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**STATE HEALTH SYSTEMS:
ORISSA**

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Foreword

This paper formed part of a series of background papers prepared for the ICRIER India Health Study, “Changing the Indian Health System: Current Issues, Future Directions” by Rajiv L. Misra, Rachel Chatterjee, and Sujatha Rao. The India Health Study, prepared under the team leadership of Rajiv Misra, former Health Secretary, Government of India, was funded by the Bill and Melinda Gates Foundation.

The paper examines the state of the health sector in Orissa, a state with approximately half of its population living below the poverty line, high disease burden, and weak economy. After providing an overview of public health services and their performance in Orissa, the paper examines the various initiatives taken by the state government for reforming the health sector and for mobilising resources. The role of the private sector in health outcomes is also discussed and an evaluation of the public health systems in Orissa is made in the paper.

This paper by Meena Gupta provides important insights into the working of the health sector in a chronically poor state of India. Useful lessons can be learnt from this experience to improve the health status of the people of Orissa and other poor states in India.

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STATE HEALTH SYSTEMS: ORISSA

I Introduction

Orissa is a major state in eastern India with an estimated population of 35 million people. The annual population growth is 1.83 per cent, which is lower than the all-India figure of 2.14. Scheduled Tribes and Scheduled Castes, mostly living below the poverty line, constitute nearly 41 per cent of the population. Approximately half of the state's people live below the poverty line, with limited access to exploitable resources due to a complex interplay of social, economic, and cultural dynamics. Frequent droughts, floods, and other natural calamities not only impoverish the people, but also make them morbidly stoic towards the pace of development. Despite some attempts by successive political leadership, fairness in resource distribution has evaded the disadvantaged groups. The inability of these groups to demand their own rights has not improved the situation.

The disease burden is high. Communicable, pregnancy-related, and childhood ailments account for about 65 per cent of the diseases. The infant mortality rate is 97 (Sample Registration System 1999), the highest in the country. The publicly provided health service outlets are available, more or less in accordance with the all-India norms, but factors such as low population density (203), geographic inaccessibility, cultural barriers, ignorance, poor service quality, and the deep-rooted influence of traditional healers make the overall outcome of service systems unsatisfactory.

Public sector expenditure on health is about 1.2 per cent of the Gross State Domestic Product, and about 3 per cent of the annual budget. A large portion of the funds is spent in the tertiary sector. Allocation to health has remained low during the 1990s, and the sustained increase in the wage and salary component has made the non-salary portion shrink over the years. Coverage of preventive services, particularly immunisation, has been generally satisfactory during the last decade. Medical care is mainly publicly provided (90 per cent), and the organised private sector is very thin.

The economy of the state is weak. The agriculture sector, employing 64 per cent of the total workforce, contributes 35 per cent to the State Domestic Product. Trade, mining, and community services have shown modest growth in the last decade. Unemployment is high, and the seasonal nature of agricultural work contributes to under-employment too. The public sector, employing about 500,000 people, is, in proportion to the population, one of the fattest in the country at about 15 government employees per 1000 population. Public finances are not in a satisfactory state, with a heavy debt burden.

II Development of Public Health Services in Orissa

Prior to the establishment of allopathic hospitals in the late nineteenth century, people generally had either no access or were reluctant to accept modern medical systems due to educational backwardness and blind beliefs regarding infectious diseases. Witchcraft and sorcery were rampant. However, ayurveda played a vital role in more systematic treatment at that time. A network of hospitals and dispensaries doing primarily curative work using modern medicine existed before Independence. The hospitals were under the district boards. The growth of modern medical institutions in a more widespread manner, and the increasing faith of the people in modern systems happened insidiously after Independence. State patronage for modern medicine, ayurveda, and homoeopathy continued post 1947.

The state of Orissa was formed on 1 April 1936 and had 6 districts at the time. The Public Health Act and rules of Madras Presidency were in force till 1939 in the southern part of Orissa. The major milestones in the development of health services in Orissa from 1939 onwards are mentioned in Table 1.

Table 1

Milestones in the Development of Health Services in Orissa

Year	Event
1939	Orissa Service Code in force. Post of Director, Health Services and cadre of civil surgeons established.
1944	Cuttack Medical College established.
1959–60	Burla Medical College established.
1962–63	Berhampur Medical College established.
1964	State Family Planning Officer post created; basic health services scheme introduced.
1970	Registration of Birth and Death Rules. Birth and death registration was now the responsibility of the Health & Family Welfare Department.
1977	1/3 of PHCs converted to upgraded PHCs, Ayurvedic and Homoeopathic doctors attached to the UGPHCs.
1985	Dispensaries converted to single doctor PHCs.

Note: PHC: Primary Health Centre
UGPHC: Upgraded PHC

III Health Systems Performance: An Overview

There have been significant changes in the health scenario over the past two decades. Infant mortality has decreased from 143 to 97 between 1980 and 2000, a reduction of 46, which given the overall situation under which the state has been performing, is not a small achievement. However, it is a matter of concern that over the last four years the infant mortality rate (IMR) has stagnated. Institutional delivery has not increased much, but the deliveries are now taking place in better surroundings than before due to increased awareness of the people supported by the trained birth attendants, anganwadi workers, and auxiliary nurse midwives (ANMs). The immunisation programme has been doing well, despite great difficulty in making potent vaccines available in ultra-rural inaccessible pockets. Polio has been almost eradicated. After staying polio free for 3½ years, two cases of polio have been detected in one district in the State in late 2002. Orissa was and still continues to be a major contributor in the national figure of deaths due to malaria. Diarrhoeal diseases are still rampant, but there is a significant reduction in the deaths due to diarrhoea. Tuberculosis (TB) detection and treatment has shown promising trends in the last few years. Table 2 shows the progress made in some key indicators.

Table 2**Health Indicators**

Indicator	1980	2000	India 2000	Source
IMR	143	97	72	SRS 1999
MMR	738 (1992)	367	407	SRS 1999
U5MR	131 (1992)	104.4	94.9	NFHS II
CBR		24.1	26.5	SRS1999
CDR		11.1	9.0	SRS 1999
TFR	3.0 (1992)	2.5	3.07	NFHS II
CPR		39	44	DHS 1998
% children aged 0–3 years malnourished		54.4	47	NFHS II
% coverage of pregnant woman with TT		74.3	66.4	NFHS II
% institutional deliveries		22.6	33.6	NFHS II
% children aged 12–24 months fully immunized		43.7	42.0	NFHS II

Note: IMR: Infant Mortality Rate; MMR: Maternal Mortality Rate; U5MR: under-5 Mortality Rate; CBR: Crude Birth Rate; CDR: Crude Death Rate; TFR: Total Fertility Rate; SRS: Sample Registration System; NFHS: National Family Health Survey; CPR: Contraceptive Prevalence Rate; DHS: Demographic and Health Survey.

The institutional arrangements for medical care have also improved. The network of sub-centres, primary health centres, and community health centres have been giving comprehensive health care in a meaningful manner over the years. The introduction of the multi-purpose health workers scheme has increased the number of sub-centres, thereby reducing the population load of each basic health worker.

The maternal and child health services showed visible improvements in quality and coverage, but the continuing pattern of a high percentage of domiciliary delivery has been a matter of concern. Alternate way of addressing the issue have been tried by making the trained birth-attendants (TBAs) capable of conducting deliveries in a hygienic condition, making available clean delivery kits, and making the public more aware of the importance of sanitation and cleanliness.

Attempts at improving hospital services, and making doctors available at more peripheral level have met with mixed results. The high proportion of doctors' vacancies in the rural areas continues to be a problem, but there has been some earnest attempt under the reform process to address this issue. The monetary incentive given for rural service

earlier and currently introduced in a limited fashion is not attractive to doctors, as the money involved is too small. Compulsory rural or tribal service though incorporated in the rules, does not always work efficiently, as the implementation is not strict. However, the recent introduction of one year's mandatory service in difficult areas for all doctors selected for the post graduate courses has helped in filling up a large number of positions in the remote districts.

IV Factors Responsible for Significant Changes in Health Indicators in the past 20 Years

Various factors have been responsible for the changes in the health indicators in the state. Some of these were within the purview of the Health Department; others were outside.

Factors directly related to health service provision:

- (a) The improved network of primary health institutions—health sub-centres, primary health centres (PHCs), and block hospitals—along with the improved skills of staff, better equipment, and more availability of drugs.
- (b) Focused campaigns and programmes on major communicable diseases such as leprosy, TB, polio, etc. and on conditions such as cataract blindness.
- (c) Improved facilities at secondary and tertiary care centres.
- (d) Sustained efforts at health education that have resulted in increased awareness of issues like safe drinking water, Oral Rehydration Therapy (ORT), contraception, prevention and control of diarrhoea, early treatment of leprosy and TB, etc.
- (e) Various health reforms introduced from time to time.
- (f) Availability of donor funding for various health activities, primarily from international donors.

Factors outside the health department:

- (a) Improved literacy levels in the state.

- (b) Better access to safe drinking water (92 per cent). Increased sanitation coverage of 7 per cent, though still abysmally low.
- (c) Better road communication linking villages to blocks and towns with better access to health services.
- (d) Increased awareness of general public about health issues, largely due to mass media like radio and television.
- (e) Extensive network of anganwadi centres under the Integrated Child Development Services (ICDS) programme, with service provision for pregnant and lactating mothers, pre-school children, including growth monitoring and supplementary feeding for the children as required.

V Initiatives in Health Sector Reform and their Impact

Interest in health sector reform began in Orissa in the mid-1990s. Two events heralded the beginning of this interest: (1) the formation of a Committee of the Orissa Legislature chaired by the Health Minister (called the House Committee) which looked into three important aspects of health care and advised the raising of additional resources for health care activities by the introduction and retention of user charges in the medical college and district hospitals, granting greater autonomy to the major hospitals, and the abolition of private practice by government doctors; (2) the evaluation done by the British government's Department for International Development (DFID) of its two health and family welfare projects in Orissa found that further capital investment in the health sector would be inadvisable unless certain systemic changes were undertaken. The evaluation suggested that reforms were needed in three main areas, viz. maintenance (of buildings and equipment), medicine, and mobility, (the three 'M's) if past and future investment in the health sector were to show results.

In the five years or so following these two events, a number of reforms, both large and small, have been introduced in the health sector in Orissa. Some of them relate to changes in administrative and operational systems, some to changes in personnel policies including skill development for better service delivery, and some were aimed at giving a minimum health guarantee to the people. The reforms have had varying degrees of success. Some of the principal reform measures are described below.

(a) Drug procurement and distribution

Introduced in 1998

Objective: To make sufficient and good quality drugs available to patients in all public health institutions.

Applicability: The whole state

Prior to 1998, the procedure laid down for purchase of drugs for the state health institutions involved a mechanism for finalising the list of drugs, prices, and supplied at state level, allotting funds to the districts and thereafter allowing the Chief District Medical Officers (CDMOs) and other indenting officers to manage the procurement and distribution. The system was time consuming and cumbersome, the medicines were costly, there was no essential drug list, medicines were ordered by brand name, there was no quality test, and there were many irregularities in purchases. With the introduction of the new centralised procurement system, largely borrowed from Tamil Nadu, several changes were made. An essential drug list is drawn up listing drugs by generic names. This is further classified into 3 categories for the primary, secondary, and tertiary level institutions. Thereafter, orders for the drugs are placed, and payments are made, centrally, but supplies are delivered at the district level. Each institution is informed of its entitlement of drugs (by value) and given a passbook. They can make their own selection, constrained only by the essential drug list and overall entitlement. Quality is insisted upon with proper packing and logos, and quality testing of each batch of drug is done through private laboratories prior to payment. For emergency purchases, 20 per cent of the drug budget is paid to the CDMOs.

The benefits of the new system are many. The essential drug list in generic names cuts down the purchase of unnecessary drugs, and results in rational drug prescription; bulk purchase, central payment, and adherence to a strict schedule of payment results in economies of scale and value for money (for example, IV fluids earlier supplied at Rs. 16 per bottle, now cost Rs. 6). Strip packing has increased the acceptability of the drugs by the public; quality testing and black listing of substandard drug suppliers has resulted in

good quality drugs being supplied. The institutions have the freedom to select their own drugs; and most important of all, drugs are available in plenty in all the institutions.

A great deal of advocacy was necessary in the initial stages to overcome the vested interest group resistance. The system got stabilised only after about a year or so. However there is now wide acceptability in the state. Further improvements that are underway are the adoption of a computerised online inventory control system, training in rational drug use, etc.

(b) User charges

Introduced in 1997

Objective: To raise resources for the health institutions from people able to pay and utilize it for the improvement of the hospital and the benefit of the patients.

Applicability: All tertiary, district, and district level government hospitals in the state.

The department used to charge a nominal fee for certain facilities in the hospitals, principally for X-rays and rooms. The fee was extremely low, only a fraction of the cost or market prices of the corresponding service. Moreover the amount paid went to the government coffers and not to the hospital, hence there was little motivation to collect it. Under the new system, user charges were introduced for three categories of service, viz. diagnostics, special accommodation (pay wards), and transportation, in the tertiary, district, and district level hospitals. The districts were also divided into three categories on the basis of their economic prosperity and slightly varying rates were fixed for the different categories. Registered societies were set up for each hospital and the user charges collected are retained by the society for use in the hospital. People below the poverty line are exempted from payment. Similarly, tests relating to the national programmes are not charged (viz. leprosy, TB, malaria, etc.).

The societies have been given the freedom to enhance the existing rates or introduce rates for new activities. They also have the authority to utilise the funds as they

think fit, subject only to general guidelines (viz. no spending on construction, on major equipment, or on hiring of personnel).

By making funds available at the hospital level for day-to-day working capital and emergency needs, the scheme has greatly benefited the public. Financial decisions are taken at the district level, thereby ensuring greater autonomy, high motivation, and increased interest in improving the hospitals.

(c) *Privatization of cleaning in hospitals*

Introduced in 1998

Objective: To ensure cleanliness in public hospitals

Applicability: Undertaken as a pilot project in a few district level and tertiary hospitals in the state.

Though most government hospitals have a fair number of regular government employees to do the cleaning work, lack of cleanliness is a common feature. Yet cleanliness is an essential requirement of every hospital and it was necessary to find a way to ensure this. An experiment was therefore attempted to contract out the cleaning work of a major hospital in Orissa to a private agency. Sulabh International, who have been pioneers in the field of public sanitation, was contracted at a negotiated price for undertaking the cleaning services of the state's Capital Hospital, Bhubaneswar, in July 1997. It was agreed that the existing cleaning staff (i.e. the government employees) would be engaged in other work in the hospital. The state government's finance department required that while no retrenchment need take place, existing vacancies of cleaning staff should be abolished and any new vacancies occurring as a result of retirement or death should not be filled up. Initially there were some protests from the Class IV employees union, but since no retrenchment of staff was involved, the protests did not gather momentum. The difference to the hospital in about two months time was remarkable. Bathrooms, which earlier stank and had been unapproachable most of the time, were clean, the corridors were without litter, the window grills and ceiling fixtures were dust and

cobweb free. Public response to the change was also extremely positive, with surprise being expressed at how a government hospital could be so clean.

Demands started coming in from other hospitals to contract out the cleaning in those institutions as well. Since funds were a constraint, this could not be done, at once, in a large number of hospitals. However, in September 1998, further contracts were signed with Sulabh for the cleaning of one ward of the SCB Medical College, Cuttack, and 6 wards of the MKCG Medical College, Berhampur. Subsequently, it was extended to 4 district hospitals. The practice is now very well accepted in Orissa and has met with a very favourable public response. Some district hospitals have contracted out the cleaning work, using their own funds, without waiting for government funding. This is an indication of the felt need for, and popularity of, the initiative. Provided funds permit, the state government intends to bring all the district level and tertiary hospitals under this system.

(d) *Petty maintenance of health buildings*

Introduced in 1998

Objective: To ensure timely and proper maintenance of public health institutions.

Applicability: Pilot project tried out in 100 Block PHCs/ CHCs at a time

All building maintenance work, including petty and annual maintenance as well as special repairs, have been the responsibility of three government engineering departments, the Works Department (for urban areas), the Urban Development Department (for urban water supply and sanitation), and the Rural Development Department (for rural areas). Since these departments have personnel only at district or at best Block headquarters level, and since health department buildings are scattered far and wide, most of the institutions do not get attended to. Petty repairs, which may cost a few hundred or a few thousand rupees, are almost never taken up on time. The matter, therefore, needed to be addressed.

Under this initiative, 100 CHCs/Block PHCs were identified in the first year and each Medical Officer in charge was given Rs. 10,000 to take up petty repairs. They were asked to undertake urgent minor repair works following simple procedures. They were

also asked to maintain simple accounts of this. The advantage of this new system was that the funds were made available to the occupier of the building, the person actually concerned with, and affected by, the condition of the building. Consequently, it was expected, the repairs would be taken up on time and the quality of the repairs would be better. The initiative has been evaluated and has been found to be useful, but certain gaps in communication need to be addressed. Training is being given to the medical personnel of all the districts on how this programme is to be handled. Changes in procedure are also proposed to ensure proper utilisation. The initiative, which was carried out on a pilot basis for three years, will be extended to the whole state shortly.

(e) *Mandatory pre-PG rural service*

Introduced in 1999

Objective: To ensure the presence of doctors in remote and difficult areas and provide better rural orientation to young doctors.

Applicability: The whole state.

The state has a large number of vacancies of doctors in tribal and 'difficult' areas. Several efforts made earlier to ensure the presence of doctors in these areas did not meet with success. At the same time, young doctors got hardly any rural orientation and made efforts to remain in urban areas all the time. Under this scheme, 11 districts, to which doctors are generally unwilling to go to and which have consistently had a large number of vacancies, were selected, and health institutions in them identified. The entrance examination for the medical post graduate (PG) courses is held one year ahead of the date of admission. Those who qualify, are advised about the medical college and the discipline they will get, and thereafter assigned to one of the institutions in the 11 districts. Those who are not already in government employment are given contract appointments and assigned to these districts. The doctors are to work in these institutions for one whole year, and only after obtaining a certificate regarding completion of the period, are allowed admission into the PG course. The initiative has been extremely successful, ensuring the presence of doctors in difficult and remote areas. One major reason why this initiative has succeeded where others have failed is that the assignment is for a limited period only, and

it is linked to something that is highly desired (a PG degree). It is understood that other states like Kerala are also adopting this practice.

(f) Internship training

Introduced in 2000

Objective: To improve the quality of community health training of medical interns.

Applicability: The whole state.

Prior to the change, medical interns were given community health training in three training centres (under the control of medical college) and their attached health institutions. They were trained in large groups of 25 or more, they got hardly any exposure to real community health problems and the quality of the training was poor with little, or no, hands-on training. The supervision was done entirely by the medical college teachers, who are themselves not very much in touch with community health conditions and developments.

Under the new scheme, the interns are sent in groups of two and three to community health centres under the control of the CDMOs. They are exposed to real community health situations and get 'hands on' training. They are supervised both by the medical officers in charge of the institutions as well as the medical college teachers.

The benefits of this scheme are several: it produces better trained doctors; it exposes young doctors to the rural health scenario; and it is expected to promote better attendance of doctors in rural health institutions if, and when, these doctors join the state health service at a later date.

(g) *Pancha Byadhi Chikitsa (5 Diseases Treatment Scheme)*

Introduced in 1999, reintroduced in 2001.

Objective: To ensure that every patient who goes to a public hospital is guaranteed treatment at government cost for certain major diseases.

Applicability: The whole state.

Prior to the introduction of the scheme, no clear position existed in the state regarding what medicines a patient could get at a public health institution and what he/she would have to buy. There was no uniformity of dispensation of drugs in any institution. Very often a patient would be asked to purchase drugs even when equivalent drugs were available in the hospital pharmacy. There was a tendency to overprescribe. This system affected the poor patients the worst. An effort was therefore made to find out what were the main diseases that the majority of the people, and particularly the poor, suffered from. A list of diseases was prepared, and out of that five were identified on the basis of incidence, hospital attendance, and cost and ease of treatment. These were malaria, leprosy, diarrhoea, acute respiratory infection, and scabies. It was estimated that 70 per cent of the patients who attended public health institutions came for treatment of one or the other of these diseases. Protocols for treatment were developed; calculations of the medicine requirement were made; medicines were ordered and distributed to all institutions; instructions were issued to health personnel regarding the provision of free medicines. A media campaign was also carried out to inform the public about the scheme. It was also made clear that if any patient had to purchase medicines from outside, the cost would be reimbursed and the prescriptions so reimbursed would be kept for clinical audit and erring doctors would be penalised.

The scheme created a health entitlement and risk protection guarantee for the poor; it addressed the commonest diseases that affect the largest number of people; and it curbed the tendency of doctors to prescribe unthinkingly. The scheme was first started in 1999 experimentally for 6 months. It was restarted as a major state-wide programme in mid 2001.

(h) State Health and Family Welfare Society

Established in 1998

Objective: To create a simple, problem free method for making funds available for health care activities, as and when required

Applicability: The whole state.

Prior to the establishment of a State Society for Health and Family Welfare, all funds were routed through the government system, i.e. through the budget. There were many problems faced. Among other things, funds were not available in time, and the drawal and accounting procedures were cumbersome.

With the establishment of the State Society, all non-budgeted funds were received, channelized, and utilized through the Society. For facility of accounting, and to meet the reporting requirements of donors, separate accounts are maintained for each programme. The benefits of having a State Society (and a single society for all the extra-budgetary funds received) were several. Funds could be easily accessed and were available for specific purposes at the time of need; there was flexibility of use; and the funds could be accessed to manage any sudden crisis or contingency. It is understood that other states are now emulating the Orissa pattern.

(i) Amalgamation of District Health Societies

Introduced in 1999

Objective: To have a composite district health society for better management (instead of multiple societies)

Applicability: The whole state.

Earlier, a number of individual societies had been set up in the districts for each Central or donor funded programme. There were societies for blindness, leprosy, TB, malaria, etc., besides a Zilla Swasthya Samiti (District Health Society) (ZSS) which had a variety of functions. The composition of almost all the societies was the same with the District Collector as Chairman, and the Chief District Medical Officer as Member

Secretary. The societies, which had been set up for different programmes, were amalgamated into a single, district level society, the ZSS. For facility of transactions, the ZSS opened separate bank accounts for each programme or separately funded activity. The amalgamation of district societies into one has resulted in more systematic functioning, with common meetings, better management, and greater autonomy to districts. The Government of India has advised other states to emulate the pattern of Orissa.

(j) *Formation of district cadres for paramedics*

Introduced in 1998. In the process of being implemented.

Objective: To create smaller, more manageable cadres for lower level functionaries

Applicability: The whole state.

Prior to the formation of district cadres, most paramedics such as ANMs, nurses, pharmacists, laboratory technicians, etc. were employees of the state and were expected to work in any part of the state. They were also subject to transfers from one place to another. Since paramedics are low-paid government workers and also because a large number of paramedics are women, these conditions of service caused them considerable hardship and expense. Besides, the workers, being mostly from the more developed coastal districts, were reluctant to go to the remote and unpopular districts and remained on leave on some pretext. Consequently, many posts in these areas remained vacant.

With the decision to form district cadres, the existing personnel in the state cadre is to be divided and allotted to different district cadres. All new recruitment thereafter is to be made by the districts. In the recruitment of new candidates, preference is to be given to candidates belonging to the same districts. The change will result in better availability of paramedics in difficult areas, less hardship for personnel due to transfers, and consequently better service to the public.

(k) Multi-skilling of health personnel

Introduced in 1998

Objective: To utilise existing health personnel for different activities.

Applicability: The whole state.

The state government suffers from a shortage of certain skilled personnel like lab technicians. It also does not at present have the funds to employ more personnel. It was, therefore, decided to utilise existing health personnel for additional activities by training them in different skills. Pharmacists and health workers have been trained in microscopy for sputum and blood examination, and deployed in the implementation of the Revised National Tuberculosis Control Programme (RNTCP) and the malaria programmes. ANMs have been trained as Directly Observed Treatment, Short-course (DOTS) providers and deployed in the RNTCP in addition to their own duties. As a result of this, a drain on the state's resources has been avoided, health personnel are better motivated, and programme management has improved (e.g. there is a reduction in slide positivity reporting lead time in malaria, better sputum conversion made, TB, etc.)

(l) Vitamin A campaign

Introduced in 1998

Objective: To reduce Vitamin A deficiency among children below 5 years

Applicability: The whole state

This is not a reform, but it is a new approach to an existing programme. Before the introduction of this campaign, children aged from 9 months to 3 years were given Vitamin A every 6 months under the routine immunisation programme. The compliance was poor, and there was a high prevalence of Vitamin A deficiency. In the campaign approach that was introduced, Vitamin A was administered on a single day (pulse approach) every 6 months. Highly publicised campaigns were carried out to ensure a high rate of attendance. To save on costs, one out of two doses every year is combined with the pulse polio campaign. As a result of this change in strategy, the coverage is far better. Where earlier

40 per cent or so of the children were covered, the coverage at present is over 90 per cent. The benefits, in the form of reduced under-5 child mortality and morbidity, should be visible in future.

This single day campaign has been discontinued on instruction of the Government of India not to link the programme with the Pulse Polio Immunisation campaign. The State is now experimenting with holding Vitamin A campaign months in May and November, administering Vitamin A to children between the age of 1 and 3 years on regular immunisation days. This initiative is yet to be evaluated.

(m) *Short-course training in anaesthesia administration*

Introduced in 1999

Objective: To enable doctors in CHCs to administer anaesthesia in emergency obstetric care

Applicability: Started as a pilot programme.

The state suffers from a serious shortage of anaesthesia specialists. Anaesthetists to tackle obstetric emergencies are even more difficult to get. There are hardly any doctors available in the CHCs to administer anaesthesia. An initiative was, therefore, taken to address this problem. Doctors from the field were given 3 months training in anaesthesia administration. With the availability of trained doctors at the CHC level, life threatening obstetric emergencies can now be attended to. However, the numbers trained are, so far, very small. The scheme, which was discontinued, is proposed to be restarted.

(n) *Handing over PHCs to NGOs*

Introduced in 1997

Objective: To allow remote PHCs to be better managed, give better health care to the public.

Applicability: A pilot project.

The scheme was tried out experimentally in 2 districts. Government was finding it difficult to provide health personnel in some small single doctor PHCs in remote locations. Consequently an experiment was made in handing over the services to willing non-governmental organisations (NGOs). Under the agreement, the PHCs were to be managed and run by NGOs. The experiment did not run for very long, as the NGOs did not have the resources and ability to run the institutions and handed them back to the government after some time. The evaluation report recommended trying out the experiment out in more places with suitable modifications.

VI Critical Manpower Shortages

There are three reasons for shortage of health manpower in the state: (1) persons with the required qualifications are not available; (2) though qualified persons are available, they are not willing to work in the remote and difficult areas; (3) the government does not have the resources to employ all the different categories of personnel needed such as radiographers, laboratory technicians, etc.

There is an acute shortage of doctors in the state. The state has only 3 medical colleges, all government run, and the number of medical graduates produced are not adequate to meet the needs of the state run medical services. Many doctors choose not to work in the state or in the government. The state is trying to address this need by appointing retired and other doctors on contract basis. It also proposes to place ayurvedic and homoeopathic doctors instead of allopathic doctors in some of the vacant PHCs.

There is a shortage of doctors in certain specialties such as paediatrics, obstetrics and anaesthesia, as they are not being produced, in sufficient numbers by the state's medical colleges to meet the requirement. While increasing the number of post-graduate seats in these disciplines may help, this will result in only a marginal increase. The Government of Orissa has tried to find some short-term solutions through short courses in anaesthesia training, etc. (described earlier). Another kind of shortage arises because doctors and paramedics (pharmacists, nurses, multi-purpose health workers—male and

female), though in government service, are reluctant to work in the more remote areas of the state. This is primarily due to the lack of physical and social infrastructure, viz. roads, telecommunications, housing, schools, and leisure activities. The lack of transparent and clearly laid down transfer policies are also partly responsible for this. Some efforts have been made to address this through mandatory pre-PG postings, amendment of the rules, etc. Manpower shortages also occur because of the state's resource constraints. This is partially being addressed through the multi-skilling of personnel described earlier. Shortages of paramedics would be significantly reduced by having district recruitment (district cadres) as opposed to state level recruitment (state cadre). This is currently being attempted by the Government of Orissa.

VII Initiatives at Mobilising Resources

The allocation for health as a proportion of the state's total budget is approximately 2.8 per cent. About 85 per cent of the resources allocated for health go to meet salaries and other administrative costs. Therefore, there is a strong need to find additional resources. Some steps have been taken in this direction in the past few years.

User fees

The monthly collection of different institutions varies from a few thousand rupees to Rs. 2,000,000 per month. The amount is retained by the institution and has been used for a variety of purposes such as repair of equipment, replacement of reagents, X-ray films, repair of beds, wards etc. No administrative approval or fund allocation by the government is required for utilisation of this amount. The registered society mentioned in an earlier section takes the decisions.

The additional resources generated have, in effect, enhanced the resources spent by the government on the health sector. The resource mobilisation through user fees during the period from 1 July 1997 to 31 March 1999 was Rs. 2.98 crores, which was roughly 1 per cent of the total public expenditure for running those institutions during the reference period.

There has also been a visible impact, in the form of near-optimal utilisation of assets. The equipment, which used to lie unutilised due to non-repair or non-availability of consumables is now repaired as soon as it is out of order, thus increasing utilisation. Similarly, the utilisation of ambulances has gone up as found in a study on health transport done in 1999.

Contribution in kind

The ZSS can collect donation in kind. This has resulted in a net addition to the asset base of the department. The contributions have been in the form of:

- Ambulances which are run by the ZSS and are a source of income since their services are charged.
- Pay wards (rooms), blood banks, paediatrics, and other wards constructed by agencies like the Red Cross, truck/bus/mill owners associations, Rotary and Lions Clubs as well as benevolent individuals, etc. Membership drives for the ZSS.
- Resource mobilization through the Panchayati Raj Institutions (PRIs): many sub-centre buildings were constructed and handed over to the Health Department.

With the ZSS accepting donations in kind, the response from the civil society has been channelled into creation of durable assets and, more importantly, income generating assets for the health sector. This has lightened the load on the health sector finances to some extent.

VIII Role of Private Sector in Health Outcomes

Health care service outlets are predominantly in the public sector in Orissa. Taking hospital beds as an indicator, private hospital beds account for less than 10 per cent of the total bed strength in the state. This is at variance with the pattern elsewhere in India.

Similarly, for every 1000 patients seeking treatment, 906 rural patients and 810 urban patients get their services from government hospitals. Private medical institutions (PMIs) are, by and large, located in urban areas and are unevenly distributed among districts. Sixty four per cent of private hospitals, with 71 per cent of the total private hospital beds, are located in urban areas. The uneven distribution of private hospitals among districts is evident from the fact that while the public-private hospital ratio is 77:22 in Cuttack district, the same in Kalahandi (in western Orissa) is 95:5. The actual ratio may be slightly higher in favour of private facilities across the districts, because many single doctor clinics are not officially registered.

Private providers include for-profit institutions (concentrated in urban areas) and not-for-profit outlets (mainly rural). Private medical institutions, with the exception of a few in Bhubaneswar and Cuttack, are usually small with less than 30 beds, and provide both general and specialised care. Private practitioners of ayurveda and homoeopathy also exist; they provide mostly outpatient consultations. In addition, there is a large band of traditional healers spread across 19 districts of the state where the tribal population is high. Not-for-profit institutions in the rural areas are mission charities, and are found mainly in southern and south central Orissa.

More than one-third of the PMIs in the state are single doctor nursing homes or small clinics. Another one-third have 2 to 5 doctors. There are very few private hospitals having more than 10 doctors.

The PMIs, with the exception of those in the voluntary sector, focus on curative care, and are not geared for carrying out public health functions. The capacity in terms of trained personnel, time, space, and other resources is an important consideration while persuading private institutions to engage in public health services. PMIs are not concerned about the control of communicable diseases. They are rather engaged in treating those people who seek the services for such conditions. A study conducted in Orissa by the Institute of Management in Government (IMG), Kerala in 1999 showed that only 44 per cent of the private hospitals in 3 sample districts were aware of any major outbreak during

a five-year period preceding the survey. The lack of concern was also evident in their responses regarding the Government of India treatment regimen followed under the national programmes for various diseases (e.g. leprosy, TB, etc.). About 64 per cent of the PMIs in the IMG study were aware of this regimen, but did not generally follow the same. However, for institutional services, the PMIs are relatively well equipped. Primary stakeholders, cutting across economic and regional status, rated private providers as being more efficient in curative care.

There are two state regulations that control the operations of private providers in the state, besides the Government of India's Acts, viz. the Medical Termination of Pregnancies Act and the Pre-natal Diagnostics Tests Act. The two state Acts are the Orissa Clinical Establishments Act (OCEA) and the Orissa Medical Regulation Act (OMRA). The OCEA, which became effective in 1994, is intended to control and regulate the proper functioning of private nursing homes and other clinical establishments. The Act sets standards and conditions for clinical establishments to register and function, establishes procedures for the supervision, and sets conditions for penalty for offences and also for protection of action taken in good faith. The OCEA, thus, empowers the government to regulate the PMIs in these aspects. However, the IMG study found that the Act was not administered or implemented properly. There are delays in granting registration, and there is no proper system in controlling PMIs from doing undesirable practices. The study also found that the district authorities either treated the provisions of the Act casually, or ignored them. The absence of a proper database of PMIs at the district level was an indicator of this attitude.

The provisions in the Act are adequate to control the PMIs and prevent undesirable practices. But there are no clauses that can direct PMIs to participate in government programmes. However, some hospitals voluntarily get involved in some such services like immunisation, sterilisation, cataract operation, health camps, and HIV/AIDS awareness programmes. Mission hospitals are generally good at ambulatory services, but the area covered by those institutions is restricted due to the very small number of such hospitals. The Act does not have any enabling provisions to encourage private initiatives, except for

the clauses that allow the authorities to relax the prescribed requirements in relation to location, accommodation, equipment, and personnel to set up clinical establishments in rural areas.

The OMRA was promulgated by the Legislative Assembly in 1961. The Act sets the professional standards and qualifications to practice both in the government and the private sector. It has an established administrative machinery in the form of Orissa Council of Medical Registration. However, in its present form, the Act does not have adequate powers to regulate the practising habits in the private sector but can be amended suitably to do so (IMG study).

Besides the state Acts, private clinical establishments which offer abortion services and pre-natal tests are regulated by two Central Acts, viz. the Medical Termination of Pregnancies Act, and the Pre-natal Diagnostic Techniques Act. The implementation of both the Acts in the state is somewhat weak.

According to the World Bank Health Sector Public Expenditure Review of 1993, the household out-of-pocket expenditure for treatment in Orissa was as given in Table 3:

Table 3

Average Household Expenditure for Treatment per Disease Episode in Orissa

	Urban (Rs.)	Rural (Rs.)
Government Hospital	75	127
Private Hospital / Clinic	109	125

Source: World Bank (1993), *India: Public Expenditure Review*.

The above figures indicate that the out-of-pocket expenditure for the rural patient per episode of illness is approximately the same whether the patient seeks private or public health care services. The situation might have improved in recent times due to better availability of medicines in government institutions, but further investigations are needed in the matter.

The issue of whether or not private participation in the health sector should be actively encouraged is a difficult one. Private institutions take the load off government health institutions, and also quite often set better and sophisticated standards. On the other hand, as more and more private institutions are set up, patients who can pay tend to increasingly go to these institutions, leaving the public hospitals for the poor and undemanding. Consequently, the standards in public hospitals, which are already low due to shortage of funds, further deteriorate. This leads to inequity in health care.

In the present circumstances, ways to encourage partnership between the public and private providers have to be looked into. The IMG study recommended that the Act should be amended to include clauses that empower the government to direct the PMIs to follow government programmes and treatment regimen, and that it should be a condition for granting/renewing licences. Similarly suitable amendments have been suggested in the case of OMRA.

IX Evaluation of the Public Health Systems in Orissa

Decentralisation and community involvement

Decentralisation in the state, and in the health sector, has been limited. The medical profession has preferred to retain its mysticism and has been unwilling to subject themselves to any outside monitoring or control. Community involvement has been dismissed on the grounds that the common person will be unable to understand the implications of health issues. Seeking community support has been limited to involving NGOs and women's groups in social mobilisation for activities like PPI. There has been no devolution of financial powers.

The United Nations Children's Fund (UNICEF) has been facilitating community involvement in four districts. This began in Kandhamal district in 1998. The main focus is on information sharing, greater transparency, and empowering people's representatives to make decisions about the delivery of primary health care services in their area. The health

and ICDS workers share the list of services that are supposed to be provided; the health workers share their tour programmes, which are displayed in the Panchayat Samiti office. The health and ICDS workers also attend the monthly Gram Panchayat meeting, and share a report of their activities, as well as their plan for the coming month. The initial meetings were often acrimonious, with the community complaining about the workers. But with more meetings, the acrimony has decreased. In some places, the interaction is more structured, with one particular health topic being discussed each time.

Some of the positive outcomes of this increased interaction have been:

- For the first time, the PRI members have felt involved in the health activities provided to them: most of them were unaware of the services that are supposed to be provided. In these districts, many Panchayats have constructed sub-centres and AWCs out the Employment Assurance Scheme (EAS) funds, where the worker was doing good work.
- In some Gram Panchayats, the villagers escort the ANM to the village if the village is remote; provide a person for carrying the vaccine; and provide a vehicle for transport. Some have suggested a change in location of the IPs, so that access to the people is better.
- Workers have been able to get early information about outbreaks of disease, as well as births and deaths.

While health workers have been attending the PRI meetings and report that their work has been made easier, medical officers have been very resistant to attending the PS meetings at the block level. Attendance of health staff in the PRI meetings has enormous potential in terms of patient compliance for chronic disease follow-up, etc. Under the Eleventh Finance Commission, it is proposed to provide funds to the PRI for maintenance and mobility at the GP level. However, the PRIs have to be educated about common health matters, in order to make optimal use of these resources.

While devolution of powers to PRIs has not made much headway, some efforts have been made to delegate powers to different levels. Primary among these is the formation of district cadres for paramedics as explained earlier. Besides the formation of the ZSS, and authorizing them to collect and utilise user charges, has resulted in increased decision making at the ZSS level.

Inter-sectoral coordination

The extent of coordination across sectors has been different at different levels. Generally speaking, coordination at the lower levels in the field has been good, particularly between the Health Department and the Women & Child Development Department (the ANM and the AWW). The implementation of the ICDS programme and health campaigns such as a leprosy and TB are evidence of this. Collection of vital statistics has also improved due to the interaction between the Anganwadi Worker in the villages and the MPHWF (F) [Multi-Purpose Health Worker (Female)] in the sub-centres. However at higher levels the inter-sectoral coordination is low and needs to be improved. In some case coordination is high because of individual initiatives.

Coordination among various agencies within the department

At present the alternate systems of medicine such as ayurveda, homoeopathy, and unani are made available through separate set of institutions. There is mutual distrust among these systems. Except for a brief attempt in the 1970s there has been no effort to integrate the systems. They have remained separate. Attempts are now on to place doctors from these alternate systems at some PHCs, and subsequently at the District Headquarters Hospital (DHH) level. Some chronic diseases, at present managed by symptomatic treatment in modern medicines, could be managed safely and cheaply through these systems.

The role of vertical programmes

Vertical programmes in the health sector have always proved effective in tackling health problems of larger dimensions. The responsibility and accountability of the staff towards their job are always higher in the vertical system. The specialised, qualified, and trained manpower available under the vertical system have been able to control the incidence of diseases like smallpox, malaria (in the past, before its resurgence), and leprosy. The disease burden of leprosy has come down significantly and this, to a large extent, is due to the dedicated manpower. However, as the incidence and prevalence of a disease decreases, maintenance of a vertical system exclusively for a single disease becomes extremely costly, and integration with the general health care system becomes important. Thus while vertical programmes are good at a time when the prevalence of a disease is high, subsequently an integrated programme is much more effective. Converting from a vertical programme to an integrated programme needs a thorough evaluation of the disease burden in the field, capacity building of horizontal systems to take up additional responsibility, proper planning for logistics supplies, and management of information system. Unplanned and hurriedly taken decisions for integration of vertical programmes with the general health care system may result in failure to control the disease.

Convergence of health and nutrition sectors

In Orissa, health and nutrition are dealt with by different departments, viz. the Health and Family Welfare Department and the Women and Child Development Department. At the field level, their priority target groups are the same: pregnant and lactating women, children under six, and adolescent girls.

At the grass-roots level, the health and anganwadi workers work well together, especially in the western and tribal districts, where the ICDS programme has been in place for several years. In 1998, the Secretaries of both departments issued a joint letter regarding the concept of a 'fixed health day', which was a major step towards better collaboration between the departments. This envisaged that the ANM in one area would provide comprehensive services at each of the AWCs in her area once a month. If there are

more than 4 AWCs in one ANM area, two AWC areas are clubbed and services delivered at each centre alternately. On the fixed health day, antenatal care, immunisation for mothers and children, growth monitoring, examination of high-risk pregnant women and malnourished children, treatment of minor ailments, as well as health education, are supposed to take place. These are supposed to be attended by the Lady Health Visitor (LHV) as well as the sector Medical Officer (MO).

Operationalization of the Fixed Health Day has varied from district to district: in some of the tribal districts this is functioning regularly, but the MOs do not attend the sessions in most places. The supervisory staff attend most of the fixed health days. The ANMs attend the monthly sector meetings of the AWWs, and update their records. What needs strengthening is the supervision, and better collaboration at the block, district, and state level.

In the districts where community involvement is being facilitated (Kandhamal, Keonjhar, Mayurbhanj, Balasore), the AWWs are also being trained in the use of the drug kits that are provided to them. This training is imparted by the block medical officers, and has enabled the AWWs to better use the medicines with them, as they are often the first functionaries approached by the villagers for curative care.

The AWWs have been selected as the Malaria Link Volunteers under the Enhanced Malaria Control Programme (EMCP) and this will forge closer links between the staff of the two Department.

Arrangements for health care needs in remote and tribal areas, and in urban slums

As per national norms, the population per subcentre and PHC in tribal and hilly areas is less than in the plains areas due to problems of inaccessibility and scattered habitations.

Shortage of staff is a perennial problem in the remote and tribal areas, with a high proportion of vacancies as well as staff absenteeism. There is a shortage of all categories of staff, including doctors, nurses, and ANMs. After the ANMs were organised into district cadres, the absenteeism is likely to be less, as preference is given to appointment of ANMs from the same district, and others apply only if they are willing to work in that district. The mandatory posting of doctors selected for PG study for a year in these districts has also addressed the vacancy problem to some extent. Since these doctors are assured of a PG seat after one year of work, they are quite willing to stay in their place of posting.

Special provision has been made for the KBK districts (the former undivided districts of Kalahandi, Bolangir, and Koraput) for health care. In these districts, Mobile Health Units (MHUs) have been provided staffed by a doctor, a pharmacist, and an ANM. These mobile units are expected to cover the remote areas once every fortnight. No evaluation of these mobile clinics has been done so far, and reports on their performance and efficacy vary from 'very good' to 'a waste of resources'. It may be worthwhile to expand the scope and the reach of the MHUs, but it is imperative that an evaluation is done before this is undertaken.

In urban slums, provision for health care is rather disorganised. Health care for the larger towns and municipalities comes under the municipal administration, and is out of the purview of the CDMO of the district in which the town is located. Health coverage in urban areas is always much below that in rural areas. Urban slums have a large floating population of migrants from the villages, and there is no track of these persons, or their health care needs. There is a mushrooming of private clinics of varying integrity and the slum population is more vulnerable to incorrect treatment and increasing drug resistance.

In short, health care for urban slum populations in Orissa is unorganised, with no one exclusively in charge. There is no mapping or systematic addressing of issues. With increasing urbanisation as well as migration to cities, this is an issue that needs to be addressed urgently. The Health and Family Welfare Department would need to co-ordinate

efforts with the Housing and Urban Development Department, as well as the various municipalities, to improve services in urban slum areas.

Epidemiological surveillance and response to epidemics

Orissa is a disaster prone state — its long coastal belt is frequently visited by cyclones and tidal waves, while the river beds regularly flood the surrounding areas causing untold suffering and misery. The western belt is drought prone and the population there is a victim of chronic under-nutrition and its attendant hazards. Other than this, the entire state of Orissa falls under Zone 3 of the seismic vulnerable zones.

In response to the super-cyclone that struck the state in 1999, the government has set up a separate institution, the Orissa State Disaster Mitigation Authority (OSDMA), which will be the nodal organisation in case of any future disasters. The OSDMA is in the process of developing a state-level disaster preparedness and mitigation plan. This plan involves the community, the NGOs and community based organisations (CBOs), and also other civic society members, all of who will be given defined roles and responsibilities. It is hoped that this will help the community to be better prepared in the eventuality of a disaster.

On the health front, the progress has been slow but steady. Following the super cyclone in October 1999, a weekly surveillance system has been set up to monitor 10 epidemic prone diseases. It is a combination of both community and institution based surveillance. Information flows from the village level right up to the Epidemic Surveillance Cell (ESC) located in the office of the Joint Director of Public Health. The transmission is done by the regular health staff and is well integrated into their regular activities. This initiative was introduced in a phased manner, initially in the 12 cyclone affected districts and after a year, to the entire state. More than 80 per cent of the original districts are reporting regularly every week. The rest of the districts are slowly joining the system and hopefully there will be improved reporting from all the districts soon.

Data is computerised at the district level and subsequently sent up to the state level by fax or through the net. Many of the districts have started analysing the data at the district level itself. The rest wait for feedback from the state before taking any action. At the state level, the ESC hosts a weekly meeting where the previous week's reports are analysed and actions recommended where necessary. Feedback is sent to the districts so that they can take the appropriate action and do the needful. In this manner all the health staff are on the alert and are able to detect any outbreaks at a very early stage. The most recent example is that of a measles outbreak that was detected and prompted the government to institute a mass measles campaign to reduce the load of susceptible children.

Orissa is one of the first states in the country to have such a responsive surveillance system. In an era of emerging and re-emerging epidemics, this important public health measure is a useful tool for the government to protect its citizen from unnecessary suffering. However there is still much to be done. Some of the actions necessary in the future are:

- Consolidation of the expansion so that all the districts are reporting regularly.
- Improve the quality of the reporting through regular supervision and monitoring through sentinel sites like private sector.
- Better analysis by using epidemiological tools and also technology like GIS etc.
- Appropriate response is needed and this requires better training of the public health staff.
- Integration and involvement of the labs and medical colleges should be done as soon as possible.
- Community involvement in this surveillance would be the icing on the cake and requires a lot more involvement by NGOs and CBOs.

Arrangements for safe motherhood and child health, including institutional deliveries

The state follows the national programmes for maternal and child health: the Child Survival and Safe Motherhood (CSSM) programme earlier, and now the RCH programme. There is in place a vast network of health personnel, starting with the female health worker at the sub-centre level, and including the LHV, the PHC Medical Officer, the doctors at the block and at the district level, to cater to the needs of women and children. Quality of care, however, is not up to the mark in many instances. The following are some of the problems encountered in providing arrangements for safe motherhood and child health:

- (a) Absence of staff from their place of posting—ANMs and medical officers;
- (b) Poor motivation of staff—therefore, antenatal care is limited to giving TT injections and providing IFA tablets;
- (c) No supervision of field staff by medical officers or LHVs;
- (d) Judgmental attitude of PHC staff—especially towards women requiring medical termination of pregnancy (MTP)—this forces most women with unwanted pregnancies to go to a quack and undergo a septic abortion;
- (e) Inadequate training on equipment use—like use of an oxygen cylinder, bag, and mask for newborns, warmers, etc.
- (f) Costs incurred in treatment at a hospital—mostly due to lack of standard treatment protocols. Bribes are paid by most patients to various levels of staff;
- (g) There are 96 First Referral Units (FRUs) in the state, but many are non-functional due to the absence of a blood bank or an anaesthesiologist. The state did start addressing this problem of shortage of anaesthetists by training MOs in anaesthesia, but this programme needs to be evaluated and made sustainable for any significant impact;
- (h) Lack of skilled personnel for emergency obstetric care (EOC)—in spite of availability of funds under the RCH programme, most places have been unable to get obstetricians or anaesthetists to attend to EOC cases;
- (i) Transport to hospital for EOC—funds have been placed with the blocks under the World Bank Reproductive and Child Health (RCH) project, but in most cases, these

have not yet been used. In many places it is not the availability of money to pay for the transport, but the actual vehicle, or the distance from the nearest health facility, that costs a woman her life;

- (j) Routine immunisation rates have come down over the past few years, and shortage of injection equipment, sterilisers etc, has seriously hampered the programme in many areas. There has been no systematic maintenance or replacement policy for items like syringes, needles, gaskets, and safety valves for sterilisers, etc.

Assessment of National Programmes: TB / Malaria / Leprosy / HIV/AIDS

Tuberculosis

The government estimates that there are about 500,000 cases of TB in Orissa at any given time, and that about 25 per cent of these (125,000) are sputum positive. The incidence is estimated at about 80,000 new cases per year, with about 17,500 deaths occurring annually due to TB (State TB Cell, DHS – Status Report 2000–2001).

Some of the districts are covered under the RNTCP, funded by DANITB (DANIDA Assisted Revised National Tuberculosis Programme). This covers ten districts in north and south Orissa, and is ready to take off in four more districts. These districts have sufficient quantities of anti-TB drugs, chemicals, etc. The laboratory technicians (and in some cases, pharmacists) have been trained in sputum microscopy, and records and registers are maintained separately. This programme follows the DOTS treatment, and DOTS providers are also trained. Regular programme monitoring takes place and the cure rate is over 85 per cent, with low defaulter rates.

In the districts not covered by the RNTCP, the regular National TB control programme is functioning. Of this, SCC (short-course chemotherapy) is available in some districts. The remaining districts have only the regular treatment regimens available, where drugs have to be taken for 18 months, and have high default rates.

It is proposed to cover the whole state under the RNTCP shortly.

The following are the main shortfalls observed:

- Funding for the National Tuberculosis Programme (NTP) is a problem—the Central and state governments are supposed to share the drug costs on an equal basis, but since 1999, there has been no state allocation for anti-TB drugs. For sputum positive patients, the Government of India provides 100 per cent of the drug costs. Government of Orissa is supposed to provide for chemicals, slides etc. For sputum negative and for extra-pulmonary TB, the Centre and state have to share costs equally.
- New districts do not have space for the TB centre to function, and posts of retired staff in the District Training Units (DTUs) have been frozen. No sputum examination drives have been undertaken for some years now.
- The RNTCP has rigid exclusion criteria, and even in the districts where it is functioning, it does not cater to the full patient load of TB.
- Neither the NTP or the RNTCP have a provision for paediatric tuberculosis. Since children are generally sputum negative and thus not a public health hazard, their treatment needs have been largely ignored. However, many cases of persistent malnutrition among children have turned out to be due to miliary or extra-pulmonary TB.
- No linkages exist with the vast network of private practitioners who are diagnosing and treating TB patients. Case detection has been only about 40–60 per cent of expected cases. Linkages with private medical practitioners, and other hospitals such as ESI, Mines hospitals etc, will give a more complete picture of TB in the state.

Malaria

Malaria is one of the leading causes of death in Orissa, and is a matter of great concern. The number of reported deaths due to malaria (in absolute numbers) has increased steadily since 1993. It is estimated that only about 10 per cent of malarial deaths get reported as such. In 2000, there were 442 deaths reported due to malaria.

The World Bank assisted Enhanced Malaria Control Programme (EMCP) operates in 158 out of the 314 blocks. The total cost of the project in India is Rs. 6758.86 million (1996), and Orissa has the second largest share of the total project budget. The project has been running for the past three years, but according to the departmental report, 'no significant development has been observed in EMCP blocks for control of malaria'. Funds under this project provide for insecticide, medicated mosquito nets, drugs for early treatment, IEC, and training.

The remaining blocks are covered under the National Anti-Malaria Programme (NAMP). Costs for this are shared equally between the Centre and the states. The Central share consists of medicines, insecticide, and equipment. The state share is towards transportation of the insecticide, purchase of newer insecticides in non-EMCP blocks, wages and other contingencies. The salaries of all staff (EMCP and NAMP) are borne by the state.

While at present, there seems to be adequate stocks of chloroquine, there is lack of clarity and knowledge about the current treatment guidelines. In spite of having Drug Distribution Centres (DDCs) and Fever Treatment Depots (FTDs) in many places, smear collection and reporting is much delayed. Availability of chloroquine tablets in the remote hamlets is a problem. Many deaths due to malaria go unreported, or are reported as 'fever' and the state does not accept this as a malaria death if no smear was taken, or the smear was not read. Though the concept of 'Presumptive Radical Treatment' or PRT was introduced in 1996, it only began being implemented in 1998, that too, in a few areas. Staff in most areas is not aware of this, nor are there adequate stocks of primaquine readily available. Shortages of slides, lancets and stains are perennial problems, coupled with the large number of blood smears collected, and the consequent delay in reading them and sending the information back to the community within a reasonable period of time.

There is a need to improve the monitoring of the malaria control programme in Orissa in order to ensure that there is some control over the spread of the disease.

Leprosy

Effective treatment for Leprosy was not available till 1981 when WHO prescribed Multi-Drug Therapy (MDT). After the introduction of MDT, the National Leprosy Control Programme was renamed as National Leprosy Eradication Programme (NLEP). The NLEP is one of the most successfully implemented National Health Programmes in the state of Orissa, with support from Government of India, the World Bank, and several bilateral donor agencies.

The extensive use of MDT in the state has completely changed the leprosy scenario of the state within the last 18 years. The disease was highly endemic in the state prior to launching of the NLEP in the year 1983. At that time the prevalence of the disease was 121.4 in 10,000 population. The endemicity of the disease in different districts varied from 50 to 250 per 10,000 population. Since 1982–83, 7.6 lakh leprosy cases have already been registered under MDT and of them over 94 per cent cases have already been cured and discharged. The prevalence of the disease came down to only 7.6 per 10,000 population by 1 February 2001. Equally significant, only 1.8 per cent of the total new cases detected in the state are found to have disabilities, which was earlier more than 10 per cent. Besides, more than 70 per cent new cases registered during recent years are voluntarily reported cases. It indicates increased awareness and disappearance of the stigma attached to the disease. The cases are now detected at an early stage, which is a very good indicator of the success of the programme.

Orissa has planned to achieve elimination of leprosy, bringing down the prevalence rate of leprosy below 1 case per 10,000 population by the end of 2004. The leprosy elimination programme in Orissa is supported by the Government of India, the World Bank through the Government of India, WHO, DANIDA, LEPR, The Leprosy Mission, Hoina, and the German Leprosy Relief Association. The state plans to consolidate the efforts towards elimination of leprosy in the next 3 years with wider involvement of the general health care system, NGOs, and the community as a whole.

HIV/AIDS

The National AIDS Control Programme was started in the state in 1992. However, with several other communicable diseases prevalent in the state, not much importance was given to the programme. Even today, Orissa has few HIV+ and full-blown AIDS cases as a percentage of its population. It is a low prevalence state. Nevertheless, with HIV+ cases at just below 1 per cent of the population, the alarm bells are ringing. In 1999, Phase II of the National AIDS Control Programme was started with the objectives of reducing the spread of HIV infection in the state and strengthening the state's capacity to respond to HIV/AIDS on a long term basis. It plans to reduce HIV infection among high-risk population through targeted interventions, STD Control, and condom programming; and to promote prevention among low risk population through IEC activities, social mobilisation, blood safety, and counselling. It also plans to build the capacity of the community for low cost care and support of people living with HIV/AIDS (PLWHA). The programme is under implementation. Its success (or otherwise) can be known only after some time.