

CHAPTER XVI

MEDICAL AND PUBLIC HEALTH SERVICES

SURVEY OF
PUBLIC
HEALTH AND
MEDICAL
FACILITIES IN
EARLY TIMES

The origin of the district is of recent times. Any account of the early days, therefore, dates back to a period when the Princely States constituting the district were under the ex-Rulers and zamindars. No systematic and recorded data relating to the period are available.

The aboriginal tribes who formed a considerable portion of the population had, naturally, little knowledge regarding maintenance of health, diagnosis of disease and combating the disease on scientific basis. Whatever knowledge they possessed had been inextricably linked up with their religious faith and belief. The cause of illness or disease or for that matter any natural calamity and unnatural death were attributed to the wrath of God, the village deities, the dead ancestors, or sorcery. Various religious methods sanctioned for propitiating the offended deities like animal sacrifices, etc., were adopted to eradicate the malady. In almost all such occasions the village priest who was specially drafted from the aboriginal races played the most important role in indicating the source of trouble and appeasing the powers of evil and sylvan deities. In the ex-States of Gangpur and Bonai, which constitute the present district, the belief in witchcraft was also ingrained among all classes of people, the aborigines as well as the Hindus of the highest castes. They were all under the influence of these superstitions. Colonel Dalton in his *Ethnology of Bengal* and Cobden-Ramsay in his *Feudatory States of Orissa* have given elaborate and interesting accounts regarding the belief in witchcraft prevalent in the district.

The Unani method of healing was unknown. It may be largely attributed to the scanty Muslim population and the lack of due patronage from the ruling chiefs.

The Ayurvedic system of medicine was not unpopular. Among the Vaidyas and Kavirajas mention may be made of Braja Sundar Purohit, a renowned vaidya of Sundargarh. A charitable Ayurvedic Dispensary is said to have been maintained by him. Apart from the private practitioners, there were perhaps no public Ayurvedic institutions to cater to the popular needs in either of the ex-States of Bonai and

Gangpur in early days. The Ayurvedic dispensary which was established in 1943-44 at Sarsara Balang by the ex-Ruler of Bonai seems to be the first of its kind.

Towards the early part of the present century a great change came over in the attitude of the people to the use of Allopathic medicines and submission to the surgical operations. With a view to popularising the western medical system, one hospital and a dispensary with in-door and out-door facilities were started at Sundargarh and Bonaigarh by the ex-Rulers of Gangpur and Bonai respectively. Subsequently two more dispensaries, one at Koira, and the other at Panposh in the Nagra Zamindary were also opened. The Sundargarh hospital was in charge of a medical officer in the rank of an Assistant Surgeon. But all the other dispensaries were in charge of qualified Civil Hospital Assistants. These institutions were well provided with medicines and surgical equipments. The dispensaries in the ex-State of Gangpur and the equipment they were provided with were excellent. To popularise vaccination special efforts were made. There were paid vaccinators and vaccination was free of charge. The Sanitary Department used to conduct and supervise the vaccination work.

The district is well drained and the climate is fairly extreme. The humidity throughout the year remains low. The people appear healthy and epidemics are rare among them. Malaria which was endemic and was creating havoc in the past has almost been controlled if not completely eradicated. Fever and spleen disorder appear to be the chief complaints. The people who are moderately immune show no sign of suffering to any serious extent from malarial fever. The climate on the whole may be termed as healthy.

Births and deaths were not being registered in the pre-merger period. The ex-Rulers of Gangpur and Bonai had been collecting the information through the police department since the year 1924-25; the village Chowkidar being the primary reporting agency. The Bengal Births and Deaths Registration Act, 1873, was enforced in the rural areas of the district in the year 1952, four years after its formation.¹

VITAL
STATISTICS

¹. Census of India, 1961, Vol. XII—Orissa, Part-I—B

Under the provisions of the Chowkidari Amendment Act, 1892, and the Orissa Police Manual the primary responsibility for collection of vital statistics statutorily devolved on the village Chowkidar. He collected information relating to his area in a prescribed form called *hata chitha* and on the parade days produced it at the police station for entry in the daily register of births and deaths maintained there. But in urban areas the health staff under the Municipality and the Notified Area Council were in charge of the collection. The Thana Officer and the Executive Officer of the Municipality compiled and reported their monthly figures to the District Health Officer who transmitted them to the Director of Health Services, Orissa.

The Orissa Grama Panchayat Act, 1948, which provided registration of births and deaths as one of the obligatory functions of the Grama Panchayats proved inoperative due to certain inherent defects in it. For instance, no penalty against the defaulting reporters was provided in the Act and the services of the village Chowkidar who continued to be responsible for the collection of vital statistics were placed under the diarchical control of the police and the Grama Panchayat authorities. Consequent on the abolition of the Chowkidari system in 1965, a new system of collection and registration of vital statistics was evolved with the enforcement of the Orissa Grama Panchayat Act, 1964. But this system did not yield satisfactory results. The Grama Rakhi Ordinance, 1967, was then promulgated according to which the responsibility again fell on the Thana Officer, and the Grama Rakhi served as the primary reporting agency. But hardly did the system operate in full swing, the Orissa Registration of Births and Deaths Rules, 1970 made under the Registration of Births and Deaths Act, 1969 (Act No. 18 of 1969) succeeded it on July 1, 1970. Under this new system the Health Officer and the Thana Officer are declared as the Registrars for the urban and the rural areas respectively. The Chief District Medical Officer acts as the District Registrar, while the Director of Health and Family Planning Services, Orissa, acts as the Chief Registrar. The responsibility to make reports about the vital occurrences within a stipulated time chiefly devolves on the head of the house or household. Nominal penal provisions have also been made in the Rules to deal with the defaulting reporters. Separate staff at each level are also entertained for the smooth and efficient working of the system. Although this seems to be a fairly sound system its workability is yet to be proved.

The following table shows the vital statistics of the district from 1961 to 1970.¹

Year		Birth	Death	No. of infant death	Ratio of death	Ratio of birth	Infant mortality rate
1961							
T	..	14,600	7,655	1,270	9.99	27.70	..
R	..	13,547	7,533	1,253	11.73	26.30	..
U	..	1,053	122	17	0.98	32.20	..
1962							
T	..	13,793	5,820	1,237	7.40	17.55	89.68
R	..	11,935	5,552	1,191	8.57	18.42	94.15
U	..	1,858	268	46	1.94	13.46	84.83
1963							
T	..	15,543	5,885	1,204	7.29	19.26	77.46
R	..	12,510	5,360	1,037	8.26	19.27	83.04
U	..	3,033	525	167	3.32	19.20	71.67
1964							
U	..	3,535	612	162	4.25	24.55	45.83
1965							
U	..	3,784	543	133	3.69	25.06	35.15
1966							
U	..	4,672	691	208	3.70	24.98	44.52
1967							
U	..	5,679	836	256	4.90	33.21	45.08
1968							
U	..	6,012	657	201	4.24	38.79	33.43
1969							
U	..	5,955	736	186	4.69	37.93	31.23
1970							
T	..	9,178	2,189	387	5.17	21.70	42.17
R	..	3,351	1,383	171	5.26	12.74	51.03
U	..	5,827	806	216	5.04	36.42	37.07

T—Total
R—Rural
U—Urban

¹. Directorate of Health and Family Planning Services, Orissa.

The figures, relating to the rural areas, are not available for the years 1964—69 due to the abolition of the Chowkidari system. Besides, the rural figures for the year 1970 are also not comprehensive. On a yearwise study, the above figures appear to be incongruous which may be due to the defective reporting by the primary agency.

But a comparison of the computed and registered figures for the decennial 1951—60 shows that the latter fall short of the former by 1,42,806 persons, a deficiency of 69 per cent, which again indicates to the ineffective working of the registration machinery. The details of the figures and the variation are furnished below:

Census 1951	Census 1961	Variation Col. 2 Col. 1	Births 1951—60 (estimates)	Deaths 1951—60 (estimates)	Excess of birth over death	Difference between Col. 3 & 6	Col. 7 in percentage to Col. 3
1	2	3	4	5	6	7	8
5,52,203	7,58,617	2,06,414	1,54,607	90,999	63,608	1,42,806	69

The birth and death rates of the district during the above decennial calculated on these estimated figures, come to 23.3 and 13.7 respectively which are relatively below the State rates of 25.8 and 16.2. Similarly the percentage of infant mortality to total deaths being 18.1 is also lower than the State figure of 23.2. Both the birth and death rates declined from 28.8 and 18.2 (1952) respectively to 19.6 and 9.8 (1960), so also the infant death dropped from 126.7 (1952) to 97.1 (1960).

The following table shows the number of deaths due to principal causes during the years 1961 to 1963*.

Year	Cholera	Smallpox	Fever	Dysentery	Respiratory disease	Injury	Other causes	All causes
1961								
T ..	..	12	4,682	683	361	203	1,714	7,655
R ..	..	11	4,608	678	357	199	1,680	7,533
U ..	..	1	74	5	4	4	34	122
1962								
T ..	..	2	3,873	342	274	137	1,192	5,820
R ..	..	2	3,753	325	255	132	1,085	5,552
U ..	..	..	120	17	19	5	107	268
1963								
T ..	3	53	3,773	301	260	160	1,335	5,885
R ..	3	45	3,601	270	238	139	1,064	5,360
U ..	..	8	172	31	22	21	271	525

* Director of Health and Family Planning Services, Orissa.

T*— Total, R—Rural, U—Urban

No other agency was virtually at work after the abolition of the Chowkidari system through which these statistics used to be collected. Hence figures for the years 1964—70 could not be furnished in the statement. As no trend can be prognosticated from the above incomplete data a comparative statement of deaths with their causes for the State and the district, for the previous decade 1951—60, is furnished below.¹

State/ District	Cho- lera	Small- pox	Fever	Dysentery and diarrhoea	Respira- tory disease	Wounds and accidents	Other causes	Total
Orissa ..	34,440	62,978	1,312,573	1,34,096	72,409	33,547	633,498	2,283,541
Sundargarh	427	1,084	54,106	5,188	3,265	1,661	16,168	81,89

The percentage of death to total deaths in the district due to cholera, smallpox and fever is 0·52, 1·52 and 66·07 respectively. While the percentage of deaths from cholera and smallpox is lower than the State average of 1·51 and 2·76, the same on account of fever is higher than the State average of 57·48. The percentage of death from fever in the district stands the highest.

In the past, people suffered chiefly from malaria and abdominal troubles, but of late the former is almost under control. The other diseases are enteric fever, dysentery and diarrhoea, and venereal disease. Leprosy is prevalent in a large number of villages. Tubercular cases are not uncommon. Yaws, which was once moderately high among the tribal people, is seldom found. Among the epidemics, smallpox is a regular visitant though its incidence is low and cholera makes comparatively rare appearance.

DISEASES
COMMON
TO THE
DISTRICT

The number of patients suffering from different diseases and deaths due to them in the hospitals and dispensaries during the period 1962—70 is given in Appendix I.

¹. Census of India 1961, Vol, XII Orissa, Part I—B.

- Fever** It is a common head under which several diseases are included. It generally means rise of normal bodily temperature. Broadly, it may include malaria, typhoid, influenza and black-water fever.
- Malaria** In the past, the ex-States of Gangpur and Bonai were malarious. Its impact in Gangpur reduced to some extent owing to the extensive opening of the land to cultivation consequent on the advent of the railway. The foreigners suffered severely from it while the jungle tribes who formed the bulk of the population were moderately immune. It appears just after the rains and continues till February. The police stations of Hemgir, Lefripara, Talsara and Sundargarh were the worst affected areas. Proper steps were taken by the ex-Rulers to combat the disease. Its incidence is considerably reduced at present owing to the operation of National Malaria Eradication Programme of which details will be found in the section Sanitation. The number of malaria patients treated in the district in 1970 was only 3,938 which is too insignificant compared to 33,160 in Gangpur (1946-47) and 7,759 in Bonai (1945-46).
- Influenza** Influenza occurs but seldom. A virulent type of influenza broke out in 1918-19 which set-back the vaccination operation considerably. Since then its violence has not been felt so severely.
- Typhoid** Typhoid occurs almost throughout the district during the whole year. Its incidence rather tends to increase gradually.
- Dysentery and Diarrhoea** Lack of drinking water facility leads the people, mostly of the aboriginal tribes, to use polluted water of the tanks and pools which exposes them to this disease. Before the commencement of the rainy season its incidence is, therefore, usually high. The data of patients given in Appendix I indicate that the disease is gradually tending to rise among the people.
- Yaws** This is a disease which bears a close outward resemblance to syphilis. Yaws is distinguished from syphilis by the facts that the primary lesion is never venereal, the central nervous system is never affected, the disease is not hereditary and it fails to yield to mercury treatment. It responds readily, however, to injection of arsenicals. It was very common among the more backward of the hill tribes who especially live under insanitary conditions. In both the ex-States special facilities were provided for its treatment. The staff were specially trained. There was a clinic at Sundargarh. Bonaigarh hospital had a separate ward of 4 beds allotted to the yaws patients. The Sundargarh doctor had been doing peripatetic work. But at present its occurrence is too rare to call for any specific provision for treatment. The maximum and minimum numbers of yaws cases treated in a single year during 1962-70 are 62 (1969)

and 6 (1970) which are relatively too insignificant compared to the total number of cases of 633 and 321 treated in Gangpur (1946-47) and Bonai (1945-46) respectively. With a view to controlling the disease an Anti-Yaws Campaign was started in 1948 and provision for its treatment was also made in various hospitals and dispensaries.

Special provision did not perhaps exist in the ex-States for the treatment of T. B. In recent days it shows a tendency to rise gradually. The cause may perhaps be attributed to the unrestricted journey by public buses and trains. An account relating to the facilities available for its treatment and prevention is given in a later section of this chapter.

TUBERCULOSIS

Incidence of leprosy was very low in the past. In the ex-State of Gangpur there was only one clinic at Sundargarh for the treatment of leprosy patients. In 1940-41 two more clinics were opened at Bhasma and Lefripara but they seem to have continued only until 1943-44. They were under the locally trained leprosy injectors. The leprosy and yaws doctor was also doing peripatetic work during his tour to interior villages. There being no leprosy clinic at Bonai the patients were sent to Cuttack at the cost of Bonai ex-State. The Rourkela Steel township has attracted a flow of beggars including lepers from different parts of India. Groups of leper families have congregated at Rourkela since 1958.

Leprosy

The anti-leprosy campaign based on detection, treatment and health education is carried on in the district by the State Government and the Hindu Kustha Nivaran Sangha, a voluntary organisation. A Leprosy Control Unit at Kuarmunda, and four Survey, Education and Treatment Centres, two at Rourkela under the State sector and the rest two located at Panposh and Rajgangpur under the Central sector, are functioning under the direct control of the Assistant District Medical Officer (Public Health). The Chief District Medical Officer supervises all the leprosy establishments. The population coverage of each of the Control Units is about three lakhs while that of the Survey, Education and Treatment Centre is about twenty five thousand. By the district branch of Hindu Kustha Nivaran Sangha four clinics are at work at Sundargarh, Sabdega, Bargaon and Bisra. So far, in the district 377 leprosy cases have been detected through mass survey and of them 281 cases are under treatment.

Elephantiasis is seldom seen in the district.

Elephantiasis

Veneral disease is not uncommon. Separate clinics exist in the hospitals and dispensaries for the treatment of these patients.

Veneral disease

Filaria is not a fatal disease and is not commonly found in the district. If preventive measures are taken at an early stage, it can well be kept under control. The high figures of patients registered in 1964, 1969 and 1970 may be probably due either to the statistical error or to other causes.

Filaria

Cholera

Occurrence of cholera is almost rare in the district. The worst of the recent outbreaks was in the year 1958 which claimed 350 lives.

Smallpox

Smallpox is common and has its periodical exacerbation. Classical type of variola major, with high fatality rate, had been recorded in the past. The highest number of deaths attributed to this disease in the recent past was 531 and 234 in 1958 and 1959 respectively. Preventive measures adopted at present for its extermination is described in a later section of this chapter.

**PUBLIC
HOSPITALS
AND DISPEN-
SARIES**

Prior to 1948 the Chief Medical Officers of Bonai and Gangpur were in charge of the few hospitals and dispensaries that existed in their respective states. They were also superintendents of vaccination. After the creation of the district, the organisational pattern had to conform to the set-up then prevailing in the regular districts. The Civil Surgeon was kept in charge of the medical administration while the public health and sanitation were under the District Health Officer. At present the Civil Surgeon, redesignated as Chief District Medical Officer, is vested with additional powers and jurisdictions. Subordinate to him are three Assistant District Medical Officers separately in charge of Medical, Public Health, and Family Planning branches.

At the time of merger, Gangpur had seven hospitals located at Sundargarh, Bargaon, Raghunathpali, Kuarmunda, Bisra, Hemgir and Rajgangpur and a dispensary at Hatibari. These institutions, excepting Sundargarh which was in charge of an Assistant Surgeon, were under qualified Civil Hospital Assistants. Attached to the Sundargarh hospital were a bacteriological department, a maternity ward, provision for the treatment of anti-rabic cases, and a clinic for the treatment of leprosy and yaws. The Roman Catholic Mission maintained three small hospitals and the B.S.L.Co., had one hospital and a small dispensary in their mining area at Birmitrapur. In Bonai ex-State there were one hospital at Bonaigarh, two dispensaries at Koira and Banki, and an Ayurvedic dispensary at Sarsara Balang which was opened in 1943-44. The bed strength of Bonaigarh hospital was 24.

After 1948, steps were taken for establishing new institutions to cater to the growing needs of the people. In the district, the number of hospitals at present is 15. Of these, 8 are meant for the general public and the remaining ones for the departmental people. The hospitals at Balisankra and Surda are managed by the Tribal & Rural Welfare Department and the rest by the Health Department. The last named hospital has no provision for indoor patients. The total number of beds in all the hospitals is 276, and the staff consists of 33 doctors, 27 nurses and pharmacists apart from other staff.

The following table gives the name, location and other details of each of the hospitals separately.

Name and location	Year of establishment	No. of Bed			Staff sanctioned	
		Male	Female	Total	Doctor	Pharmacist/Nurse
Sundargarh Headquarters Hospital, Sundargarh.	1942	52	38	90	11	4
Balisankra Tribal & Rural Welfare Hospital, Balisankra.	1962	4	2	6	1	1
Bargaon Hospital, Bargaon	1912	4	4	8	1	1
Bilaimunda Hospital, Bilaimunda.	1967	4	2	6	1	1
Bonaigarh Subdivisional Hospital, Bonaigarh.	1913	15	3	18	3	3
Raghunathpali Hospital, Panposh.	1915	14	10	24	3	1
Rajgangpur Hospital, Rajgangpur	1915	15	10	25	2	1
Surda T. & R. W. Hospital, Surda.	1963	..	..	..	1	1
Rourkela Police Hospital, Rourkela.	..	20	..	20	1	1
Orissa Military Police Hospital, Rourkela.	..	50	..	50	1	1
Sundargarh Police Hospital, Sundargarh.	..	..	..	..	1	1
Bandamunda Railway Hospital, Bandamunda.	..	15	10	25	4	8
Kansbahal Utkal Machinery State Insurance Hospital, Kansbahal.	..	..	..	..	1	1
Rajgangpur Employees State Insurance Hospital, Rajgangpur.	..	..	..	..	1	1
Sundargarh Jail Hospital, Sundargarh.	..	4	..	..	1	1

Head-
quarters
Hospital,
Sundargarh

A dispensary, to trace the history of the Headquarters Hospital, Sundargarh, was opened at Sundargarh, then known as Suadihi, in the year 1895 consequent upon the introduction of western medical system in the ex-State of Gangpur. It was then called the Gangpur Raj Dispensary. As late as 1902 this dispensary was lodged in a small Kucha hut consisting of two rooms. The Raja of Gangpur cherished the desire of naming the hospital after the late queen Victoria and by the year 1913 it was renamed the Victoria Memorial Hospital. This hospital was shifted to its new building in 1942 which was then under the control of the Ministry Department. It came under the civil control and management in 1945-46 and was called Bhabani Shankar Shekhar Memorial Hospital, after the name of the late Raja of Gangpur.

At present the hospital is housed in a nice building and well equipped with modern medical apparatus including an X-ray plant. All cases for X-ray examination are referred to this hospital. Attached to it are an Auxiliary Nurse Midwife Training Centre and the only Blood Bank of the district. Facilities for the treatment of T. B., venereal, and infectious diseases are available here.

The Headquarters Hospital, and the Subdivisional Hospital at Bonaigarh provide for the treatment of anti-rabic cases.

Primary
Health
Centres

With a view to provide medical aid, preventive as well as curative, to the interior populace 16 Primary Health Centres have been established during the period from 1956 to 1968. The staff of each of these centres mainly consists of a doctor and a pharmacist. Save the centres at Birkera, Ekma, and Tangarpali the rest have six beds each (male—4, female—2). The location and the year of establishment of the primary health centres are given below.

Name and location	Year of establishment	Name and location	Year of establishment
Birkera	1958	Kuarmunda	1959
Bisra	1968	Kutra	1960
Ekma	1968	Lahunipara	1959
Gurundia	1957	Laing	1965
Hatibari	1965	Majhapada	1956
Hemgir	1964	Sargipali	1956
Kinjirkela	1966	Sabdega	1966
Koira	1964	Tangarpa	1966

The district has 10 dispensaries : their location and year of establishment are given in the table below. A doctor and a pharmacist constitute the main staff of the dispensary. An emergency bed is attached to each of these dispensaries. Dispensaries

Name and location	Year of establishment	Name and location	Year of establishment
Bankibazar Dispensary, Bankibazar	1959	Mangaspur Dispensary, Mangaspur	1954
Bandega Dispensary Bandega	1952	Raiboga Dispensary, Raiboga	1953
Bhatkidihi Dispensary, Bhatkidihi	1968	Uditnagar Dispensary, Uditnagar	1960
Jarda Dispensary, Jarda	1965	Kamarposh Balang Dispensary, Kamarposh Balang	1970
Lefripara dispensary, Lefripara	1962	Nuagaon Dispensary, Nuagaon	1970

Attached to the hospitals, primary health centres, and dispensaries of the district are 31 Maternity and Child Welfare Centres run by the Health Department. Moreover, two sub-centres located at Balisankra and Bargaon are managed by the Tribal & Rural Welfare Department. These centres provide domiciliary service in the towns and adjoining rural areas. Milk and drugs are distributed free of cost from these centres to expectant mothers, and babies. Besides, there is a Mobile Health Unit at Gundiadihi, and two Maternity After-Care Centres at Raidihi and Rourkela. The last centre is managed by the Dayananda Anglo Vedic Society, a philanthropic organisation. Its staff constitutes a doctor and a nurse. Maternity and Child Welfare Centre

The following hospitals and dispensaries are established and managed by the non-government institutions. The total number of beds in them is 541 (male-336, female-205) and the total staff consists of 139 doctors and 171 pharmacists and nurses. These institutions, except the one managed by the Notified Area Council, Rourkela, and those managed Private Institutions

by the missionaries, are chiefly meant for the employees of the respective firms establishing them.

Birmitrapur TISCO Hospital
 Birmitrapur H. S. L. Hospital
 Gaibira Mission Hospital
 Hatibari TISCO Hospital
 Rourkela Ispat General Hospital
 Kalunga Mission Hospital
 Lanjiberna Orissa Cement Ltd., Dispensary
 Gumardihi Dolomite Quarry Hospital
 Hamirpur Mission Dispensary
 Kesramal Mission Dispensary
 Panposh TISCO Quarry Dispensary
 Rourkela Notified Area Council Dispensary
 Rajgangpur Orissa Cement Ltd., Dispensary

Ispat
 General
 Hospital,
 Rourkela

The I. G. H. is a modern, well equipped hospital located in the Hindustan Steel Limited township and provides most up-to-date medical facilities to the employees and their dependants free of charge. The bed strength of the hospital is 470 (male 300, female 170) and the main staff consists of 123 doctors and specialists, and 136 pharmacists and nurses. It possesses a most efficient surgical department which provides surgical facilities in almost all the major diseases of orthopaedics, heart, chest, brain, ear, nose, throat, ophthalmic, and dental, including plastic surgery. Obstetrics and gynaecology constitute a separate department. The department of medicine includes general medicine, cardiology (heart disease), paediatric medicine, chest medicine, dermatology, social and preventive medicine. A Child and Maternity Welfare and Family Planning Unit, a Pathological and a Bio-chemistry laboratory, a diagnostic X-ray department, a Nurses' Institute, and a Blood Bank are attached to the hospital. A Public Health Service and a rehabilitation block with a hydrotherapeutic pool to restore the patients to full health are also maintained by the hospital.

In each of the sectors V, VII, XVII and XX of the township is located a Health Centre with the provision for 12 indoor patients.

The Steel Plant also maintains a thirty-five bed hospital in Barsuan Ore Mines, a ten-bed hospital in Purnapani Lime Stone quarries and a fifteen-bed hospital in the Labour Colony. These institutions are adequately staffed and manned by the efficient doctors. The Plant spends over 30 lakhs annually over all these institutions.

Ayurvedic
 and Homoeo-
 pathic
 dispensary

The Ayurvedic and Homoeopathic systems are also sponsored by the State Government along with the Allopathic system of healing. These institutions are controlled by the Directorate of Ayurvedic and

Homoeopathic medicines, Orissa. The district has 9 Ayurvedic and 4 Homoeopathic dispensaries : the former are located at Nandapara, Sarsara Balang, Sol, Baladmal, Sikajore, Chungimati, Rauldega, Khatkurbahal and Khuntgaon : the last named village also contains a homoeopathic dispensary. The other three homoeopathic dispensaries are at Bandubahal, Darlipali and Sankobahal. These dispensaries are managed by qualified physicians.

Family Planning started in the district in 1962-63. The shortcomings of an unwieldy family and the need for birth control are being propagated.

FAMILY
PLANNING

The District Family Planning Bureau located at Sundargarh is placed directly under the Assistant District Medical Officer (Family Planning). Under him are a mass education and information officer, a statistical investigator, a computer, and an administrative officer. The mass education and information officer who is solely responsible for motivating the attitude of the people towards a planned family has under him a female and a male district extension educator. Altogether there are sixteen F. W. P. Cs. in the rural areas attached to the Primary Health Centres. The urban centres are located at Sundargarh, Rajgangpur, Birmitrapur, Uditnagar and Rourkela. The centre at Uditnagar is managed by the Rourkela Notified Area Council and the centre at Rourkela by the Ispat General Hospital. No static sterilisation unit exists in the district. The mobile sterilisation and IUCD units with headquarters at Sundargarh operate throughout the district. An Assistant Surgeon is in charge of the former while a Lady Assistant Surgeon is in charge of the latter unit.

The following table indicates the year-wise activities of the Family Planning Organisation in the district since its inception.

Year	Sterilisation operation conducted			I. U. C. D.	No. of users of conventional contraceptives.
	Total	Male	Female		
1962-63	2	2	..	..	..
1963-64	167	161	6	..	..
1964-65	1,081	1,045	36	..	..
1965-66	6,071	6,015	56	602	437
1966-67	7,135	7,043	92	706	324
1967-68	5,234	5,132	102	1,524	892
1968-69	1,991	1,938	53	1,054	1,653
1969-70	4,815	4,708	107	1,807	3,149
1970-71	4,380	4,250	130	2,843	3,856
1971-72	2,192	..	..	1,993	3,944

The figures indicate how family planning is gradually gaining popularity in the district. Altogether 33,068 cases of sterilisation and 10,529 cases of I. U. C. D. insertion have been conducted during the decade 1962-63 to 1971-72. Use of contraceptives such as condom, diaphragm, jelly and foam tablets seems to be more popular. Besides the free supply of contraceptives by the Government, they are also available cheaply in the market. In the year 1970-71, the Family Welfare Planning Centres distributed 2,23,184 condoms, 15 diaphragms, 4,441 tubes of jelly and 8,195 foam tablets in the district.

Facilities are also provided for sterilisation and I. U. C. D. insertions in all the hospitals, dispensaries, and primary health centres besides the family welfare planning centres. With a view to compensating the loss on account of the wages a person might have to sustain for undertaking such operations cash payments in the following rates are made to the person concerned and also to the accompanying motivator.

		Rs.
Sterilisation	Male	14'00
	Female	17'00
	Motivator	3'00
I. U. C. D. insertion	Female	5'00
	Motivator	1'00

Sanitation

In the ex-State of Bonai, a small conservancy department under the charge of the Chief Medical Officer looked to the sanitation of Bonai town ; and the rural areas were left to the care of the *gaontias* and the village panchayats. The system in the ex-State of Gangpur was different : there were sanitation committees in six important towns, viz., Sundargarh, Rajgangpur, Raghunathpali, Bisra, Hatibari and Hemgir. These committees were formed on electoral basis and their chief functions were providing of street lights and maintenance of cleanliness of the towns. The sanitation of the villages was not probably given due importance.

The Assistant District Medical Officer (Public Health), previously known as the District Health Officer is, under the present dispensation, directly in charge of the Public Health Organisation. The district is divided into seventeen blocks, each being provided with a Primary Health Centre. The normal staff of the Primary Health Centre are augmented by one sanitary inspector, three vaccinators and one disinfectant. The Block implementing the N. S. E. P., details of which are mentioned later on, is provided with an additional staff of one sanitary inspector and one vaccinator.

The Health Officer posted by the State Government and the Public Health staff are responsible for the maintenance of sanitation in the municipal towns of Sundargarh, Rajgangpur, and Birmitrapur and Rourkela Notified Area. The vaccination staff under the Health Officer, whose main function consists in taking adequate preventive measures against the outbreak of epidemics, constitute a sanitary inspector, a vaccinator and a disinfector. But the sanitation of Rourkela Steel Plant area is maintained by the Hindustan Steel Limited authority through their own staff.

The medical officer of the primary health centre looks to the proper maintenance of the rural sanitation and prevention of epidemics and supervises the work of vaccination. He also ensures speedy and timely detection of cases, and submission of reports by the subordinates for immediate remedial measures.

Activities of Health and Sanitary Organisation

Both in the urban and the rural areas drainage seldom poses a major problem due to the undulating nature of the district. Water logging is rarely seen. Construction of soakage pits wherever necessary and installation of smokeless Chullahs are undertaken through the community development blocks.

Drainage

In summer, drinking water scarcity is often marked in rural areas. To overcome this difficulty separate schemes are being executed through the Grama Panchayats and the Community Development Blocks. Huge sums are spent annually in constructing new wells and tanks and renovating the old ones through these agencies. Sundargarh, Rajgangpur, and Rourkela are the only towns where protected water-supply is provided: the analyst checks the water periodically by collecting samples from different taps through his staff.

Water Supply

Vaccination probably started in both the ex-States in the early part of the 20th century. It was free of charge and to popularise it special efforts were made by the ex-rulers. The performance in 1907-08 was—1,882 primary and 582 cases of revaccination in Bonai, and 8,686 primary and 12,788 revaccination cases in Gangpur.

Vaccination

The strength of vaccination staff in Gangpur (1946-47) and Bonai (1945-46) was as follows:—

	Gangpur	Bonai
Inspector ..	1	..
Vaccinator—Male ..	2	..
(Permanent)		
Temporary	12	7
Female ..	2	1
(Temporary)		

The staff were working under the Chief Medical Officer. Figures of vaccination and revaccination made during certain selected years prior to 1948 are given below :

Year		Primary	Revacci- nation	Total
1915-16	.. Bonai ..	5,309	2,903	8,212
	Gangpur	10,305	33,938	44,243
1925-26	.. Bonai ..	2,382	784	3,166
	Gangpur	13,575	26,705	40,280
1945-46	.. Bonai ..	2,716	17,767	20,483
	Gangpur	10,530	23,932	34,462

As stated earlier the vaccination staff in the Primary Health Centres and the municipalities respectively cover the rural and the urban areas at present. The supply of F.D. vaccine is made by the Directorate of Health. The old practice of obtaining vaccine lymph from Namkum is stopped. The technique of the operation has also undergone a great change. Now bifurcated needles are in use. Effective and timely measures are being taken to stamp out the epidemic and to prevent its spreading by general vaccination of the people in the areas where it appears.

A statement showing the figures of primary vaccination and re-vaccination and inoculation against cholera during the period 1962-71 is given below :

Year	Inoculation	Vaccination		
		P. V.	R. V.	Total
1962	.. 73,751	118	1,043	1,161
1963	.. 75,755	20,479	87,590	1,08,069
1964	.. Not available	25,314	95,912	1,21,226
1965	.. 85,078	38,453	1,49,539	1,87,992
1966	.. 4,76,998	46,873	1,89,894	2,36,676
1967	.. 1,30,428	59,398	2,12,822	2,72,220
1968	.. 1,33,899	87,944	1,77,630	2,65,574
1969	.. 1,23,335	64,479	1,62,342	2,26,821
1970	.. 1,47,789	49,676	1,67,566	2,17,242
1971	.. 46,418	58,001	2,75,437	3,33,438

With a view to combating smallpox menace effectively in the district a crash programme called the National Smallpox Eradication Programme is in operation under the overall charge of the Chief District Medical Officer which covers 14 out of the 17 blocks mentioned earlier. The staff of each block consists of a sanitary inspector and a vaccinator. The para-medical assistant in charge of the two zones into which the blocks are divided serves as a liaison between the Assistant District Medical Officer (Public Health) and the medical officers of the Primary Health Centres. In addition, a mobile unit consisting of 5 vaccinators also operates in the remote areas.

Smallpox
Eradication
Programme

The National Malaria Eradication Programme is in operation in the district since long. Five out of the 8 centres of the Sundargarh unit covering the entire district are located at Rajgangpur, Hemgir Kalunga, Birmitrapur, and Lahunipara.

Anti-Malaria
Measures

Before the introduction of surveillance in 1960, spraying of two to three rounds of insecticide was given in each centre annually. During 1971 two rounds of spraying were given from 8th May 1971 to 24th September 1971 and from 2nd September 1971 to 18th November 1971. The details are as follows:

	1st round	2nd round
Number of Villages sprayed ..	2,819	1,175
Number of Hamlets sprayed ..	3,152	1,353
Number of Holdings covered ..	2,36,224	1,24,822
Number of Population covered ..	13,16,298	6,43,917
Total insecticides consumed ..	55,290Kg.	28,430Kg.

The table below indicates the surveillance activities performed in the district from 1966 to 1971. The relatively low figures in 1970 and 1971 shown under Cols. 3 and 4 are due to the reduction in staff.

Year	Popu- lation as per N.M.E.P. census	Fever cases detected and blood slides collected	Blood slides Exa- mined	Result ----- Malaria Positive	Radical treat- ment done
1966 ..	1,300,025	1,72,865	1,63,739	3,050	3,050
1967 ..	1,378,683	1,60,996	1,40,188	5,478	5,478
1968 ..	1,442,023	1,52,585	1,36,684	7,904	7,904
1969 ..	1,319,575	1,16,972	1,16,972	5,103	5,103
1970 ..	1,376,298	79,565	37,407	221	221
1971 ..	1,376,298	87,670	59,704	1,011	1,011

Tuberculosis
Prevention
and Treat-
ment

Under the administrative control of the Chief District Medical Officer a small 6-bed T. B. clinic is attached to the headquarters hospital. But for an X-ray plant, for which it depends on the headquarters hospital, it is a self contained unit with a well equipped laboratory. The UNICEF is likely to supply an X-ray plant shortly to this clinic.

It also functions as the District T. B. control centre. The staff consists of the District T. B. Officer, Health Visitor, laboratory Technician, X-ray Technician, Statistical Assistant, and a B. C. G. team. The staff are specially trained. The B. C. G. team which primarily aims at prevention of the disease operates throughout the district. The T. B. centre was fortified with this unit on the 4th June, 1971. During the remaining part of the year 4,715 persons were vaccinated and Montoux test was conducted on 304 persons. A total number of 1,677 persons attended the clinic for sputum examination in 1971, of them 149 cases were found to be positive and 257 were pulmonary T. B. cases.

APPENDIX I

The number of patients suffering from different diseases, treated, and death due to them in the hospitals and dispensaries during the period 1962-70.

Diseases	1962		1963		1964		1965	
	Treated	Death	Treated	Death	Treated	Death	Treated	Death
1. Typhoid	479	3	751	10	886	15	1,202	11
2. Tuberculosis	1,249	2	114	5	2,919	1	345	1
3. Venereal disease	1,715	1	2,155	..	4,191	..	3,914	..
4. Cancer	9,357	..	333	..	1,333	..	15,521	1
5. Dysentery	10,871	11	26,278	13	46,050	20	57,392	26
6. Malaria	10,183	16	9,247	..	5,181	1	5,111	2
7. Filaria	136	..	277	..	2,140	..	484	..
8. Diphtheria	16	..	10	..	10	1	11	1
9. Whooping Cough	392	..	707	..	1,421	..	1,293	..
10. Tetanus	36	..	24	3	51	5	41	3
11. Poliomyelitis	2	..	6	1	7	..	13	..
12. Infective hepatitis	828	1	439	2	597	2	470	3
13. Influenza	5,927	..	10,846	..	18,776	..	14,182	..
14. Heart disease	985	..	533	1	829	6	606	..
15. Others	1,48,679	92	1,76,102	113	2,32,133	133	1,64,498	77

APPENDIX I—Continued.

Diseases	1966		1967		1968		1969		1970	
	Treated	Death	Treated	Death	Treated	Death	Treated	Death	Treated	Death
1. Typhoid	3,802	23	1,128	11	1,525	6	3,413	10	2,373	8
2. Tuberculosis	558	2	864	9	1,267	5	7,496	26	3,259	42
3. Venereal disease	3,096	1	3,612	4	2,561	..	4,626	..	6,057	1
4. Cancer	444	..	78	3	236	..	1,115	8	6,047	15
5. Dysentery	83,171	22	63,608	27	53,324	25	36,296	9	94,451	23
6. Malaria	5,768	..	4,343	2	3,667	..	4,801	..	3,938	3
7. Filaria	752	..	778	..	571	..	6,697	..	6,694	..
8. Diphtheria	18	1	27	1	43	1	1,673	14	3,047	13
9. Whooping Cough	2,616	..	2,134	..	1,780	1	5,035	..	5,473	10
10. Tetanus	64	2	73	5	97	11	174	29	101	21
11. Poliomyelitis	9	..	2	..	22	..	522	..	543	1
12. Infective hepatitis	1,717	5	735	5	400	2	1,116	8	1,051	3
13. Influenza	12,078	..	2,601	..	8,476	..	18,632	..	34,230	..
14. Heart disease	1,377	4	1,067	12	1,256	9	5,463	25	6,576	21
15. Others	1,77,387	51	2,59,874	130	2,69,940	152	5,79,777	408	5,72,360	575