

CHAPTER-XVI

MEDICAL AND PUBLIC HEALTH SERVICES

Forests and hills and dales occupy a considerable portion of the district. Being near the Ghats the rains are regular and abundant. The running streams have infected water as they contain stagnant vegetable matter. The water of the rivers and wells is good. But the water of the tanks is usually polluted through their unhygienic use. The climate is in general not salubrious and in certain tracts it is notoriously malarious. Apart from the forest tracts in Madanpur-Rampur and Lanjigarh which are more or less malarious, the climate of the more open parts in the north and west of Kalahandi Forest Division is fairly healthy. But the southern hill regions of Thuamul-Rampur and Karlapat have unbracing climate particularly for persons unaccustomed to the food and atmosphere of the country. It has a very evil reputation for malignant terrain and cerebral form of malaria. The northern plateau of Sunabeda in Nawapara subdivision has, however, cooler climate and is considered to be a suitable site for a sanatorium. The climate of Komna area which is a low lying tract and surrounded by ranges of hills and forests is usually damp and unhealthy. Khariar, though not unhealthy, is rather malarious. But it is less notorious than the Komna area. Nawapara with its healthier climate has been well chosen for the seat of the subdivisional headquarters.

Climate

Malaria and epidemics like cholera and smallpox used to visit almost annually both the ex-State of Kalahandi and Nawapara subdivision and claimed a large number of lives in the past. But owing to the operation of various public health and preventive measures their visitations are almost put under control.

No systematic records highlighting the public health and medical facilities that obtained in the ex-State of Kalahandi before publication of the Cobden Ramsay's Gazetteer for Feudatory States of Orissa (1908) are perhaps available. C. Elliot's Report (1856) contains little on the subject. According to the former the country was very malarious and unhealthy to new comers. The permanent inhabitants suffered only to an ordinary degree from fever and bowel complaints. From time to time there were small cholera epidemics, but smallpox visitations owing to the universal and effectual vaccination of the people were very rare. That the people had little fundamental knowledge about the hygienic and sanitary principles is apparent from the following description of C. Elliot. "The water, however, is good,

SURVEY OF
PUBLIC
HEALTH
AND MEDI-
CAL FACI-
LITIES IN
EARLY TIMES

at least that of the rivers and wells, for a custom obtains here which pollutes the water of the tank and renders it unfit for drinking purposes. Universally throughout the dependency, the people are in the habit of anointing their bodies with oil and turmeric as a prophylactic against cold and fever and from washing in the tanks the water becomes so much defiled that persons making use of it for any length of time are very liable to fall sick, as was exemplified in the cases of some of my men". Similarly owing to the custom of using the water of the same tank for drinking, bathing and washing of clothes and animals, malaria and epidemics like cholera and smallpox used to spread all over Nawapara during autumn of almost every year. But washing of animals was later prohibited by the administration.

In 1907-08, as recorded by Cobden-Ramsay, there were five dispensaries in the ex-State of Kalahandi each provided with accommodation for indoor patients. These dispensaries were situated at Bhawanipatna, Junagarh and at the headquarters of the Rampur-Thuamul, Kashipur (now in Koraput) and Mahulpatna Zamindaris. They were in charge of Civil Hospital Assistants and the Medical Department of the State was under a qualified Medical Officer. At the headquarters there was a separate female dispensary with a lady doctor in charge. Vaccination was free and was very thoroughly carried out although it was not popular then. The Nawapara subdivision of the present district was then with the Central Provinces.

Owing perhaps to their educational and cultural backwardness the local people were less prone to accept the modern medical system. The effects of the system, on the otherhand, could not reach the inhabitants of the remote villages partly due to lack of good communication and partly due to inadequate number of medical institutions then established.

Through all the ages, prior to the introduction of the modern systems of healing, and during the transitional period and, to some extent in the present days the Ayurvedic system of medicine has been perhaps most popular in the district. Easy availability of the herbs and the cheapness of the system contributed towards its popularity. The Unani system could not, however, find an entrance into the ex-State of Kalahandi probably due to scanty Muslim population and lack of royal patronage. The tribal people, however, had their own beliefs and methods of treatment. For them, any system of healing was inseparable from the corresponding religious beliefs and superstitions. All the diseases and physical sufferings were believed to be curses from Heaven and propitiation of the deities, therefore, constituted an essential part of securing complete riddance of them. Sorcery

also played a very important role and a sorcerer was the first-man to be consulted at the indication of any ailment. His advice was confined usually to the administration of some roots and herbs or worship of the discontented deities through animal sacrifice and various other methods.

Collection of vital statistics was perhaps started in the ex-State of Kalahandi sometime during the twenties of this century. But Nawapara subdivision, which was previously under Sambalpur district, had the benefit of the registration system from an earlier date. After the merger of the State an interim arrangement was initially made from July 1948 to collect weekly figures of attacks and deaths from cholera and smallpox with a view to take preventive measures against epidemics. A systematic collection of vital occurrences throughout the district began only from 1st January, 1952, under the Bengal Births and Deaths Registration Act, 1873 (Act. IV, 1873). The primary reporting agency under this Act in the rural area was the village Chowkidar who used to collect information about vital occurrences during his rounds in villages and reports them at the police station on weekly or fortnightly parade days. The Thana Officer consolidates the reports thus recorded for a month and sends monthly returns to the District Health Officer. But practically this work suffered a great deal at the hands of the Chowkidars who deemed it as an additional work beyond their legitimate duty. Inadequate penal provision both for the collecting and reporting agencies also aroused little consciousness about their duties in this direction. The Thana Officer, who is busy in ever-increasing law and order problem hardly affords to check the omissions in the reports furnished by the Chowkidar. The entire structure of vital statistics was therefore based on what was reported by the Chowkidar, an illiterate and over-worked person, and the result was admittedly far from correct. The transfer of Chowkidars to the pay-roll of the Grama Panchayat caused further set back to the system. After this transfer, the attendance of the Chowkidars at the weekly parade in Thanas fell considerably, causing still greater default in reporting of vital statistics. After the abolition of Chowkidari system in 1965, various attempts were made for effective collection of the information through the Orissa Grama Panchayat Act, 1964, and the Grama Rakhi Ordinance, 1967, but proved futile.

The collection and reporting of these events were slightly better in the town of Bhawanipatna. But although a Municipality had been formed in 1951 collection of vital events in the town began only in 1954. The health staff of the Municipality used to collect and send the report on vital statistics to the District Health Officer. On the

VITAL
STATISTICS

receipt of monthly reports from the Thana Officers and the Municipality, the District Health Officer compiled and forwarded monthly report of births and deaths to the Director of Health Services, Orissa, for the compilation of state figures.

The Registration of Births and Deaths Act, 1969 (Act No.18 of 1969), and the Orissa Registration of Births and Deaths Rules, 1970, have been enforced in the district on the 1st July, 1970. The Health Officer, or in his absence, the Executive Officer in the urban areas, and the Thana Officer in the rural areas are appointed as the Registrars. Under these rules, the Chief District Medical Officer acts as the District Registrar while the Director of Health Services, Orissa, acts as the Chief Registrar. The responsibility to make reports about the births and deaths within a stipulated time devolves on the head of the house or household. The Act provides for penalties of fairly a nominal amount in a graduated scale for the period of delay or failure to report on the part of the reporting agency. Besides, different officers in charge of various institutions like hospitals, hotels, running trains and buses etc. are made responsible to notify about births and deaths. To make the present system effective, an awareness about the importance of the collection of vital statistics should be created among the reporting agencies through proper publicity as majority of the population of the district is illiterate and backward.

The vital statistics for nine years from 1966 to 1974 are furnished in Appendix-I. These figures offer little opportunity for undertaking any prognosis relating to the trend of population and standard of health in the district. For they lack information in respect of the rural areas from 1966 to 1969 which is attributed to the abolition of the Chowkidari system. The various other figures given in the statement largely suffer from underreporting of the vital events and are therefore unreliable.

The figures of births and deaths etc. in the following table relating to the decade 1951—60, may broadly provide an idea about the growth of population and the health of the people. Here also the reliability of the figures is not unquestionable as the primary reporting agency was the Chowkidar.

District/State	Births	Deaths	Birth rate	Death rate	Infant death rate
Kalahandi ..	2,62,118	1,70,210	30.2	19.6	126.1
Orissa ..	..	..	25.8	16.2	145.6

The birth and death rates in the district are comparatively higher than their corresponding State figures. However, the infant mortality rate records a contrary position.

The figures shown in Appendix-I relating to the principal causes of death for the period 1966—74 are incomplete due to the reasons stated earlier. But such statistics relating to an earlier period (1951—60) is furnished in the following table with a view to provide an approximate picture. For scarcely any reliance can be placed on the classification made by the Chowkidar, the reporting agency, who having possessed no medical knowledge is apt to regard fever as a general cause of death.

State/District	Cholera	Smallpox	Fever	Dysentery and diarrhoea
(1)	(2)	(3)	(4)	(5)
Orissa ..	34,440	62,978	13,12,573	1,34,096
Kalahandi ..	4,544	10,030	1,33,949	3,246

State/District	Respiratory disease	Wounds and accidents	Other causes	Total
(1)	(6)	(7)	(8)	(9)
Orissa ..	72,409	33,547	633,498	22,83,541
Kalahandi ..	1,975	3,215	13,251	1,70,210

The comparative percentage of mortality due to cholera, smallpox and fever (chiefly malaria) in the district as well as the State during the period 1951—60 is furnished below:—

State/District	Cholera	Smallpox	Fever
Orissa ..	1.51	2.76	57.48
Kalahandi ..	2.67	5.89	78.70

These figures indicate that Kalahandi was then under the strong grip of these diseases.

The term, fever, includes a number of diseases having their superficial symptom of a rise in the normal body temperature. It is probably the largest possible killer in Kalahandi. During the period 1952—60 the total number of deaths due to fever is recorded at 133,949, the annual number ranging from 13 to 17 thousands. Out of 1000 total deaths about 787 persons died of fever.

DISEASE
COMMON TO
THE DISTRICT

Fever

Malaria

Malaria, among the various types of fever, commonly occurs in the district. But its endemicity has been greatly reduced. It is quite apparent from the statistics given in Appendix-III that although incidence of malaria gradually tends to increase during the latter years death toll due to it is very negligible which may well-nigh be attributed to the developments in the medical and public health activities.

Filaria

Filariasis occurs but only sporadically in the district. Only 2 to 3 hundred persons are annually affected by filarial fever. As is evident from the statistics in Appendix-III, it claimed not even a single life during the nine year period 1966—74.

Typhoid

The incidence of typhoid is also not so great which is evinced from the figures in Appendix-III. The maximum number of patients treated in a single year (1973) in all the hospitals and dispensaries from 1966 to 1974 and the total number of casualties in the same period were only 2538 and 79 respectively.

Cholera

From time to time there were small cholera epidemics in the district. The largest death toll due to it in the recent past was 4,074 in 1958. During the period from 1952—60 the total number of deaths from cholera was 4,544, the proportion being nearly 27 per 1000 deaths. In 1968 the incidence was fairly large but no death was recorded during the year. Owing to elaborate preventive measures taken against the epidemics these days, which is described later in this chapter, cholera has almost been checked.

Smallpox

The district seems to have suffered considerably from smallpox in the past. But due to the universal and effectual vaccinations of the people undertaken by the ex-ruler of Kalahandi its visitations were very rare. In 1958 to 1960, it appeared in a virulent epidemic form and claimed about 2,325; 5,325 and 888 lives respectively. During 1952—60 the total deaths reported in the district was 10,030. Due to effective preventive measures taken against the malady, as described later in this section, it is claimed to have been completely obliterated.

Yaws

Yaws, a malignant type of skin disease, is commonly seen among the tribal people. It seldom assumes any formidable proportion. But its incidence is almost completely checked in the district owing to the anti-yaws campaign undertaken in the past.

Leprosy

The incidence of leprosy is seldom high in the district. Before the merger of the ex-States there existed probably no arrangement for the survey and treatment of this disease. At present its treatment is

conducted in the existing hospitals and dispensaries. The anti-leprosy activities undertaken in Kalahandi are dealt with separately later in this chapter.

From the statistics furnished in Appendix-III it is quite apparent that the incidence of T. B. in Kalahandi is not insignificant. The number of patients and deaths due to T. B. annually tends to increase. During the period from 1966 to 1974 about 89 persons died of Tuberculosis. The Governmental activities undertaken towards controlling the disease has been described later.

Tuberculosis

The figures in Appendix-III reveal that the annual number of dysentery patients treated in the district during 1966 to 1974 is constantly at a staggering height. Despite the various developmental activities undertaken in the field of environmental sanitation and protected water supply in these days it showed no signs of significant decline during the above period. The high incidence of dysentery and diarrhoea in the district may be largely due to the unhygienic and unhealthy living conditions and habits of the illiterate Scheduled Castes and Scheduled Tribes people who form the bulk of the population.

Dysentery
and
Diarrhoea

Among other diseases common to the district mention may be made of influenza, anaemia, malnutrition, respiratory and skin diseases, tetanus and cancer. But their contribution taken separately towards the total pool of mortality is almost negligible.

Other
common
diseases

The dispensaries of the ex-State of Kalahandi were in charge of Civil Hospital Assistants. The Medical Department of the State was under a qualified Medical Officer. The administrative control of these institutions vested with the Civil Surgeon, Balangir, after the merger of the ex-State of Kalahandi on the 1st January, 1948. After the formation of the district of Kalahandi on the 1st November, 1949, with the integration of Kalahandi ex-State and Nawapara subdivision of Sambalpur district which formed its part from the 1st April, 1936 to 31st October, 1949, all the medical institutions came under the control of the Civil Surgeon, Kalahandi. The Health Officer was in charge of the Public Health administration. Under the present set up the Civil Surgeon has been re-designated as the Chief District Medical Officer. Under him there are three Assistant District Medical Officers, one in charge of Medical, the other in charge of Family Welfare and the third in charge of Public Health organisations of the district. In addition, the Chief District Medical Officer is assisted by a number of doctors including lady doctors and other technical and non-technical staff. Besides his normal routine duties relating to the administration of medical and public health activities in the district, the Chief District

PUBLIC
HOSPITALS
AND DIS-
PENSARIES

Administra-
tive set up

Medical Officer also functions as the District Registrar under the Registration of Births and Deaths Act, 1969. He is the local food authority under the Prevention of Food Adulteration Act, 1954.

By the time the district began to function in 1949, there existed about 13 medical institutions. With the establishment of new institutions, chiefly the primary health centres in the remote rural areas, their number gradually increased. By the end of 1976 there were in the district 12 hospitals, 6 dispensaries and 18 primary health centres besides one private hospital and 4 other institutions. Thus numerically it rose to over three times the number existing in 1949. A list of such institutions with their date of establishment, number of staff and bed strength etc. is furnished in Appendix-IV. Detailed descriptions relating to the District Headquarters hospital, the Subdivisional hospitals, the Children hospital, the T. B. hospital and the Evangelical hospital (private) are given separately. Two of the institutions, one hospital at Risida and a Mobile Health Unit at Ampani are managed by the Tribal and Rural Welfare Department. Estimated according to the population of 1971 each of these institutions served over 28,000 persons.

District,
Headquarters
Hospital,
Bhawani-
patna

A dispensary with in-door accommodation was started at Bhawani-patna probably in 1883. Later it was converted to a hospital with the provision of indoor accommodation for 28 patients (male 18 ; female and maternity 10). Then the hospital was in charge of a Civil Hospital Assistant and was well provided with medicines and surgical equipments.

Since the merger of the Kalahandi State with the Province of Orissa in 1948 great improvements to the hospital building have been effected and its staff augmented. At present it provides accommodation for 100 patients (male 64, female 36) which are chiefly distributed into Medical, Surgical, Infectious and Maternity wards.

Prior to merger, the hospital was in charge of the Chief Medical Officer. Thereafter it was, for sometime, a subdivisional hospital under the Balangir Civil Surgeon. In November, 1949 when Kalahandi was declared a separate district the hospital assumed the status of the District Headquarters Hospital. The Assistant District Medical Officer (Med.) is directly responsible for its administration. He is assisted by 14 medical officers including 8 specialists, one in each of the branches of Medicine, Surgery, O. & G. Paediatric, Pathology, E. N. T. Eye and Anaesthesia. In addition, there are one Radiologist, five Pharmacists, twenty staff nurses and many other technical

and non-technical personnel. The hospital is equipped with an X-Ray plant, a Blood Bank and a Pathological Laboratory. Anti-rabic treatment is made available here. Attached to it are a T. B. and a Family Welfare Clinic.

The following table indicates the number of in and out patients treated in the hospitals and their daily average attendance during 1971 to 1975.

Year	In-door		Out-door	
	No. treated	Daily average	No. treated	Daily average
1971	18,843	51	51,370	141
1972	21,548	60	56,209	155
1973	23,364	64	54,929	150
1974	23,551	64	56,570	154
1975	25,264	69	69,017	189

Out of local contributions a shed has been recently constructed within the hospital campus to provide accommodation for the attendants of the patients.

The Subdivisional Hospital, Nawapara, was established in the year 1936. No tangible improvement seems to have been made to the hospital since its inception. It is directly managed by the Subdivisional Medical Officer under the supervisory control of the Chief District Medical Officer, Kalahandi. The principal staff of the hospital comprise two doctors, two pharmacists, three nurses, one midwife and two technicians. It accommodates 14 male and 8 female patients. The beds are allocated into separate wards like Surgical, Medical, Labour and Infectious Ward. In addition, there exists a separate operation theatre, a pathological laboratory, a post-mortem room and an out-patient department. Facilities for X-ray and anti-rabic treatment are made available to the patients. A T. B. clinic is attached to the hospital.

Subdivisional,
Hospital
Nawapara

In the following table is given the number of patients treated and their daily average attendance during the period 1971 to 1975.

Year	In-door		Out-door	
	Patients treated (new)	Daily average (old & new)	Patients treated (old & new)	Daily average (old & new)
1971	663	19	40,757	112
1972	741	18	28,797	77
1973	777	14	29,670	81
1974	741	14	38,846	107
1975	912	20	42,123	115

Subdivi-
sional
Hospital,
Dharamgarh

The Subdivisional Hospital, Dharamgarh, was established in 1966. It is a small hospital with accommodation for 10 patients (male-6, female-4). In August, 1975, twelve additional beds were sanctioned for the hospital. But the Government orders could not materialise until December, 1976. The Subdivisional Medical Officer is under the administrative control of the Chief District Medical Officer and is assisted by two Medical Officers, one Pharmacist, two Staff Nurses and one Dai. It provides facilities for the treatment of T. B. and Anti-rabic cases. There also functions a Family Welfare clinic in the hospital.

Number of patients treated and their average daily attendance during the period 1971 to 1975 is furnished in the table below:

Year	In-door		Out-door	
	Patients treated	Daily average (new cases)	Patients treated	Daily average (old & new cases)
1971	548	1.5	48,173	132
1972	507	1.4	47,906	131
1973	713	1.9	54,629	150
1974	1,074	2.9	26,797	73
1975	896	2.4	35,053	96

Children
Hospital,
Bhawani-
patna

The Children Hospital, Bhawanipatna, was started in 1970 and formed a part of the District Headquarters Hospital until indoor accommodation was provided in a separate building in 1976. It provides accommodation for 25 patients. Under the supervision of the Chief District Medical Officer, the Assistant District Medical Officer (Med.), Kalahandi, is directly in charge of the hospital. He is assisted by a Paediatric Specialist, an Assistant Surgeon, one Pharmacist, one Social worker and two Staff Nurses. The patients of the Children Hospital are provided with all the facilities that are available to those in the Headquarters Hospital.

In the following table is furnished the number of in and outpatients treated and their average daily attendance during the period 1971 to 1975.

Year	In-door		Out-door	
	Patients treated	Daily average	Patients treated	Daily average
1971	2,587	7	23,132	63
1972	3,755	10	21,067	59
1973	2,608	7	27,114	74
1974	3,036	8	25,371	70
1975	4,672	13	26,526	73

Government
Tuberculosis
Hospital

In Uditnarayanpur, at a distance of 8 km. from Bhawanipatna, the Government T. B. Hospital was formally opened on the 9th June 1949 by the then Health Minister of Orissa. It was then housed in three blocks, all with tile roofs, constructed by the erstwhile ruler of the ex-State of Kalahandi. It provided accommodation only for 25 patients and received patients from the entire State. Two years later, in 1951, accommodation for 10 more patients was provided in the hospital. In later years the hospital was much improved. At present it affords accommodation for 65 patients (male-50, female-15) and entertains patients only from the districts of Kalahandi, Balangir and Koraput. The hospital provides no facility for out-door and surgical treatment. The surgical cases are referred to the U. M. T. Sanatorium, Arogyavavan, Andhra Pradesh. It affords all types of medicinal treatments and only minor surgical cases are taken up here. It has its own X-ray plant and pathological laboratory.

The hospital is directly under the control of the Director of Health and Family Welfare Services, Orissa. The Medical Superintendent who is the administrative head of the institution is assisted by two medical officers, six nurses, one pharmacist, one Radiographer and one laboratory technician.

The number of Indoor patients treated and their daily average during the period 1971—76 is given in the Table below:

Year	No. of patients	Daily average
1971	156	57
1972	156	57
1973	216	55
1974	292	55
1975	306	58

In the past the Kavirajas who practised the Ayurvedic system of treatment were popular in the district. But the development of the system was retarded to a considerable extent after the introduction of the Allopathic system. The introduction of the Homeopathic system in the district is only of recent occurrence. But both the Ayurvedic and Homeopathic systems are now becoming popular under the patronage of the State Government. These systems of treatment are comparatively less expensive and suit to the low economic condition of the people. The Ayurvedic and Homeopathic institutions in the district are directly managed by the Director of Indian Medicines and Homeopathy, Orissa, Bhubaneshwar.

Ayurvedic
and Homeo-
pathic Insti-
tutions

**Ayurvedic
Institutions**

By the middle of 1974 there existed seven Ayurvedic dispensaries in Kalahandi. Each of these institutions is in charge of one Kaviraj who is assisted by a wholtime and a part-time worker. The date of establishment and location of these dispensaries are as follows.

Government Ayurvedic Dispensary, Mandal	..	1946
Government Ayurvedic Dispensary, Karlapat	..	1948
Government Ayurvedic Dispensary, Boden	..	1956
Government Ayurvedic Dispensary, Badachergaon	..	1958
Government Ayurvedic Dispensary Budhidar	..	1971
Government Ayurvedic Dispensary, Mohangiri	..	1960
Government Ayurvedic Dispensary, Laitara	..	1972

**Homeopathic
institutions**

The district had only three Government Homeopathic dispensaries in 1974. They are located at Utkela (1949), Junagarh (1968), and Kasurapada (1972). The figures against each indicate the year of establishment. The staff of each dispensary chiefly constitute one Medical Officer and a Distributor.

In addition to the above institutions the Bhawanipatna Municipality also maintains a homeopathic dispensary at Bhawanipatna, a short account of which is furnished below.

**Municipal
Homeopathic
Dispensary,
Bhawanipatna**

With the approval of the Municipal Council, Bhawanipatna, the Municipal Homeopathic Dispensary was established on the 1st June, 1957 near the Municipal market. The present building of the dispensary has been constructed at an outlay of about 0.50 lakhs. Its staff chiefly constitute two qualified homeopathic doctors, one distributor and a nursing orderly. The medicines are distributed to the patients free of cost. In the headquarters town it has earned great popularity. Daily, on an average, 200 patients attend the dispensary.

**Maternity
and Child
Welfare**

There functions in the district as many as eleven Maternity and Child Welfare Centres. They are located at Bhawanipatna, Mangalpur, Bandhakana, Budhiadar, Nandol, Lanji, Kendumunda, Farang, Konkeri, Nawapara and Thuamul-Rampur. All of them have been established since 1st April, 1960. The Assistant District Medical Officer (Family Welfare) is directly responsible for their management. He is assisted by the Medical Officer of the nearest hospital or the Primary Health Centre. Each of the Centres is staffed by one Dai and a female attendant.

Services are offered by these centers both through clinical and domiciliary methods. The expectant mothers, postnatal cases, infants and children under 5 years are examined in the centre and

given proper treatment and advice. CARE Feeding Programme is also executed through these centres. Talks on health education and family welfare are given to the visitors.

The year-wise achievement of these centres from 1971 to 1976 is furnished in the following Table:

	1971	1972	1973	1974	1975	1976
Antenatal ..	1,687	1,949	2,364	3,868	4,944	3,341
Postnatal ..	719	3,770	1,364	1,853	2,367	1,192
Delivery ..	372	1,883	383	659	984	417
Infant ..	355	940	887	710	767	961
Toddler ..	272	397	290	515	532	634
Condensing	128	156	180	155	169	271
Health Talks	843	556	469	377	377	390
Family Welfare Advice ..	274	287	520	405	405	440

Besides the Government institutions, there must be functioning in the district a number of private hospitals, dispensaries and clinics of different systems. But their number, owing to lack of such statistics, cannot precisely be stated. Among the private hospitals mention may be made of the Evangelical Hospital, Khariar. A detailed account of the institution is furnished below.

PRIVATE
HOSPITALS
AND NURSING
HOMES

The Mission Station at Khariar was opened in 1924 on some land granted by the then Zamindar of the Khariar Estate, which then belonged to the district of Raipur in the Central Provinces. The opening of a dispensary in 1928 with an Indian lady doctor in charge, marked the beginning of the medical activities of the Mission. In 1950 the dispensary was upgraded to a hospital with the name, American Evangelical Mission Hospital. It was re-named as Evangelical Hospital, Khariar, in 1960, since when the real development of the hospital started. The objective of the hospital is to provide to all the sections of the people irrespective of caste, creed or economic position, with high standard medical care as far as practicable on the part of the Mission. Comprising an area of nearly 14 hectares, the hospital stands on the State Highway No. 3, 2 km. west of the Khariar town.

Evangelical
Hospital,
Khariar

The hospital is under the control of a Director, governed by the West Utkal Group Management Committee of the Eastern Regional Board of Health Services within the Church of North India.

Eighty five per cent of the expenditure on the hospital is met from the fees charged on the patients and the rest from the supporting agencies in the U. S. A., Germany and Switzerland.

The hospital provides accommodation for 125 patients. Its staff constitute one Surgeon (Administrator), one Ophthalmologist and other duty doctors; twenty-two nurses, two laboratory technicians, two X' Ray technicians and an adequate number of non-technical personnel. All forms of medical and surgical treatment, except neurosurgery and thoracic surgery, are made available in the hospital. Psychiatric treatment is also conducted in the institution.

The following table shows the number of patients treated in the hospital during the period 1974 to 1976:

Year	In-Door		Out-Door	
	No. treated	Daily average	No treated	Daily average
1974	2,605	114	12,161	33
1975	2,634	108	11,960	32
1976	3,054	134	12,766	35

Family Planning, later termed as Family Welfare Programme, started functioning in the district as early as 1956. Until September 1964, when it became a target-oriented and time-bound programme, its activities were chiefly confined to the distribution of conventional contraceptives. Only some Family Planning clinics were then established and sterilisation facilities were made available in hospitals alone.

The responsibility for the implementation of the programme directly devolves on the Assistant District Medical Officer (Family Welfare) who works under the supervisory control of the Chief District Medical Officer. He is in charge of the District Family Welfare Bureau consisting of four units; Administrative, Education and Information, Field and Evaluation, and Operation or Mobile Service Unit. The staff of the Bureau chiefly consist of one administrative officer, one M. E. I. O. (Mass Education and Information Officer), one Statistical Investigator and one Lady Assistant Surgeon, who respectively head the above mentioned units. The Medical Officer, Primary Health Centre, looks after the Rural Family Welfare Organisations with the assistance of a Block Extension Educator, a Lady Health Visitor, the Auxiliary Nurse Midwives and the field workers.

The facility of I. U. C. D. (Intra Uterine Contraceptive Device) insertion was started from the year 1965. In the year 1970 the Maternity and Child Welfare Programme was integrated with the Family Welfare

Programme in order to accelerate the pace of the latter. For every ten thousand population one Auxiliary Nurse-Midwife (A. N. M.) has been provided since 1972. Besides, in all the hospitals and dispensaries family welfare facilities are available.

The following table indicates the achievements made under the Family Welfare Programme during the period 1970-71 to 1976-77.

Year	Number of sterilisations conducted	No. of I. U. C. D. insertions
1970-71	2,974	578
1971-72	2,336	1,323
1972-73	5,429	1,762
1973-74	7,607	1,648
1974-75	5,959	991
1975-76	13,261	1,869
1976-77	22,628	1,006

During the above period a considerable number of conventional contraceptives were also distributed among the people through government agencies.

In 1959, the State Nutrition Division was started under the administrative control of the Health and Family Planning Department except for a few years from 1964 to 1970 when it functioned under the Community Development Department.

Nutrition Programme

Potentially the programme is very important in promoting the health and preventing diseases of the people. But in the present set up it forms one of the weakest links in the general health programme. With the object to know the food habits and diet patterns of the rural mass and to assess nutritional status of the vulnerable groups the Nutrition Division conducts now and then base line dietary (food consumption) and nutrition assessment survey as well as evaluation survey in the Applied Nutrition Programme (A. N. P.) Blocks allotted by the Community Development Department. This scheme also affords an effective field service to improve local diet through production, preservation and use of protective foods and ensures their effective utilisation by the vulnerable sections. Simple nutrition principles are imparted to the masses through practical demonstrations.

With thirty households belonging to Nawapara and Komara A. N. P. Blocks, Dietary (food consumption) and Nutrition Assessment Survey had been conducted in 1972-73 and 1974-75 respectively. The

average *per capita* consumption of food materials and nutrients derived therefrom against recommended allowances are furnished in the following table.

Food Stuff	Quality		Nutrients and vitamins	Quantity	
	Consumed in gram	Recommended in gram		Derived from the food consumed	Recommended
Cereals ..	334	400	Calories	1,558	2,800
Pulses ..	16.7	85	Protein	32.35 gm.	55 gm
Leafy vegetables	24	114	Calcium	0.30 gm.	1.00 gm.
Roots and other vegetables	30.5	170	Iron Vitamin A	24.65 mg. 1675 I.U.	25.00 mg. 3500 I.U.
Flesh food ..	3.5	85	Vitamin B ₁	1.34 mg.	1.0 mg.
Milk and milk products	15	284	Vitamin B ₂	0.70 mg.	2.5 mg.
Fruits ..	Nil	85	Vitamin C	12.10. mg.	50 mg.

With a view to assess deficiency diseases, 561 persons of the above Blocks were examined during the period of survey. The percentage of such diseases were, deficiency of Vit.A, 38; Vit. B₂, 24; Vit.C, 7.5; Anaemia, 53; Caries, 26; and poor musculature, 31.

Besides, practical demonstration on infant diets and chief nutrition recipes with local food stuff were also conducted in Nawapara Block in 1973-74.

The Nutrition Division supervises the feeding centres under Special Nutrition Programme, CARE, Special Child Relief Programme and World Food Programme implemented by the Community Development Department in the district of Kalahandi.

No District Health Education Unit has been set up in the district though such a unit is contemplated under the programme. The State Health Education Bureau, Bhubaneshwar, therefore, sends health education materials like posters and pamphlets on communicable diseases, public health activities etc., to the Chief District Medical Officer and the Primary Health Centres who utilise them for disseminating sanitary and hygienic principles among the vulnerable groups. The District Family Welfare Bureau also participates in the programme so far it relates to family welfare, and maternity and child health.

In the ex-State of Kalahandi the Public Health activities were being looked after by the Sanitation and Vaccination Department which was under the control of the Chief Medical Officer. Since the formation of the district in 1949, the Health Officer, under the control of the Civil Surgeon, was in charge of the Public Health Administration. According to the present set up, the Assistant District Medical Officer (P.H.) is directly responsible for the Public Health affairs in the district and is under the overall control and supervisory authority of the Chief District Medical Officer.

SANITATION
Administrative set up in urban and rural areas

In the urban areas sanitation is managed by the Municipal or N. A. C. authorities. In the Bhawanipatna Municipality one Assistant Health Officer and one Special Sanitary Inspector have been posted.

The sanitation in rural areas is managed by the medical officer of the Primary Health Centre. He works under the supervision of the Assistant District Medical Officer (P. H.) and the Chief District Medical Officer and is assisted by the Sanitary Inspectors, disinfectors, special cholera workers and vaccinators. In addition, under various health schemes and programmes different categories of public health staff, who are working both in rural and urban areas are also responsible for the maintenance of health and sanitation in the district.

Prevention and control of main communicable diseases, providing of protected water supply and drainage system and the performance of various other functions like slum clearance etc. broadly constitute the activities of the health and sanitary organisations in the district. Brief accounts of different programmes for the maintenance of health and sanitary conditions in the district of Kalahandi are furnished below:

Activities of Health and Sanitary Organisations

Under the Cholera Control Programme each of the 18 Blocks of the district has been provided with a Sanitary Inspector and a Disinfectant. They work directly under the supervision of the Medical Officers of the Primary Health Centres. For efficient implementation of the programme the Sanitary Inspector is supplied with adequate drugs and disinfectants. Additional staff are usually requisitioned from other districts at the time of exigency. The Medical Officer, the Sanitary Inspector and other staff generally encamp in the affected areas until normalcy is restored. The achievements made under the programme during the period from 1973 to 1977 are given in the following table.

Cholera Control Programme

Year	No. of inoculations performed (in lakhs)	Chlorination of water sources	Disinfection of houses
1973	1.61	13,234	2
1974	1.41	10,428	62
1975	4.11	18,615	494
1976	2.84	17,830	893
1977	3.65	21,516	221

Kalahandi, not unlike other districts of Orissa, was not free from superstitious beliefs about this malady. Supernatural agencies were regarded as the cause of its occurrence. Until very recently it had been claiming a large number annually in the district. Vaccination as a preventive measure against smallpox had been introduced during the rule of the erstwhile ruling Chief of Kalahandi.

Mass vaccination campaign under the Smallpox Eradication Programme was undertaken in Kalahandi in 1961-62 which continued till December 1965. Again with the implementation of the National Smallpox Eradication Programme in 1970-71 in Orissa the district was also brought under it. Since 1973, the strategy of the programme chiefly constituted the safeguarding of the new-born children by primary vaccination, re-vaccinating the adult members once in every three years, conducting door to door surveillance and taking precautionary measures against future outbreaks.

The execution of the programme chiefly rests with the Assistant District Medical Officer (P. H.) who is assisted by the Medical Officers of the Primary Health Centres. The staff of the S. E. P. allotted to each Primary Health Centre comprise one Sanitary Inspector and four vaccinators. In the urban areas the local bodies are responsible for the implementation of the Programme. A vaccinator out of the S. E. P. staff is posted to the Bhawanipatna Municipality.

Besides, a Mobile Squad consisting of five vaccinators is there at the district headquarters to conduct special campaigns and to meet the exigencies of epidemics. Posted at Bhawanipatna, Khariar and Dharamgarh, there are three Paramedical Assistants who assist the Assistant District Medical Officer (P. H.) in supervising the activities of the National Smallpox Eradication Programme in the 6 Blocks assigned to each of them. He also supervises the performance of the vaccinators and the supervisors (Sanitary Inspectors) of the S. E. P. under his jurisdiction. His primary duty consists in appraising the authorities about the shortcomings in the implementation of the programme in the field.

The following table shows the data of smallpox incidence and the achievements made in the field of vaccination in the district for the period 1967-76.

Year	No. of cases		Number of Vaccinations performed	
	Reported	Death	Primary	Revaccination
(1)	(2)	(3)	(4)	(5)
1967	432	105	58,770	140,668
1968	119	26	72,325	169,890
1969	301	82	73,338	166,672

Year	No. of cases		Number of vaccinations performed	
	Reported	Death	Primary	Revaccination
(1)	(2)	(3)	(4)	(5)
1970	Nil	Nil	46,801	64,738
1971	2	1	78,211	287,543
1972	Nil	Nil	81,041	383,333
1973	3	Nil	59,953	317,026
1974	3	Nil	54,800	283,389
1975	Nil	Nil	42,326	174,922
1976	Nil	Nil	43,258	52,272

The latest outbreak consisting of three cases was reported from the village Lakhapadar under Narla Primary Health Centre in the early part of 1974. Thereafter no case could be detected notwithstanding the intensive investigation combinedly made by the officers of the State as well as the WHO. With a view to ensure detection of smallpox incidence a reward of Rs.1,000 was declared for the first informant.

The principal work of the National Smallpox Eradication Programme has been over since the 23rd April, 1977, when the district was declared by the Internal Assessment Commission on Smallpox to be free from the disease. Now primary vaccination to the new-born and the unprotected children only continues.

The Bhawanipatna Unit of the National Malaria Eradication Programme covers the entire district of Kalahandi. The strength of the Unit, according to the pattern, is 0.75. Out of the 0.75 unit strength, 0.16 and 0.59 unit strengths are respectively under the consolidation phase and attack phase. The area under attack phase is served annually with two rounds of D. D. T. spray. Besides, monthly/fortnightly surveillance is also conducted in the area. Similarly in the area included under the consolidation phase regular surveillance is carried out and focal spray planned when malaria positive case is detected.

National
Malaria
Eradication
Programme

The number of staff entertained for the implementation of the Programme, except the ministerial and other non-technical personnel, is furnished below:

Particulars of staff (1)	No. (2)
Zonal Medical Officer	1
Non-medical Unit Officer	1
Assistant Unit Officer	1
Surveillance Inspector	30
Surveillance Worker	121
Superior Field Worker	4
Inferior Field Worker	9
Centre Inspector	7
Laboratory Technician	9

Besides, a good number of superior and inferior field workers are temporarily engaged for a period of 5 months during a year.

The Unit is divided into a number of centres, the centre into sectors, and the sector into sections. The Zonal Medical Officer who is at the helm of affairs supervises the activities of his subordinates and issues technical instructions. The non-Medical Unit Officer and the Assistant Unit Officer assist the Zonal Medical Officer respectively in the management of office and field work. The laboratory technician daily examines about 50 to 60 blood slides and maintains the concerned records. The Surveillance Inspector supervises the work of the Surveillance Workers who visit every house at an interval of about 15 to 30 days to search out fever cases within their sector areas. They also conduct treatment when malaria positive cases are discovered. The superior and inferior field workers attached to the laboratory assist the technician in his work. The temporary workers conduct spray operation in the areas under attack phase.

In the following table is given the activities of the Unit during the period 1971—75 :

Year	Surveillance				Spray Operation	
	Blood Slides		Positive Cases		Percentage of	
	Collected	Examined	Detected	Treated	Holdings covered	Sprayable surface covered
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1971 ..	105,691	85,651	1,059	987	85	75
1972 ..	124,663	39,101	2,151	1,937	85	80
1973 ..	151,729	94,805	11,681	10,966	80	70
1974 ..	152,238	144,165	22,501	20,844	90	85
1975 ..	144,392	121,657	18,497	16,958	90	85

Columns 3 and 4 indicate that the incidence of malaria gradually tends to rise in the district. While the percentage of positive cases detected in 1971 was a little over 1, it rose above 15 in 1975.

With the establishment of a T. B. Clinic at Bhawanipatna in 1968, which was later upgraded as the District T. B. Control Centre in 1972, the real T. B. Control Programme in the district started. Prior to its functioning the T. B. patients were receiving treatment in the existing hospitals and dispensaries. At present, apart from the T. B. Control Centre, facilities for the treatment of T. B. patients are available in 35 medical institutions including the Primary Health Centres. The District T. B. Control Centre with six observation beds is provided with bacteriological diagnostic facilities and domicillary treatment facilities. In addition, the District Headquarters Hospital also contains twelve observation beds and conducts bacteriological diagnosis. One of the T. B. Hospitals of the State located at Uditnarayanpur, details of which are furnished separately, also caters to the needs of the district.

T.B. Control Programme

Before the opening of the District T. B. Centre there functioned a B. C. G. Team since 1964. It was working under the Mass B. C. G. Vaccination Scheme and was attached to the Sambalpur Zone. The Zonal Medical Officer who was responsible to the Assistant Director of Public Health (T. B.), was in charge of the Scheme. Later in 1971 it was integrated with the District T. B. Control Centre. As

a preventive measure, the Team undertakes testing and B. C. G. vaccination of 0·19 age-group in almost every house. It comprises a non-medical team Leader and seven B. C. G. Technicians besides a driver and a peon.

Under the supervision of the Chief District Medical Officer, the District Tuberculosis Officer is directly in charge of the District T. B. Control Centre. He is assisted, besides the non-technical staff, by an Assistant Surgeon, two Male Health Visitors, a Laboratory Technician and an X-Ray technician.

By the end of 1976 as many as 1,757 T. B. patients were treated in the District T. B. Control Centre and the peripheral centres. In Appendix-V is given the year-wise achievements made during the period 1970—74 under the Programme.

**Anti-Leprosy
Work**

The achievements made in the field of Anti-Leprosy activities in the district are far from satisfactory. In all, there are only three S. E. T. (Survey, Education and Treatment) Centres established at Junagarh, Rampur and Khariar. The centre at Junagarh is sponsored by the Government of India while the other two are sponsored by the State Government. Each centre covers a population of about 0·20 to 0·25 lakh and is managed by a para-medical worker. The Assistant District Medical Officer (P. H.) is directly responsible for the management of Anti-Leprosy work in the district. In course of the medical examination of 26,260 persons by the end of 1976 only 103 leprosy cases could be detected. Of them 96 patients were kept under regular treatment.

**Anti-Yaws
Programme**

In the subdivisions of Kalahandi and Dharamagarh Anti-Yaws operations were conducted in two phases during the years 1961 and 1962, and 1969 and 1970.

In course of both the operations the total number of persons examined exceeded 3 lakhs. But the percentage of yaws cases detected was only 0·1. At present no special programme is in operation in Kalahandi and the treatment of sporadic yaws cases is made in the existing medical institutions.

**School
Health
Service**

The School Health Service aims at preventing various diseases and mal-nutrition among the school children of 0—14 age-group, a major segment of the young age population, and protects them against future health hazards. The school Medical Officer examines the students at regular intervals and suggests remedial measures to the concerned students wherever any defect is noticed.

According to the earlier administrative pattern the district was under the jurisdiction of the School Medical Officer, Southern Circle, Berhampur, until 1st January 1976, when a new scheme was introduced by the Health and Family Planning Department in concurrence with the Education Department with a view to obviate certain inherent defects beset in the earlier system. The system lacked thoroughness in examining the students, assured neither regularity nor any follow up action and entailed no procedure for ascertaining whether or not the defects found in the students were duly rectified through proper treatment. The present scheme undertakes medical examination of all the students both of primary and secondary schools.

The following table indicates the responsibility and jurisdiction of the Medical Officers according to the present set up of the School Health Service.

Name of the Medical Officer	Jurisdiction and category of Schools
(1)	(2)
Assistant District Medical Officer (P. H.)	All the Boys' High English Schools of the district except those in the towns of the Subdivisional Headquarters
Health Officer, Bhawanipatna, Municipality	Boys' High English Schools of Bhawanipatna town
Subdivisional Medical Officer or 2nd Medical Officer	Boys' High English Schools of the Subdivisional Headquarters and the Boys' M. E. Schools of respective subdivisions
Lady Assistant Surgeon of Headquarters Hospital	Girls' M. E. and H. E. Schools of the Sadar subdivision
Lady Assistant Surgeon of Sub-divisional Headquarters Hospital	Girls' M. E. and H. E. Schools of respective subdivisions

The Assistant District Medical Officer (P. H.) is entrusted with the School Health Service since it is mainly a preventive health measure and forms an integral part of the public health programme.

The School Medical Officer, Southern Circle, Berhampur, visited only three schools, Brajamohan H. E. School, Bhawanipatna; Junagarh H. E. School, Junagarh, and Raja Artatrana H. E. School, Khariar, during the year 1962. The number of students physically examined were 251, 120 and 231 respectively. The above examination revealed that a higher percentage (64, 57 and 76 respectively) of the students had some physical defect or other. The present system, if carried out successfully, will really help develop a mentally and physically sound student community.

Drug control

The Office of the Drugs Inspector, Balangir Range, with headquarters at Balangir started on the 7th February, 1970 for the execution of the provisions of the Drugs and Cosmetics Act, 1940, and other allied Acts and Rules made thereunder, in both the districts of Balangir and Kalahandi. He is directly under the supervisory control of the Drugs Controller, Orissa. The Inspector, in course of his duties, chiefly attends to the complaints relating to the adverse drug reactions and sale of sub-standard and spurious drugs and cosmetics within the district. He conducts surprise checks of the sale premises, seizes suspected batch of drugs, looks into the availability of essential drugs in the district, scrutinises the objectionable advertisements and enforces the Dangerous Drugs Act, in collaboration with the excise authorities. Further, he ensures the drugs price display and price control and issues essentiality certificates to the pharmaceutical industries.

The activities of the organisation in the district of Kalahandi during 1972 to 1977 are furnished in the following Table:

Year	Inspection of		Number of samples drawn and tested for quality	Show-Cause Notices issued for violation of the Act.	
	Sales premises	Manufacturing premises			
(1)	(2)	(3)	(4)	(5)	
1972	..	19	3	9	..
1973	..	29	2	10	5
1974	..	27	5	20	6
1975	..	38	5	12	2
1976	..	20	7	8	..
1977	..	24	9	5	2

During the above period, neither any prosecution for the violation of the provisions of the Act was started nor any complaint for the sale of substandard and spurious drugs and cosmetics were recorded.

Underground Drainage and Protected Water Supply

In the field of protected water supply little attempt had perhaps been made in the past. The people were accustomed to use the polluted water of the tanks and rivers. In recent years various schemes have been implemented in the district to provide the people both in the urban as well as the rural areas with potable water. The execution of the water supply schemes is looked after by the Executive Engineer in charge of the Public Health Division which functions at the headquarters station of Bhawanipatna. Apart from other

technical and non-technical staff, he is chiefly assisted by three Sub-divisional Officers and 13 Junior Engineers and Sub-Assistant Engineers. One Subdivisional Officer is posted at each of the three subdivisional headquarters.

After completing survey and investigation the organisation has taken up the construction of the following water supply schemes. Besides, 247 tube-wells have been sunk in different villages under the Minimum Needs Programme and Accelerated Rural Water Supply Scheme including 40 installed in tribal villages.

During 1974-75, under the scheme, 394 wells were completed out of 403 incomplete wells of the previous year. Besides, during this period, 144 wells and 37 tube-wells were newly constructed. During 1975-76, sixty-three wells, seventy tube-wells and 30 OXFAM wells were also constructed for supplying drinking water.

In the following Table is given the names of the water supply schemes under execution in the district including their estimated outlay, etc.

Name of the Scheme	Estimated outlay (in lakhs)	Source of supply	Date of administrative approval
(1)	(2)	(3)	(4)
Urban Water-supply Scheme, Bhawanipatna	45.16	..	1975
Piped Water-supply to Dharamgarh	5.87	Nawab Sagar Tank	1963
Piped Water-supply to Nawapara	1.60	Open well and Balancing Tank	1966
Piped Water-supply to Junagarh	3.44	River Hati	1963
Piped Water-supply to Kesinga and Bogoda	3.28	River Hati	1963
Piped Water-supply to Tukula	8.53	River Sunder	1972
Piped Water-supply to Khariar Road	3.80	River Jonk	1964

All these schemes were at various stages of construction by the end of 1977-78. The expenditure incurred on these schemes is met by Government grant coupled with people's contribution or contribution from the local bodies, as the case may be. Save for the construction of the main item, a two lakh gallon capacity overhead tank, the Bhawanipatna Urban Water-supply scheme is almost completed. The Junagarh Water-supply Scheme which at present manages with a diesel pumping set will shortly be completed after replacement by an electric pumping machine. The construction of some minor works of the Dharamgarh Water-supply Scheme has

only been completed. As the distribution system is already laid water supply is effected through a diesel engine. The Khariar Road Water Supply-Scheme was commissioned in 1967 and presently water is supplied through 71 hydrants. An augmentation scheme with a view to meet the increasing popular demand is underway for which survey has been completed since January 1977. The Nawapara Project has been functioning since 13th May, 1969 and water is supplied through 16 hydrants. Tapping of an additional source of supply is keenly felt as the present one fails to cope with the increasing population of Nawapara. Construction of the Tukula Water-supply Project is under progress. During the summer months of 1976 water was supplied to the village through 15 hydrants with the help of diesel engine. The Kesinga and Bogoda Water-supply Scheme has been managing through diesel engine. Shortly it will be replaced by electric motors.

Besides, the execution of water supply scheme prepared for the Khariar Notified Area Council is pending for want of funds. The water supply of the town is temporarily carried on through 13 tube-wells.

None of the towns of Kalahandi is provided with underground sewerage system. A sewerage scheme for the town of Bhawanipatna is under implementation.

Slum Clearance and Improvement

In three of the five urban agglomerations of the district, viz., Bhawanipatna, Khariar Road and Kesinga, the Scheme, Slum Clearance and Improvement, has been put into operation. The achievements made under the scheme in the above mentioned towns till the end of 1976 are furnished in the following table.

Name of Municipality/ N. A. C.	Year of Operation	Total amount sanctioned		Number of tenements completed	Number of persons settled
		Grant	Loan		
(1)	(2)	(3)	(4)	(5)	(6)
Bhawanipatna Municipality	1965-66	53,775	20,000	10	10
N. A. C., Khariar Road	1970-71	56,100	56,100	12	12
N. A. C., Kesinga	1967-68	30,600	30,600	6	6

The slum quarters built in Bhawanipatna Municipality have been rented out to persons other than the slum dwellers as the latter were reluctant to reside in them. Some more quarters are proposed to be constructed soon by the Municipality under the scheme.

APPENDIX I
Vital Statistics

Year (1)	Births			Deaths		
	Rural (2)	Urban (3)	Total (4)	Rural (5)	Urban (6)	Total (7)
1966 ..	N. A.	509	509	N. A.	285	285
1967 ..	N. A.	502	502	N. A.	252	252
1968 ..	N. A.	462	462	N. A.	243	243
1969 ..	N. A.	485	485	N. A.	176	176
1970 ..	16,814	607	17,421	7,175	249	7,424
1971 ..	12,450	387	12,837	5,374	133	5,501
1972 ..	15,782	525	16,357	6,928	180	7,108
1973 ..	13,583	438	13,976	6,899	196	7,095
1974 ..	12,358	366	12,724	6,065	133	6,198

Year (1)	Infant Deaths			Birth rate per 1000 population		
	Rural (8)	Urban (9)	Total (10)	Rural (11)	Urban (12)	Total (13)
1966 ..	N. A.	51	51	N. A.	16.4	16.4
1967 ..	N. A.	31	31	N. A.	16.2	16.2
1968 ..	N. A.	20	20	N. A.	14.4	14.4
1969 ..	N. A.	26	26	N. A.	15.2	15.2
1970 ..	802	36	838	16.7	18.3	16.8
1971 ..	466	15	481	12.4	11.7	12.4
1972 ..	685	27	712	15.3	13.1	15.2
1973 ..	603	53	656	13.9	12.9	13.9
1974 ..	425	21	446	12.3	7.0	12.0

Year (1)	Death rate per 1000 population			Infant mortality rate per 1000 live births		
	Rural (14)	Urban (15)	Total (16)	Rural (17)	Urban (18)	Total (19)
1966 ..	N. A.	9.2	9.2	N. A.	100.1	100.1
1967 ..	N. A.	8.1	8.1	N. A.	61.7	61.7
1968 ..	N. A.	7.6	7.6	N. A.	43.3	43.3
1969 ..	N. A.	5.5	5.5	N. A.	53.6	53.6
1970 ..	7.1	7.5	7.2	47.7	59.3	48.1
1971 ..	5.3	3.9	5.3	37.4	38.7	37.5
1972 ..	6.7	4.5	6.6	43.4	51.4	43.7
1973 ..	7.1	5.8	7.0	44.5	121.0	46.9
1974 ..	6.0	2.6	5.9	34.4	40.1	35.1

APPENDIX II

Deaths from Chief Diseases for the Period from 1966—1974

Year	Cholera			Smallpox		
	Rural	Urban	Total	Rural	Urban	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1966	..	N. A.	..	N. A.	..	..
1967	..	N. A.	..	N. A.	..	..
1968	..	N. A.	..	N. A.	4	4
1969	..	N. A.	..	N. A.	..	..
1970	..	8	..	23	..	23
1971	..	19	..	11	..	11
1972	15	..	15
1973	..	51	..	11	..	11
1974	..	9	..	16	1	17

Year	Fever			Dysentery and diarrhoea		
	Rural	Urban	Total	Rural	Urban	Total
(1)	(8)	(9)	(10)	(11)	(12)	(13)
1966	..	N. A.	100	N. A.	17	17
1967	..	N. A.	67	N. A.	11	11
1968	..	N. A.	50	N. A.	6	6
1969	..	N. A.	47	N. A.	2	2
1970	..	6,209	101	165	17	182
1971	..	4,799	31	67	1	68
1972	..	6,336	7	133	12	145
1973	..	5,792	20	139	9	148
1974	..	5,398	5	47	4	51

APPENDIX II—*contd.*

Deaths from Chief Diseases for the Period from 1966—1974

Year	Respiratory			Injuries		
	Rural	Urban	Total	Rural	Urban	Total
	(14)	(15)	(16)	(17)	(18)	(19)
1966	N. A.	20	20	N. A.	15	15
1967	N. A.	9	9	N. A.	10	10
1968	N. A.	1	1	N. A.	7	7
1969	N. A.	2	2	N. A.	3	3
1970	118	5	123	121	4	125
1971	79	..	79	88	..	88
1972	74	3	77	73	..	73
1973	56	..	56	75	7	82
1974	54	13	67	45	2	47

Year	Other Causes			All Causes		
	Rural	Urban	Total	Rural	Urban	Total
	(20)	(21)	(22)	(23)	(24)	(25)
1966	N. A.	133	133	N. A.	285	285
1967	N. A.	155	155	N. A.	252	252
1968	N. A.	175	175	N. A.	243	243
1969	N. A.	122	122	N. A.	176	176
1970	531	122	653	7,175	249	7,424
1971	311	99	410	5,374	131	5,505
1972	297	158	455	6,928	180	7,108
1973	775	160	935	6,899	196	7,095
1974	496	108	604	6,065	133	6,198

KALAHANDI

APPENDIX III

Number of patients of different diseases treated/died in the Hospitals/Dispensaries/
Primary Health Centres

Year	Malaria			Dysentery		
	Out-door	Indoor	Death	Out-door	Indoor	Death
	(2)	(3)	(4)	(5)	(6)	(7)
1966	1,850	59	..	48,728	328	5
1967	2,659	27	..	56,318	426	12
1968	4,255	303	5	54,336	363	11
1969	1,768	10	..	46,511	166	4
1970	3,354	10	..	52,500	354	13
1971	2,075	14	..	47,324	408	5
1972	2,861	122	1	59,697	429	19
1973	6,091	209	2	55,332	523	19
1974	11,644	357	2	52,063	517	8

Year	Typhoid			Yaws		
	Out-door	Indoor	Death	Out-door	Indoor	Death
	(8)	(9)	(10)	(11)	(12)	(13)
1966	180	177	3	54	1	..
1967	821	170	6	28	2	..
1968	710	242	8	58	10	..
1969	1,042	254	7	29	6	..
1970	958	271	10	30	1	..
1971	1,796	368	6	15	..	..
1972	1,802	306	17	1	..	..
1973	2,156	382	12	..	..	..
1974	1,170	393	10	1	..	..

APPENDIX III—*contd.*

Number of patients of different diseases treated/died in the hospital/Dispensaries/
Primary Health Centres

Year (1)	Filaria			Cholera		
	Out-door (14)	Indoor (15)	Death (16)	Out-door (17)	Indoor (18)	Death (19)
1966	269	5	..	..	..	..
1967	393	16	..	12	..	..
1968	241	5	..	2,387	18	..
1969	202	9	..	3	7	..
1970	230	5	..	10	..	..
1971	296	2	..	..	..	..
1972	380	8	..	..	..	..
1973	481	22	..	..	..	..
1974	269	33	..	..	..	..

Year (1)	Smallpox			T. B.		
	Out-door (20)	Indoor (21)	Death (22)	Out-door (23)	Indoor (24)	Death (25)
1966	14	..	..	276	179	3
1967	58	4	..	2,331	138	1
1968	80	..	..	2,455	303	5
1969	127	..	..	701	245	3
1970	56	1	..	935	437	7
1971	59	3	..	658	413	7
1972	1,145	417	11
1973	1,275	695	33
1974	1,679	673	19

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APPENDIX III—*concl.*

Number of patients of different diseases treated/died in the hospital/Dispensaries/
Primary Health Centres

Year (1)	Tetanus			Cancer		
	Out-door (26)	Indoor (27)	Death (28)	Out-door (29)	Indoor (30)	Death (31)
1966 ..	6	8	5	1,371	31	1
1967 ..	65	33	6	11,765	29	2
1968 ..	59	49	16	6,233	14	1
1969 ..	58	47	9	2,366	19	4
1970 ..	64	32	7	5,482	173	2
1971 ..	48	36	15	4,053	873	2
1972 ..	61	38	8	358	48	2
1973 ..	43	36	7	51	33	2
1974 ..	28	21	5	69	42	4

Year (1)	Heart disease			Other causes		
	Out-door (32)	Indoor (33)	Death (34)	Out-door (35)	Indoor (36)	Death (37)
1966 ..	77	8	..	1,00,48,368	2,07,784	7,432
1967 ..	478	13	..	1,05,79,072	2,21,441	7,082
1968 ..	220	13	3	1,12,84,263	2,25,604	7,395
1969 ..	96	13	1	1,19,21,500	2,40,988	8,231
1970 ..	219	15	1	1,24,41,739	2,53,500	8,925
1971 ..	317	13	1	1,34,50,782	2,88,259	9,832
1972 ..	155	17	2	1,53,25,084	3,17,836	12,410
1973 ..	228	24	2	1,68,86,949	3,29,924	11,309
1974 ..	248	23	1	1,66,28,025	3,19,063	10,436

APPENDIX IV

Name, Location, Year of Establishment Etc. of Medical Institutions in Kalahandi District

Name and Location (1)	Year of Establishment (2)	Number of			Number of Bed		
		Doctors (3)	Pharmacists (4)	Nurses (5)	Male (6)	Female (7)	Total (8)
HOSPITALS							
District Headquarters Hospital, Bhawanipatna	1883	11	5	19	66	34	100
Children Hospital, Bhawanipatna	1970	1	1	1	..	..	25
Subdivisional Hospital, Dharamgarh	N. A.	2	1	2	6	4	10
Subdivisional Hospital Nawapara	1936	3	2	3	14	8	22
Government Hospital, Lanjigarh	N. A.	1	1	..	4	2	6
Government Hospital, Ranmal	1968	1	1	1	4	2	6
Government Hospital, Ladugaon	1964	1	1	..	4	2	6
Government Hospital, Barabandha	1964	1	1	..	4	2	6
Government Hospital, Khariar	1892	1	1	..	10	6	16
Government Hospital, Junagarh	1900	1	1	1	6	4	10
T. & R. W. Hospital, Risida	1961	1	1	..	4	2	6
Government T. B. Hospital, Uditnarayanpur	1949	3	1	6	45	20	65
DISPENSARIES							
Government Dispensary, Komna	1949	1	1	..	..	..	..
Government Dispensary, Kesinga	..	1	1	..	4	2	6
Government Dispensary, Karlapada	1967	1	1	..	..	..	..
Government Dispensary, Hatibandha	1966	1	1	..	..	..	..
Government Dispensary, Dharmabandha	1967	1	1	..	..	..	..
Government Dispensary, Polam	1968	1	1	..	..	..	..

APPENDIX IV—*Concl.*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PRIMARY HEALTH CENTRE							
Chiliguda Primary Health Centre	1968	1	1	..	4	2	6
Khariar N. A. C. ..	1952	2	1	..	4	2	6
Khariar Road Primary Health Centre	1959	2	1	..	4	2	6
Jaipatna Primary Health Centre	1955	1	1	..	4	2	6
Koksara P. H. C. ..	1955	1	1	..	4	2	6
Parla Primary Health Centre	1955	1	1	..	4	2	6
Kalampur P. H. C.	1966	1	1	..	4	2	6
Thuamul-Rampur P. H. C.	1964	1	1	..	4	2	6
Borda P. H. C. ..	1964	1	1	..	4	2	6
Narla P. H. C. ..	1964	1	1	..	4	2	6
Madanpur-Rampur P. H. C.	1964	2	1	..	4	2	6
Karlamunda P. H. C.	1968	1	1	..	4	2	6
Chapuria P. H. C.	1967	1	1	..	4	2	6
Sinapali P. H. C. ..	1964	1	1	..	4	2	6
Boden Primary Health Centre	1966	1	1	..	4	2	6
Bhella P. H. C. ..	1967	1	1	..	4	2	6
Biswanathpur P. H. C.	1966	2	1	..	..	..	..
Pastikudi P. H. C. ..	1964	1	1	..	..	..	..
OTHER INSTITUTIONS							
District Jail Hospital, Bhawanipatna	1936	1	1	..	..	..	..
Police Hospital, Bhawanipatna	1956	1	1	3	8	..	8
Medical Aid Centre, Parang	1969	1	1	..	..	..	..
T. & R. W. Mobile Health Unit, Ampani	1966	1	1	..	..	..	..
PRIVATE INSTITUTIONS							
Evangelical Hospital, Khariar	1928	3	..	22	..	..	125

APPENDIX V

Year-wise Achievements made during the 1970-74 period under the T. B. Control Programme

Year	D i a g n o s t i c				A c t i v i t i e s		
	No. of sputum examined	No. of positive cases	No. of Ex-Ray examination	No. of positive cases	Pulmonary cases	Extra pulmonary cases	Cases from outside the district
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1970 ..	1,892	148	..	..	144	11	4
1971 ..	1,961	152	..	..	145	19	8
1972 ..	1,800	239	..	..	216	30	23
1973 ..	1,583	210	..	..	210	50	27
1974 ..	1,888	223	..	..	204	67	21

Year	D i a g n o s t i c			A c t i v i t i e s	
	Transferred from other institutions	Total cases detected	Total death	Total registration	Total vaccination
(1)	(9)	(10)	(11)	(12)	(13)
1970 ..	..	159	..	208,285	73,046
1971 ..	..	172	..	41,726	16,066
1972 ..	31	300	13	66,334	22,946
1973 ..	49	336	26	111,944	32,886
1974 ..	129	421	32	96,410	32,051