

CHAPTER-XVI

MEDICAL AND PUBLIC HEALTH SERVICES

An enquiry into the early history of public health and medical facilities of this predominantly tribal district reveals that the people had little knowledge regarding maintenance of health, diagnosis of diseases and combating the diseases on modern scientific basis. Like their counterparts in the neighbouring States they believed in a number of superstitions. They related the cause of illness or disease to the wrath of god or dead ancestors, or sorcery. Various aboriginal methods like animal sacrifice and other types of offerings were sanctioned for propitiating the offended deities. This they thought would eradicate the malady.

SURVEY OF
PUBLIC HEALTH
AND
MEDICAL
FACILITIES IN
EARLY
TIMES

In the past, the Ayurvedic system of medicine was very popular among the inhabitants of the district. The mountain 'Gandhamardan' which bears the name of the well known mountain in the Ramayan famous for medicinal herbs, is situated in this district. In the Ramayan, as the story goes, Laxman was fatally wounded in the battle and fell unconscious for several days. It was only when some medicinal plants brought by Hanuman (the great monkey-god) from the Gandhamardan was applied to his wounds that Lakshman regained his consciousness. The importance of this hill in the district as a reservoir of valuable natural medicines is well known.

But in spite of all its virtues, the Ayurvedic system of medicine has not been able to cope with the sophisticated medical needs of the people. As a result, the western system of allopathic medicine is becoming more and more popular in the district. In the ex-State of Kendujhar, the rulers showed some genuine interest in the improvement of public health and established some hospitals and dispensaries with well qualified doctors. But steps taken in this direction during the Durbar administration were quite inadequate to meet popular needs. As discussed later, medical facilities in the district have been greatly enhanced after the merger of the ex-State with the Province of Orissa in 1948.

There was no registration system of births and deaths in the Princely State of Kendujhar. After merger, the ex-State was constituted a district and the Bengal Births and Deaths Registration Act, 1873 came into force in the district from 1952.

VITAL
STATISTICS

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 the urban areas the health staff under the Municipality and the Notified Area Council were in charge of collecting vital statistics. 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 Directorate 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 result. 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 Welfare Services, Orissa, acts as the Chief Registrar. The responsibility to report on the vital occurrences within a stipulated time chiefly devolves on the head of the household. Nominal penal provisions have also been made in the Rules to deal with the defaulting reporters. Although this seems to be a fairly sound system, its workability is yet to be proved. Appendix I to the Chapter shows the vital statistics of the district from the year 1969 to 1976.

DISEASES COMMON TO THE DISTRICT

In the past, people suffered chiefly from malaria and abdominal troubles, but of late, the former is almost under control. The other common 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 now seldom found. Among the epidemics, smallpox has disappeared totally and cholera makes comparatively rare appearance.

The number of patients suffering from different diseases and deaths due to them in the hospitals and dispensaries during the period 1969-76 is given in Appendix II.

Fever

It is a common bodily disorder under which several diseases are included. It generally means rise of normal body temperature. Broadly, it may include malaria, typhoid, influenza and black-water fever.

In the past the climate of the ex-State was extremely malarious and the people suffered severely from Malaria. At present its incidence is, however, considerably reduced owing to the operation of the National Malaria Eradication Programme of which details will be found in the section, sanitation. In the year 1976, 32,703 patients were treated of which 18 lost their lives.

Malaria

Influenza occurs but scarcely. There is no such report that it had been of virulent type at any period.

Influenza

Typhoid occurs almost throughout the district. Its incidence rather tends to increase gradually. In the period between 1969-76, a total number of 18, 717 people suffered from typhoid and ninety-eight people lost their life. The data of patients given in Appendix III indicate that the disease is gradually tending to rise among the people.

Typhoid

Lack of drinking water facility leads the people, mostly of the aboriginal tribes, to use the polluted water of the tanks and pools which exposes them to this disease. Before the commencement of rainy season its incidence is, therefore, usually high. The data of the patients given in Appendix II indicate that due to improved sanitary measures in recent years the disease is gradually tending to decline among the people.

Dysentery
and
Diarrhoea

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. But at present its occurrence is too rare to call for any specific provision. During the period 1969-76 the total number of yaws cases detected was 1910. In the year 1975, the maximum number of 1,324 cases were treated, and it seems to be the highest record in recent years.

Yaws

No special provision perhaps did exist in the ex-State for the treatment of T.B. In recent years it shows a tendency to rise gradually. The causes may partly be attributed to the unrestricted movement of public as well as private buses and other motor vehicles.

Tuberculosis

Under the administrative control of the Chief District Medical Officer a small 18-bed* T.B. Clinic is attached to the Headquarters Hospital at Kendujhargarh. It has no X-ray plant of its own for which it depends on the headquarters hospital. It has a well equipped laboratory. In the year 1972, a sophisticated microscope was supplied to the laboratory by the UNICEF.

*. 'Six' for observation, 'Twelve' for isolation

The district T. B. control is functioning in the T.B. clinic building within the compound of the Headquarters Hospital since 1967. The staff consists of the District T.B. Officer, the Medical Officer, Treatment Organiser, Health Visitor, X-Ray Technician, Laboratory 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 has been fortified with this unit since March, 1973. The following table shows the number of cases treated and the number of deaths during the period 1973-77.

Years		1973	1974	1975	1976	1977
Total cases Treated	..	702	730	1,014	854	770
Total death	..	20	18	22	42	21

Leprosy

In the ex-State of Kendujhar only two leprosy clinics functioned, one at Anandapur established on 1st September, 1937, and the other at Soso established on 1st August, 1938. In 1943-44 Soso leprosy clinic was transferred to Hatadihi.

The anti-leprosy drive aiming at detection and treatment of the disease and health education is carried on in the district by the State Government. A Leprosy Control Unit at Anandapur and eight Survey, Education and Treatment Centres at Telkoi, Tangira, Joda, Champua, Chamakpur, Barbil, Patana, Bariha, are functioning under the direct administrative control of the Chief District Medical Officer, Kendujhar.

Voluntary organisations like the Hindu Kustha Nivaran Sangha are not functioning in this district. The population coverage of the local Control Unit at Anandapur is 3,14,606, while that of a Survey, Education and Treatment Centre is about twenty to twenty five thousand. By 1977, the number of leprosy cases detected were 1,953 and the cases under treatment were 1,437.

Venereal disease

Venereal disease in the district is not uncommon. Separate clinics exist in Kendujhar Sadar hospital for the treatment of these patients.

Filaria

Filaria is not a fatal disease. However, as Appendix III reveals there is an increase in the number of filaria victims in the district in recent years. There is no separate organisation for the control of filariasis in the district. The filaria cases are treated in the existing medical institutions under the control of the Chief District Medical Officer. Special

surveys conducted in limited areas in the past (1956-57) and in recent years (1976-77) show that the prevalence of this disease in the district was not high in comparison to the coastal districts. The following is the survey report of 1976-77.

Disease rate (approximately)	1 to 4
Micro-Filaria rate (approximately) (blood positive)	1 to 7
Endemicity rate (approximately)	.. 2 to 10

The survey also showed that transmission continued and in the wake of industrialisation and growth of communication facilities the disease may pose a problem in future.

The occurrence of cholera is rare in the district. In 1970 only eight persons were affected by this disease. Cholera

No case of smallpox has been reported in the district in recent years. Dr. J. Cervanka, a member of International Assessment Commission, visited this district in the early part of 1977 and reported about the smallpox free character of the district. As per the recommendations of the International Assessment Commission and in conformity with the Government of India's policy decision, primary vaccination of the newborns and other unprotected children is now being carried out. Preventive measures adopted at present for its eradication is described in a later section of this chapter. Smallpox

The Chief District Medical Officer is in overall charge of the medical administration of the district. In the past, the health organisation was under the charge of the District Health Officer. But in the present set-up, subordinate to the Chief District Medical Officer are three Assistant District Medical Officers directly in charge of Medical, Public Health, and Family Welfare organisations. The Chief District Medical Officer, in addition to his supervisory responsibility, also acts as the District Registrar under the Registration of Births and Deaths Act, 1969. PUBLIC HOSPITALS AND DISPENSARIES

Medical facilities in the ex-State of Kendujhar were not very satisfactory. In 1907-08, there were only three dispensaries located at Kendujhar, Anandapur and Champua. By 1934-35 the number increased to six, and later on in 1943-44 the total number of hospitals and dispensaries in the ex-State was ten. However, after the independence of the country the number of hospitals, Public Health Centres, dispensaries, and Maternity and Child Welfare Centres in the district have gone up to forty-seven, a spectacular increase over the pre-independence period.

The following table gives the name, location and other details of the hospitals in the district.

Name	Location	Year of establishment	Beds		Staff sanctioned		
			Male	Female	Doctor	Pharmacist	Nurse
1	2	3	4	5	6	7	8
1. District Headquarters Hospital, Kendujhargarh	Kendujhar Sadar	1917	81	53	14	5	21
2. Subdivisional Hospital, Champua	Champua,	1923	12	10	1	1	3
3. Subdivisional Hospital, Anandapur	Anandapur,	1922	22	16	6	1	4
4. Kaliahata Hospital,	Kaliahata	1956	3	3	1	1	..
5. Hadgarh Hospital,	Hadgarh	1975	4	4	1	1	1
6. Barbil Hospital (T. R. W.)	Barbil	1962	4	2	1	1	..
7. Police Hospital,	Kendujhar Sadar	1948	9	1	1	1	2
8. Jail Hospital,	Kendujhar Sadar	1948	10	..	1	1	2
9. Ukhunda Hospital (T. R.W.)	Ukhunda	1962	3	3	..	1	..
10. Dumuria Hospital,	Dumuria	1941	..	..	..	1	1

District Headquarters Hospital Kendujhargarh

It is the oldest hospital in the district. It was started in the year 1917 and in subsequent years with additions and expansions it became a full fledged hospital. Treatment facilities for diseases like tuberculosis anti-rabic, venereal diseases and various other types of infectious disease are also available here. It has an X-Ray plant of its own. All cases of X-Ray examination are referred to this hospital. Attached to it are an Auxiliary Midwife Training Centre and the only Blood Bank of the district.

Primary Health Centres

With a view to providing medical aid, preventive as well as curative to the interior populace, 13 Primary Health Centres were established in the district during the period 1958 to 1968. These public Health Centres have a total of sixty-nine beds of which 45 are for male and

the rest 24 for female. The staff of these centres mainly consist of one or two Doctors and a Pharmacist. The name, location and year of establishment of these Primary Health Centres are given below.

Name and location	Year of establishment
1. Basudevpur P. H. C., Kandara	1968
2. Banspal P. H. C., Saharpur	1967
3. Bhagamunda P. H. C., Bhagamunda	1962
4. Banda P. H. C., Banda	1961
5. Fakirpur P. H. C., Fakirpur	1962
6. Ghatagan P. H. C., Ghatagan	1960
7. Jhumpura P. H. C., Jhumpura	1962
8. Kesadurapal P. H. C., Kesadurapal	1960
9. Patana P. H. C., Patana	1959
0. Padmapur P. H. C., Padmapur	1961
1. Salania P. H. C., Salania	1968
2. Telkoi P. H. C., Telkoi	1958
3. Udayapur P. H. C., Udayapur	1967

Besides, there were five additional Primary Health Centres functioning at Phuljhar, Mugupur, Raigarh, Batto and Panasadiha during the 5th and 6th Plan periods.

In addition, nine subsidiary health centres were established at Dhenkikote, Pandapada, Saharpada, Ravanprakashpur, Anandapur, Jyotipur, Malada, Karanjia and Purunabandhagoda during the 5th Plan period. Besides, two medical aid centres at Odapada; and Panchpaiu; and two mobile health units at Kanjipani and Raidihi were also functioning.

The district has 10 dispensaries. Their location and year of establishment are given below. A doctor and a Pharmacist usually constitute the main staff of the dispensary. An emergency bed is attached to each of these dispensaries.

Dispensaries

Name and location	Year of establishment
1. Sainkula Dispensary, Sainkula	1948
2. Gonasika Dispensary, Gonasika	1947
3. Hatadihi Dispensary, Hatadihi	1947
4. Harichandanpur Dispensary, Harichandanpur	1947
5. Janghira Dispensary, Janghira	1960
6. Kalikaprasad Dispensary, Kalikaprasad	1962
7. Rajanagar Dispensary, Rajanagar	1947
8. Sirigida Dispensary, Sirigida	1955
9. Soso Dispensary, Soso	1947
0. Suakati (T. R. W.) Dispensary, Suakati	1957

* Upgraded to hospital

Maternity
and Child
Welfare
Centres

There are nine Maternity and Child Welfare Centres in the district. They are located at Kendujhargarh, Anandapur, Champua, Kalikaprasad, Kodagadia, Angarua, Janghira, Dumuria, and Suakati. The six last named centres are managed by the Harijan and Tribal Welfare Department, while the other centres are managed by the Health Department.

Private
Institutions

As this is mainly a mining district and various private companies are in the field of operation, they have established their own health units for the benefit of the workers of the respective mines. The following hospitals and dispensary are established and managed by the non-Government institutions.

1. Tisco Hospital, Joda, Joda
2. Central Hospital, Thakurani, Thakurani.
3. Mines Hospital, Guruda, Guruda.
4. Iron Ore Mines Hospital, Daitari, Daitari.
5. Iron Ore C. W. F. M. H. Dispensary, Barbil, Barbil.

Central
Hospital,
Thakurani,

Among the private hospitals mention may be made of the Central Hospital, Thakurani. In the year 1930, it was started by the Orissa Minerals Development Company Ltd., to look after the health of the Company's workers. Company itself is the sole source of finance for this hospital. It provides accommodation for twenty-one patients (10 male, 10 female and 1 maternity case).

The following figures indicate the number of patients treated in this hospital during last five years.

Year	Total number of patients treated	Average daily number of patients treated
1	2	3
1973	1,09,915	301.21
1974	1,10,994	304.01
1975	1,30,135	356.51
1976	1,27,712	349.82
1977	1,34,037	367.21

This hospital was established in the year 1953 to render medical aid to the employees of the Iron and Manganese Mines of M/S Serajuddin and Co. This hospital has one medical officer, one compounder and one dresser. It provided accommodation to thirty patients (twenty male and ten female).

Guruda Mines
Hospital

The following figures indicate the number of patients treated in the hospital during last five years.

Year	Total number of patients		Average daily No. of patients treated
	Outdoor	Indoor	
1	2	3	4
1974	.. 11,845	175	32
1975	.. 7,406	158	20
1976	.. 1,955	184	52
1977	.. 14,356	162	39
1978	.. 20,723	113	56

The Ayurvedic and the Homoeopathic systems of medicine have, under the patronage of the State Government, made significant progress in the district in recent years. For the development of these systems a separate organisation was started at the State level, and later, since September 1, 1972, a Directorate was created. All the institutions are directly managed by the Director of Ayurvedic and Homoeopathic Medicines, Orissa, Bhubaneswar. In 1985 there were as many as 25 Ayurvedic Dispensaries in the district located at Palasapanga, Pithagola, Chakradharpur, Podang, Kanjipani, Nayakote, Damahuda, Machhagarh, Gayalamunda, Kantipal, Anandapur, Dhakotha, Deogan, Kansakendua, Alati, Bancho, Orali, Parsala, Padua, Purusottampur, Karanjia, Malada, Chamakpur, Chauthia and Bamberi. Each dispensary is placed under the charge of an Ayurvedic doctor. Similarly there are 15 Homoeopathic dispensaries functioning in this district at Patilo, Batto, Toranipokhary, Samantarapur, Kendujhargarh, Mahadeijoda, Maidankela, Hal'dharpur, Raigoda, Karadangi Sadangi, Kadagadia, Remuli, Tentaliananda and Kendua. Besides the Government dispensaries, about twenty-five private registered homoeopathic practitioners are in the field. The homoeopathic system of medicine is gradually gaining popularity in the district, especially among the rural masses.

Ayurvedic
and Homoeo-
pathic Insti-
tutions

Family planning activities in the district started in the year 1957-58 with some limited objectives and was mostly confined to the urban areas. Along with the family planning activities the Family Welfare Programme was taken up in the district in the year 1964. Under the Family Welfare Programme the Maternity and Child Health Services

FAMILY
WELFARE

provided Tetanus Toxins to the expectant mothers and the children were provided with D. P. T. (1 to 2 years), D. T. (3 to 6 years) and vitamin 'A' tablets. Efforts are being made to popularise family planning, especially among the backward sections of the rural mass. The family planning efforts in the district have acquired some degree of sophistication with the introduction of modern methods such as sterilisation, I. U. D. insertion, condom, jelly cream, foam tablets, diaphragm and oral contraceptives. Mass media, educational activities, personnel training and orientation of community leaders are all playing a great role in population control efforts.

There are at present one District Family Welfare Bureau at the district headquarters and thirteen Family Welfare and Planning Centres attached to the Primary Health Centres in the rural areas.

Under the overall supervision of the Chief District Medical Officer, the Assistant District Medical Officer (Family Welfare), is directly responsible for the implementation of the programme involving planning, supervision, evaluation and services. He is assisted by a host of other staff posted in the all categories of Family Welfare institutions in accordance with the Government of India staffing pattern. In the district Family Welfare Bureau the administrative officer is responsible for its general administration, and the Mass Education and Information Officer co-ordinates the Mass Education programme with the help of concerned organisations and supervises the work of Extension Educators. There are two, a male and a female, District Extension Educators who provide inservice training to the Block Family Welfare Extension Educators, help the Block Workers solve their difficulties regarding implementation of the programme and are responsible for the supply of contraceptives. The Statistical Investigator compiles different reports and returns, assesses the impact and achievement of the programme, organises training for all the computers and supervises their work. The Mobile Sterilisation and I. U. C. D. Units are respectively under the charge of an Assistant Surgeon and a Lady Assistant Surgeon who work according to a monthly phased programme and render follow up service to the cases developing complications. Besides, there are several other technical and non-technical personnel attached to the Bureau. The Rural Family Planning Organisation consists of an Assistant Surgeon, a Block Extension Educator, a Lady Health Visitor and two field workers (male and female).

For the family planning message to reach the remote corners of the district mass media and extension approach have been accepted as the proper vehicles. The agricultural off-seasons are selected for intensive service activities as the majority of the people live in the

villages and owing to their educational and cultural backwardness seldom approach the family planning centres although they no less feel the imperative need for spacing or limitation. The services of Audio-visual team attached to the District Family Welfare Bureau are utilised in educating the rural folk for the acceptance of the small family norm. Besides, other methods like exhibition, seminar, mass meeting, drama, Daskathia, Palla and group discussions are organised to popularise Family planning programme.

The I. U. C. D. insertion is made at the Block level and through the Mobile Unit follow up services are rendered to the beneficiaries and complicated cases are referred to the consultant Gynaecologists for advice and treatment. Facility for sterilisation operation is also made available both at camps and clinics. Of the two methods the later seems to be relatively more popular. The recanalisation facility available in the medical college hospitals goes further in raising popular faith in sterilisation operation. Financial benefits like compensation for loss of wages and transport charges are given to those who undergo vasectomy or sterilisation operation. Nirodh and othr contraceptives are supplied to the persons needing them through the clinics and during the field services.

The details of year-wise target and achievement of sterilisation operation I. U. C. D. insertion and conventional contraceptives from 1968-69 to 1977-78 are as follows.

Year	Sterilisation		I. U. C. D.		Conventional contraceptive	
	Target	Achievement	Target	Achievement	Target	Achievement
1	2	3	4	5	6	7
1968-69	5 289	2,500	3,525	2,565	5,287	874
1969-70 ..	5,418	3,880	2,074	2,275	3,608	2,177
1970-71	4,727	6,944	2,684	6,738	5,923	5,439
1971-72 ..	6,381	6,274	4,013	5,641	3,800	4,67,517
1972-73 ..	5,600	4,333	3,000	2,926	3,600	2,67,431
1973-74 ..	6,140	1,608	3,320	1,545	4,000	1,22,004
1974-75 ..	4,134	1,842	2,723	807	4,892	73,584
1975-76 ..	4,674	4,026	1,382	809	2,131	1,07,208
1976-77 ..	8,370	8,119	1,390	1,033	1,760	1,86,347
1977-78 ..	7,610	1,534	1,570	528	4,090	2,14,727

**SANITATION
Administrative
Set-up.**

Subordinate to the Chief District Medical Officer, the Assistant District Medical Officer (Public Health) is directly in charge of the Public Health organisation of the district. All the Public Health Programmes excepting that of the M. N. E. P. function under the supervision and guidance of the A. D. M. O. (P. H.). At the subdivisional level the Subdivisional Medical Officer is the supervising authority in respect of all the Public Health activities. In rural areas the Medical Officers in charge of the Primary Health Centres are also in charge of the Public Health activities. Kendujhar is divided into 13 Public Health Centres. Each Medical Officer of the P. H. C. is assisted by two Sanitary Inspectors, one for general Public Health and the other for Smallpox Eradication Programme. Besides, under various health schemes and programmes, both in rural and urban areas, there are different categories of public health staff who are no less responsible for the maintenance of health and sanitation of the district.

**Activities of
Health and
Sanitary
Organisations**

With the object of improving and maintaining the health and sanitary conditions of the district various organisations are at work. Their activities may be broadly divided into three categories, such as, prevention and control of chief communicable diseases, providing of protected water supply and drainage system, and other miscellaneous functions like slum clearance, health education, etc. Brief accounts of these schemes are as follows :

**Health
Education**

The Health Education, according to the pattern prescribed by the Government of India, was started in the State in 1960 and is functioning under the Director of Health and Family Planning Services, Orissa. Although the scheme envisaged the establishment of District Health Education Bureaus, they are yet to be organised. The main objective of the scheme is to make the people realise the responsibility of their own health, the health of their family and that of the community at large. For this purpose the Central Bureau, in absence of the District Organisations, produces Health Education materials for different public health programmes, such as, cholera, smallpox, nutrition, malaria, blood donation, etc., organises field study programmes for health education and research, conducts school health education programmes in collaboration with the Education Department and conducts training programme of health personnel in health education methods and media. It also observes Health-Days, and takes part in public education programmes during the fairs and festivals of the district.

**School
Health
Service**

The object of the School Health Service scheme is to examine the health of the students and to impart advice to those who are found defective. The scheme was started in the district only in 1976. The details of

the number of schools visited and the number of students examined by the medical officers is given below :—

Year		Number of schools visited	Number of students examined
1		2	3
1976	..	71	4,740
1977	..	118	5,444
1978 (up to September)	..	131	3,216

The Director of Health and Family Planning Services, Orissa, is the Food Health Authority under the provisions of the Central Prevention of Food Adulteration Act, 1954, which came into force in the State of Orissa in the year 1959, and is responsible for the implementation of the Act. In this district the scheme was implemented in the year 1960. Under the direct administrative control of the Chief District Medical Officer, the Assistant District Medical Officer (P. H.), a Food Inspector and a Sanitary Inspector, Food, supervise the prevention of food adulteration activities. The objective of the scheme is to prevent adulteration of food articles meant for human consumption and to take action against the offenders under the Prevention of Food Adulteration Act, 1954.

Prevention
of Food
Adulteration

The year-wise activities of this organisation are furnished below :—

Year	Number of samples collected	Examined	Result	
			Upto the standard	Adulterated
1	2	3	4	5
1972	9	9	6	3
1973	...	...	...	...
1974	73	73	48	25
1975	83	83	51	32
1976	74	74	46	28

Nutrition
Programme

For the implementation of the Nutrition Programme, the State Nutrition Division was established in the year 1959 under the direct control of the Director of Health and Family Planning Services, Orissa. The main objective of the programme is to improve the nutritional status of the vulnerable population by supplementing nutrition through food and nutrients, and by preventing infection through immunisation programme. Its scope also includes periodical surveys to assess the nutritional status of the vulnerable population. The Nutrition Division has no administrative set up at the district level.

The following blocks were covered under the Applied Nutritional Programme in the year mentioned against each.

Name of the A. N. P. Block	Year
Anandapur	.. 1959-60
Ghatgan	.. 1960-61
Banspal	.. 1964-65
Joda	.. 1966-67
Patana	.. 1972-73
Kendujhargarh	.. 1973-74
Telkoi	.. 1977-78

Dietary and nutrition assessment survey were conducted in some selected A. N. P. Blocks as detailed below.

Year	Name of the A. N. P. Block	Name of the A. N.P. villages surveyed	No. of Households surveyed	No. of beneficiaries examined under Nutrition Assessment
1	2	3	4	5
1973-74	Kendujhargarh	Raisuan	25	153
1974-75	Patana	Saraskela	10	463
1977-78	Telkoi	(1) Benamunda	41	} 303
		(2) Telkoi	50	
		(3) Kamalanga	50	

Nutrition education is also imparted by the Lady Nutrition Officer to the Mahila Samiti members through practical demonstration. Apart from that, a composite survey under Integrated Tribal Development Programme has been taken up during the year 1978-79. Mainly some Juang villages were selected for the purpose in order to assess the health and nutritional condition of the Juang tribe.

The table below gives details of the Dietary (food consumption) and Nutrition Assessment survey of the Juang villages during the year 1978.

Name of the P. H. C.	Name of the Juang village	No. of households surveyed	No. of beneficiaries examined under Nutrition Assessment
1	2	3	4
Telkoi	1. Pitanali	18	75
	2. Sapananji	25	60
	3. Madhusudanpur	25	116
	4. Khirakanjipani	18	61
	Total	86	312
Banspal	1. Gonasika	39	82
	2. Guptaganga	40	91
	3. Baitarani	19	66
	4. Kadalibadi	25	50
	Total	123	289

Growth of slums is not an unusual phenomenon in the modern cities and towns. These dirty places not only undermine the beauty of the towns and cities but also contribute towards polluting the surrounding atmosphere. For the improvement of these areas and for rehabilitating the slum dwellers, the scheme, slum improvement and clearance, has been in operation in several towns. In Kedujiargarh town this scheme started in the year 1970-71. So far, 19 tenements have been constructed rehabilitating 19 families. At Barbil where the scheme started in 1975, so far, eight tenements have been built up and are yet to be inhabited. The scheme is in operation in the towns like Joda and Anandapur but no significant progress has been made so far.

Slum
Improvement
and
Clearance

TOWN
WATER-
SUPPLYBarbil Town
Water-Supply

The execution of the Barbil town water-supply system was started in the year 1962 and the scheme was completed during the year 1972-73. River 'Karo' is a perennial source of water-supply and quite adequate to meet the estimated demand for 35,000 people. At present the scheme supplies 3 lakh gallons of water per day, whereas the total demand is 0.9 million gallons per day. The total expenditure incurred for the scheme is 18,55,000 rupees.

Champua
Town Water-
Supply

The water-supply scheme to Champua town started in the year 1975 and was completed in 1979. River Baitarani is the perennial source which fulfils the estimated demand of 6115 people. At present the scheme provides water supply at the rate of fifty thousand gallons per day whereas the estimated demand is 2 lakh gallons. The total cost of the scheme was 6,20,500 rupees. There are thirty stand posts which serve the needs of the general public.

Anandapur
Town Water-
Supply

The Anandapur town was brought under protected water-supply by a rural piped water-supply scheme sponsored by the UNICEF. It was started in the year 1962 and was completed in 1965. It supplies drinking water to 7,000 people. The total expenditure incurred in the project was Rs. 2,86,000. Besides piped water-supply, under the schemes of Minimum Need Programme and Accelerated Water Supply Programme a total number of 746 tube wells have been sunk.

Kendujhar
Town Water-
Supply

The water-supply scheme to Kendujhar town was started in the year 1965-66 and was completed in 1966. The main source of water tapping is Machha Kandana Nallah. Now an augmentation water supply scheme is underway which would incur a total expenditure of Rs.49.42 lakhs including the previous expenditure of Rs.15.73 lakhs.

RURAL
WATER-
SUPPLY

Till 1st April, 1984, there were 3,796 tube wells in working order under rural water-supply Scheme in the district. Out of these tube-wells 3,632 were in the identified problem villages and 164 in un-identified villages. The total requirement of the district (at the rate of 250 population per 1 tube-well) is 4,265 tube-wells/sanitary wells.

Vaccination

Vaccination started in the ex-State of Kendujhar by the initiative of its ex-rulers. It was free of charge and special efforts were made to popularise it. In the year 1943-44, in the ex-State, 21,421 received primary vaccination and 27,745 persons were re-vaccinated.

Smallpox
Eradication
Programme

With a view to combating smallpox menace 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, Kendujhar. A total of 60 vaccinators and 13 S. E. P. supervisors (Sanitary Inspectors) working in the district. While the vaccinator gives primary vaccination to the children against smallpox, the S. E. P. supervisor prepares the plan and programme of vaccination and

supervises the field activities. During the outbreak of smallpox he institutes containment measures in the affected areas. There are two paramedical assistants in the district to supervise the performance of the vaccinators and the S. E. P. supervisors (S. I.). During the outbreak of smallpox he organises and supervises the containment activities in the field of operation.

A statement showing the figures of primary vaccination and revaccination during the period 1976-77 is furnished below.

Year		Primary vaccination	Revaccination
1		2	3
1967	..	14,551	64,564
1968	..	43,948	1,41,319
1969	..	51,951	80,317
1970	..	55,606	1,69,992
1971	..	59,155	1,70,821
1972	..	1,32,369	4,96,048
1973	..	1,10,365	5,43,575
1974	..	79,227	5,01,444
1975	..	52,768	2,76,389
1976	..	25,789	65,805
1977	..	24,830	61,048

The following statement shows the figures of innoculation against cholera during the period 1974-78.

Year		Innoculation
1		2
1974	..	65,377
1975	..	91,415
1976	..	80,422
1977	..	83,240
1978	..	82,190

Anti-Malaria
Measures

The National Malaria Eradication Programme is in operation in the district since long. With the help of the World Health Organisation Falciparum containment programme is carried out in the district. Drug Distribution Centres and Fever Treatment Depots have been established in the villages to make anti-malaria drugs available to the people at the time of need through the voluntary agencies like the Panchayat Office bearers, school teachers, and Mahila Samitis. Presently 1,559 Drug Distribution Centres and 316 Fever Treatment Depots are functioning in the district.

The table below indicates the surveillance activities in the district during the period 1974—78.

Year		Blood-smear collected	Blood-smear examined	Total positive	Radical treatment done
1		2	3	4	5
1974	..	2,45,538	1,49,025	25,711	23,082
1975	..	1,68,092	1,33,671	39,930	35,804
1976	..	1,79,545	88,732	19,702	18,855
1977	..	2,13,182	88,697	15,989	13,215
1978	..	1,52,112	1,02,762	15,934	12,530

APPENDIX I

Vital Statistics

Year	Birth			Death		
	Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7
1969	..	708	708	..	367	367
1970	10,987	450	11,437	4,722	282	5,004
1971	9,497	476	9,973	5,409	286	5,695
1972	7,454	514	7,968	7,324	395	7,719
1973	6,172	544	6,716	6,056	353	6,409
1974	8,548	513	9,061	4,999	295	5,294
1975	10,216	431	10,647	6,304	290	6,594
1976	9,263	399	9,662	4,367	285	4,652

Year	No. of Infant death			Birth rate per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
1	8	9	10	11	12	13
1969	..	22	22	..	2.36	2.36
1970	689	28	717	1.26	1.45	1.26
1971	634	16	650	1.06	1.08	1.06
1972	844	45	889	0.93	1.14	0.94
1973	341	47	388	0.69	0.84	0.70
1974	474	31	405	0.90	0.77	0.89
1975	660	24	684	1.03	0.55	1.02
1976	469	38	507	0.91	0.49	0.88

Year	Death rate per 100 population			Infant mortality rate per 100 live birth		
	Rural	Urban	Total	Rural	Urban	Total
1	14	15	16	17	18	19
1969	0.54	1.22	1.22	..	3.11	3.11
1970	0.54	0.91	0.55	6.27	6.22	6.27
1971	0.60	0.65	0.61	6.68	3.36	6.52
1972	0.91	0.88	0.91	11.32	8.75	11.16
1973	0.68	0.54	0.67	5.52	8.64	5.78
1974	0.53	0.54	0.52	5.55	4.63	5.57
1975	0.63	0.37	0.63	6.46	5.57	6.42
1976	0.43	0.35	0.42	5.06	9.52	5.25

APPENDIX II

Death from chief diseases for the period from 1969—1976

Year	Cholera			Smallpox		
	Rural	Urban	Total	Rural	Urban	Total
1	2	3	4	5	6	7
1969	..	..	..	..	1	1
1970	8	..	8	3	1	4
1971	..	..	..	..	..	..
1972		..	..	..	..	..
1973	..	..	..	..	..	..
1974	..	..	..	1	2	3
1975	..	..	..	..	..	..
1976	..	..	..	..	..	..

Year	Fever			Dysentery or Diarrhoea		
	Rural	Urban	Total	Rural	Urban	Total
1	8	9	10	11	12	13
1969	..	192	192	..	26	26
1970	3,870	192	3,999	167	10	177
1971	4,884	57	4,941	46	3	49
1972	6,783	163	6,946	125	18	143
1973	5,390	137	5,527	116	30	146
1974	3,927	57	3,984	60	4	64
1975	5,641	93	5,734	42	23	65
1976	2,891	49	2,940	41	18	59

Year	Respiratory disease			Injuries		
	Rural	Urban	Total	Rural	Urban	Total
1	14	15	16	17	18	19
1969	..	41	41	..	11	11
1970	85	12	97	76	14	90
1971	10	9	19	51	4	55
1972	7	39	46	50	8	58
1973	11	14	25	47	19	66
1974	1	1	2	19	5	24
1975	1	..	1	88	8	96
1976	20	4	24	52	6	58

Year	Other causes			All causes *		
	Rural	Urban	Total	Rural	Urban	Total
1	20	21	22	23	24	25
1969	..	96	96	..	367	367
1970	513	116	629	4,722	282	5,004
1971	418	213	631	5,409	286	5,695
1972	359	167	526	7,324	395	7,719
1973	492	153	645	6,056	353	6,409
1974	991	226	1,217	4,999	295	5,294
1975	531	166	697	6,304	290	6,594
1976	1,363	208	1,571	4,367	285	4,652

APPENDIX-III

No. of patients of different diseases treated and died in the Hospitals and Dispensaries

Year		Malaria			Dysentery		
		Outdoor	Indoor	Death	Outdoor	Indoor	Death
1		2	3	4	5	6	7
1969	..	4,424	147	..	35,978	318	9
1970	..	2,098	64	1	33,407	469	5
1971	..	4,071	95	3	33,868	547	8
1972	..	5,140	20	2	62,982	672	34
1973	..	17,568	748	11	68,446	755	35
1974	..	27,558	1,092	11	62,374	794	8
1975	..	25,967	883	12	60,679	876	24
1976	..	31,938	765	18	70,235	461	20

Year		Typhoid			Yaws		
		Outdoor	Indoor	Death	Outdoor	Indoor	Death
1		8	9	10	11	12	13
1969	..	2,063	370	12	122	2	..
1970	..	1,408	489	15	61	4	..
1971	..	1,573	357	14	69	6	..
1972	..	2,355	378	14	102	..	..
1973	..	1,909	450	13	40	2	..
1974	..	2,092	516	17	22	..	..
1975	..	1,296	8	..	1,313	11	..
1976	..	3,197	256	13	152	4	..

Year		Filariasis			Cholera		
		Outdoor	Indoor	Death	Outdoor	Indoor	Death
1		14	15	16	17	18	19
1969	..	950	24	..	..	..	..
1970	..	702	17	..	32	32	3
1971	..	831	26	..	..	..	..
1972	..	701	14	..	..	..	..
1973	..	1,284	37	1	601	1	..
1974	..	1,823	45	..	..	..	..
1975	..	1,986	66	..	..	..	..
1976	..	3,076	53	1	1,022	..	..