary	1985
7. Mathura Dispensary	1985
8. Khonjapali Dispensary	1971
9. Langaleswar Dispensary	1982
10. Rajpur Dispensary	1972
11. Chingudighai Dispensary	1972
12. Badagudiali Dispensary	1972
13. Beruanbadi Dispensary	1972

Name of the Dispensary (1)	Year of establishment (2)
14. Kullad Dispensary	1984
15. Badakudanda Dispensary	1972
16. Birikota Dispensary	1975
17. Domuhani Dispensary	1975
18. Jillundi Dispensary	1976
19. Munigadi Dispensary	1974
20. Nimapadar Dispensary	1980
21. Solsale Dispensary	1972
22. B. Karadabadi Dispensary	1982
23. Benipali Dispensary	1975
24. Jharpavni Dispensary	1980
25. Sandhikendu Dispensary	1986
26. Manikyapur Dispensary	1979
27. Jayantipur Dispensary	1979
28. Nimakhandi Dispensary	1968
29. Pattapur Dispensary	1971
30. Parimal Dispensary	1966