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An Assessment of Referral Healthcare Units in Tribal Areas of Warangal District

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Abstract

As tribal people availing health services from PHCs were unable to afford referral services from corporate hospitals, the government provided them free referral services at the nearest center. In rural and tribal areas the secondary level of health care includes community health centers (CHCs) constituting the First Referral Units (FRUs) and the sub-district and district hospitals (Tertiary Hospital). Community health centers were designed to provide referral health care for cases from the primary health centers and for cases in need of specialist care approaching the centre directly. Despite India's remarkable progress in the field of rural and tribal health care services, the health statuses of scheduled tribes in tribal areas lag behind national averages.

This study intends to find how the referral hospital services in the tribal areas of Warangal district are functioning and to reveal their effectiveness of health delivery services related to their quantity, quality, range and accessibility. A cross-sectional, observational study was done in a community health center (CHC) and the district level hospital, selected from the Eturnagaram Integrated Tribal Development Agency (ITDA) area of Warangal district. Data was collected through open-ended questionnaires using interviews and focus group discussions. Respondents, medical and para-medical staffs were interviewed with pre-designed questionaires. The study found that non-availability of proper infrastructure, drugs, absence of adequate manpower and access of hospital were some of the major reasons why tribals have negative perceptions about the referral services in tribal areas. Further, this study has suggested improve the shortfall in the health care system from both structural and functional point of view.

Keywords: Tribal areas, community health centre, district hospital, Warangal District, Telangana region.

Introduction

In 1946 the Bhore Committee gave the concept of primary health centre (PHC) as a basic health unit to provide as close to the people as possible, an integrated, curative and preventive health care to the rural and tribal population with emphasis on preventive and promotive aspects of health care. The Minimum Needs Program (MNP) was introduced in the country in the first year of the Fifth Five-Year Plan (1974–78) with the objective to provide basic minimum needs and thereby improve the living standards of the people. The Indian public healthcare system consists of primary, secondary, and tertiary care institutions. The systemic changes that were undertaken to reforms the health systems in the developing countries in the nineties came to be known as health sector reforms (Berman & Bossert, 2000). National Rural Health Mission (NRHM) is the key health sector reform program of the Government of India implemented in all States including Andhra Pradesh. It was needed to rationalize institutional arrangements of Andhra Pradesh Health Sector Reform Programme within the overall NRHM framework (Department of Health, Medicine and Family Welfare, 2006a).

In the field of rural health, the objective was to establish:

- one sub-centre for a population 5,000 people in the plains and for 3,000 in tribal and hilly areas,
- one primary health centre (PHC) for 30,000 population in plains and 20,000 population in tribal and hilly area, and
- one community health centre (CHC/Rural Hospital) for a population of 120,000 people in the plains and for 80,000 in tribal and hilly areas.

A sub-centre provides interface with the community at the grass-root level, providing all the primary health care services.

PHCs are the cornerstone of rural health services- a first port of call to a qualified doctor of the public sector in rural areas for the sick and those who directly report or referred from sub-centers for curative, preventive and promotive health care. It acts as a referral unit for 6 sub-centers and refers out cases to community health centers (CHCs) and higher order public hospitals at sub-district and district hospitals. It has 6 indoor beds for patients.

The secondary level of health care includes community health centers (CHCs), constituting the First Referral Units (FRUs) and the sub-district and district hospitals. The CHCs were designed to provide referral health care for cases from the primary health centers level and for cases in need of specialist care approaching the centre directly. Approximately four PHCs are included under each CHC thus catering to approximately 80,000 populations in tribal/hilly/desert areas and 1,20,000 population for plain areas. A CHC is a 30-bedded hospital providing specialist medicine, obstetrics and genecology, surgery, paediatrics, and dentalcare.

Tribal people availing health services from the PHCs cannot afford the referral services of corporate hospitals. Hence, they were provided referral services in special hospitals nearby and at no monetary cost to them. Despite India's remarkable progress in the field of rural and tribal health, the health statuses of Scheduled Tribes in tribal areas lag behind national averages. In this context, this study intended to find how the referral hospital services in the tribal areas of Warangal district of Telangana state are functioning and to reveal their effectiveness of health delivery services related to their quantity, quality, range and accessibility.

Methodology of the Study

The Warangal district has three levels of public health referral facilities:

- Community Health Centers,
- Area Hospitals
- District-level hospitals.

However, the Integrated Tribal Development Agency (ITDA) area of Warangal district had only two levels of referral hospitals i.e. Community Health Centers and District-level hospital (Tertiary Hospital). In the absence of the Area Hospitals, the services from the Community Health Center and District-level hospital referral facilities should be of such standards that nobody feels the shortage of the Area referral hospital. The poor living standards of the Scheduled Tribes of Eturnagaram Integrated Tribal Development Agency (ITDA) area have a direct bearing on their health status. The poor health status of the tribes in turn perpetuates their low living standards. This vicious circle can be broken only if the public health service delivery is improved to bring about sustainable development in the wellbeing of the tribes. The tribes of the Eturnagaram area are caught up in this vicious circle.

The Integrated Tribal Development Agency (ITDA) area in general and the tribes in particular have been experiencing a very high morbidity due to water-borne and vector-borne diseases and other vaccine-preventable diseases.

A cross-sectional, observational study was undertaken in a community health center (CHC), and the district-level hospital, selected from the Eturnagaram Integrated Tribal Development Agency (ITDA) area of Warangal district. This study was undertaken during the Year 2010. Both primary and secondary data collected for the study. The present study refers to the undivided Andhra Pradesh. The State of Andhra Pradesh has bifurcated into Telangana and Andhra Pradesh according to the Andhra Pradesh Reorganisation Act, 2014. Data was collected by means of survey through open-ended questionnaires using interviews schedules, and by focus group discussion. Patients, attendants, medical and para-medical staffs were interviewed with pre-designed schedules and questionnaires.

Profile of Study Area and Population

The total population of Andhra Pradesh, as per the 2001 Census, is 76,210,007. Of which, 5,024,104 (6.6 per cent) are scheduled tribes (STs). With a total population of 32.46 lakhs (2001 Census) the Warangal district occupies 13th place in the State of united Andhra Pradesh in its population and 12th place with regard to its area. The scheduled caste population in the district is 5.51 lakhs and the scheduled tribes population is 4.5 lakhs which forms 16.99% and 14.10% respectively, of the district population. Out of 1,098 revenue villages of the district 1,003 villages are inhabited and the rest of the villages are deserted.

The total rural population of the district is 26.23 lakhs. The district has five towns:

- Warangal,
- Kadipikonda,
- Jangoan,
- Mahabubabad and
- Dornakal.

The total urban population is 6.23 lakhs. As against the total district population of 32,46,004, 15,95,745 are literates, in which 12,21,672 are from rural area and 3,74,073 are from urban area. There are 8,96,482 non-literates in the district out of which 54.9% are male and 45.10% are female amongst all age groups.

The Integrated Tribal Development Agency (ITDA) was introduced in the country in the first year of the Fifth Five-Year Plan. The main objective of ITDA is socio-economic development of tribal communities through income generating schemes allied with Infrastructure Development programmes and protection of the tribal communities against exploitation.

Eturnagaram ITDA was established in 1986. Eturnagaram is a village and a mandal in Warangal district. In Warangal district the scheduled tribes constituted 14.5% of the total district population. Out of the 51 mandals (sub-district administrative units) in the district, 11 mandals known as the tribal sub-plan mandals had a strong presence of the tribal population. Out of the 11mandals in the ITDA only one mandal *viz.,* Mangapeta with an overwhelming tribal population was classified as fully covered scheduled area and the other 10 mandals as partially covered scheduled area which enjoyed a special constitutional status. Another 16mandals were classified as MADA mandals, based on the tribes inhabiting the mandals.

The Koyas and the Lambadas were the two principal tribes inhabiting the district. Though the Erukulas also inhabited the ITDA, their number was not significant. The scheduled tribes, suffering from nutrition deficits were among the poorest of the social groups inhabiting the remote geographical locations of the state of Andhra Pradesh.

Health Scenario in Tribal Areas

Health problems in tribal areas in general were malaria, dengue, viral fevers, diarrhea, cirrhosis of liver, gynaecological disorders, arthritis, gastritis, tuberculosis and other health problems arising out of anemia and nutritional deficiency. Though it was an endemic area for vector-borne and water-borne diseases, nature was little munificent this season as out of 229 dengue cases reported from the district only 12 were from the ITDA. A perusal of the NRHM monthly progress reports suggested that the proportion of tribal population subject to seasonal fevers, diarrhea and other water-borne diseases and TB was higher in the sub-plan area compared to the district average. The number of villages classified as *'high risk'* in the TSP area was 128. The NRHM monthly reports suggested that

the HIV positivity rate among the ANCs was 0.5% during the year 2009. Among men and non-ANC women of high-risk groups, the HIV positivity rate was 4.2% and 4.7% respectively. On the whole, 3.4% of those tested during the last three months were reported to be HIV positive in the district. The number of women and children suffering from anemia was relatively high in the sub-plan area.

With the advent of 108 services the rate of institutional deliveries increased substantially. However, high levels of the MMR, the IMR and the neonatal mortality rates clearly reflected the relatively poor health status of the people inhabiting in the district.
The district has the following medical infrastructure:

- 69 primary health centers
- 672 health sub-centers,
- nine 30-bed community health centers,
- two 50-bed community health centers,
- two100-bed area hospitals.
- 27 Ayurvedic dispensaries,
- 11Homeo dispensaries and
- 11 Unani dispensaries.

Apart from this 2,680 Registered Medical Practitioners and barefoot doctors and 1.580 qualified doctors are working in and around district headquarters. Around 2807 traditional birth attendants/Women health activists are attending to deliveries in rural areas. Though persistent efforts were being made by the Government in providing the health services to the population of the ITDA, a vast scope for improvement was possible in improving the health service delivery. The demand for and utilization of the public health facilities continued to remain low in the ITDA of Warangal district.

Community Health Centers in Study Area

Community health centers are the First Referral Units (FRUs) and form the secondary level of health care provision. The community health centers are designed to provide referral health care for cases from the primary health centers and for those patients in need of specialist care who approach the center directly. There are four primary health centers under each community health center, whereas each community health center caters to approximately 120,000 people in plain areas and 80,000 people in tribal and hilly areas. The community health centers are 30 bedded hospitals that provide specialist care in surgery and pediatrics, curative medicine, obstetrics and gynecology (Price Waterhouse Coopers; 2008f).

In the Integrated Tribal Development Agency (ITDA) Area of Eturnagaram though there were three community health centers, only the Eturnagaram Community Health Center was located in the centre of the ITDA whereas the other two community health centers at Mulugu and Narasampet were located at the periphery of the ITDA. Reaching the community health centers of the ITDA periphery was a difficult proposition for the tribal people due to the high transport cost and time involved.

Table –1
Distribution of Community Health Centers within the ITDA Area

S. No.	Referral Unit	Place	No. of Beds	Distance to the Farthest ITDA Mandal
1.	CHC with CEMONC facility	Eturnagaram	30	Chunchupalli -55
2.	CHC	Mulugu	50	Chunchupalli-115
3.	CHC	Narasampet	50	Not accessible to the ITDA main area as there was no road connectivity

Source: DCHS Warangal and ITDA Eturnagaram

The Community Health Center of Eturnagaram served the population of three mandals:

- Mangapet (the only scheduled mandal of the ITDA of Warangal district),
- Tadvai and
- Eturnagaram.

The average distance between the PHCs located in these three mandals and the community health center, Eturnagaram was ranging between 30 and 45km. The patients depended on the public transport facilities to reach the community health center in Eturnagaram. The distance from the farthest village to the community health center of Eturnagaram was 65km. However, the Community Health Center was located at a distance of 3 km from the main bus stop of Eturnagaram. The patients coming by public transport from distant villages and the residents of Eturnagaram were hardly using the facility because of this problem. Therefore, it would be appropriate to examine the possibility of using this building as a PHC and establishing a new CHC at Eturnagaram proper.

Services Provided in the Community Health Center

The community health center of Eturnagaram being located in the midst of the Integrated Tribal Development Agency area and being the only referral hospital around, service delivery should of higher standard and quality to meet the health needs of the tribal and non-tribal communities of the ITDA. This community health center was in close proximity to the scheduled area of the ITDA.

Table .2
Services provided in the Community Health Center

S.N	Indicator	Monthly average	Daily average per Medical officer
1	Ops	6046	22.4
2	IPs	541	2.0
3	Major Surgeries	-	-
4	Minor Surgeries	13	Na
5	Tubectomies	12	Na
6	Vasectomies	13	Na
7	IOLs	-	-
8	Emergency OPs	336	1.24
9	Emergency IPs	86	0.3
10	Emergency Major Operations	-	-
11	Emergency Minor Operations	101	Na
12	Deliveries	12	Na
13	Lab Tests	751	Na
14	Sputum Tests	37	Na
15	HIV Tests (in ICTC)	137	Na
16	USG	-	-
17	X-Rays	74	Na
18	ECGs	-	-
19	Ratio of Lab Tests to OPs+IPs	12.4%	-
20	Ratio of Sputum Tests to OPs+IPs	0.6%	-

Source: CHC, Eturnagaram

The daily outpatients per medical officer in the community health center was 22. In the absence of an anaesthetist, major surgeries were not taken up. The number of emergency outpatients and inpatients brought to the community health center were 1.24 and 0.3 respectively per medical officer per day. However, tubectomies and vasectomies were conducted in a camp mode by enlisting the services of trained staff. The number of deliveries conducted in a month, on an average, was only 12.

Lab tests were conducted on 12.4% of outpatients. The number of lab tests and the sputum tests conducted in the Community Health Center were worked out to be 12.4% and 0.6% respectively among outpatients and inpatients. Though Comprehensive Emergency Obstetric and Newborn Care (CEMONC) facility was available, critical deliveries were referred to the Mahatma Gandhi Medical Hospital, Warangal or the Government Maternity Hospital, Hanumakonda due to the non-availability of an anaesthetist at the community health center. Further, the building in which pregnant women arriving on their expected dates of delivery (EDD) waited in latent labour remained underutilized due to the limited number of deliveries taking place in the community health center. Though kitchen was available in the community health center, food was not supplied to the inpatients. Due to this problem, the pregnant women preferred to reach the community health center just minutes before or during active labour, instead of coming on the day of expected date of delivery. The inpatients and outpatients had to spend money on getting treatment from community health centre. Most of the expenditure of the patients was on medicines. Majority of the patients did not think that such expenses were a major constraint to the utilisation of the services intended to be delivered through these CHCs. On the contrary, most of them expressed their preference for the public health institutions vis-à-vis other alternatives.

Infrastructure, Medical and Para Medical Staff

The community health center at Eturnagaram confirmed to the norms in terms of space; and the building was found to be a well designed one with necessary space and facilities, except for the shortage of separate consultation rooms for the medical officers; four medical officers were sitting in one room and the other five in another room. These rooms were of large size – 20x20 feet - which could be converted into smaller rooms to provide privacy in diagnosis and medication. However, the condition of flooring looked vastly rundown as about 50% of it was completely damaged in the outpatient department (OPD) area, rooms of the medical officers and the verandas. It needs to be repaired immediately. It had a kitchen facility not put to use. It also had residential quarters for the senior medical officers and the staff nurses. However, it had no compound wall; stray dogs and cattle freely moved in and around the community health center area. The CHC had adequate water supply, separate toilets for male and female and electricity. However, it had no ambulance and landline telephone connection. In cases of emergency, the Integrated Tribal Development Agency provided the vehicle support. The available generator was in working condition.

There were no vacancies of medical officers in the community health center. However, a majority of the paramedical staff were appointed under contract. Under Reproductive and Child Health (RCH) program 12 additional nursing staff were employed. In the absence of a pharmacist, three of the staff nurses working under RCH program performed the role of the pharmacist by shifts.

Table -3
Vacancy Position in Community Health Center

S.N.	Cadre	Sanctioned	Vacancies	Remarks
1	Civil Surgeon	1	-	Appointed 25 days ago
2	Dy. Civil Surgeon	1	-	-
3	Dental Assistant Surgeon	1	-	Appointed 3 months ago
4	Civil Assistant Surgeon	6	-	2 appointed 2 months ago
5	HN	1	-	-
6	Staff Nurse	6	-	3 on contract
7	ANM	2	-	On contract
8	Lab Technician	1	-	On contract
9	Pharmacist	-	-	-
10	Opthalmic Assistant	-	-	-
11	Refraction Assistant	-	-	-
12	EMTC Staff	-	-	-

Source: CHC, Eturnagaram

The condition in the community health center indicated the need for proper supervision of availability of the staff in medical facilities rather than simply appointing the staff. Uncertified absence was a common practice among the medical officers of the community health center. For example, during the visit, only two of the nine medical officers

were available in the community health center. Among the seven absentees, only two had applied for casual leave. However, all the paramedical staff on duty were found in the community health center. Among the nine medical officers, only two resided at the headquarters and all others were commuting from *Warangal,* i.e. from a distance of 110km. All the paramedical staff were residing at *Eturnagaram.*

Equipment and Lab Services

Two operation theatres and two labs were functional in the community health center, Eturnagaram. With regard to equipment, a pulse oximeter, a microscope, a dental unit, a generator and an AC facility were available. All of them were in working condition (Table –3). However, the shortage of one pulse oximeter was felt by the medical officers of the community health center. Further, one AC unit was not enough for running the two operation theaters in the CHC.

Table –4
Availability of Equipment in Community Health Center

Indicator	Number Provided	Number Functional	% Functional
X-Ray Units	2	2	100
ECG	1	1	100
Boyles Machine	1	1	100
Autoclave	1	1	100
Operating Microscope	1	1	100
Dental Unit	1	1	100
Refrigerators	3	3	100
Pulse Oxi-Meter	1	1	100
AC	1	1	100
Generator	1	1	100

Source: Sample CHC, Eturnagaram

Availability of Drugs

The availability of drugs was crucial in the delivery of health service. Patients were of the opinion that getting diagnosed at the community health center and purchasing drugs from the open market meant no service at all. The quantity of drugs available on the day of field visit indicated the dependence of patients on the open market for drugs. The important drugs and the other essential items not available in the community health center on the day of the visit included IV sets, disposable syringes, B. complex tablets and Rantac and Voveron (Diclofenac) injections. In such cases, the drugs and the essential items were purchased locally by the superintendent of the community health center.

Table-5
Drugs not Available in CHC on the day of the Field Visit

Drugs not available	Alternative arrangements made
B. Complex Tab.	Not prescribed
Rantac	Not prescribed (meant for acidity relief)
Voveron	Not prescribed (Meant for pain relief)
Taxim	Not prescribed (higher anti-biotic, essential)
IV Sets	Purchased locally
Disposable syringes	Purchased locally

Source: Sample CHC, Eturnagaram

The Central Distribution System maintained a pharmacy at the Project Monitoring and Rehabilitation Centre (PMRC) of *Eturnagaram.* But due to non-availability of the pharmacist, the pharmacy was closed. It is essential that the pharmacy at the PMRC be revived. Such a revived pharmacy would be in close proximity to majority of the ITDA mandals, including the scheduled mandal, *Mangapet.*

Clinics were conducted till recently in the shandies of the ITDA. The clinics were intended to take the medical services within the closest possible proximity to the tribal population participating in the shandies. The shandy clinics were mainly meant to collect blood smears for testing of malaria parasite and to provide treatment to the minor ailments. The patients requiring further examination and care were referred to the PHCs/CHCs. The shandy clinics were conducted by the health staff (MPHA-M/MPHA-F). Occasionally the MOs also attended the shandy clinics. However, during the current year conduct of shandy clinics was dispensed with in the ITDA of Warangal. The community members were of the opinion that such clinics need to be conducted within the communities that were far-away from the sub-centers.

District Hospital (Tertiary Care Services)

The district hospital is the main port of call for the district health system. It functions as a secondary level of health care which provides curative, preventive and promotive healthcare services to the people in the district. It also forms the fundamental basis for implementing various health policies while it delivers healthcare and management of health services for a defined geographic area. Every district hospital is linked with other health service delivery units such as the sub-district or sub-divisional hospitals, community health centers, primary health centers and sub-centers. The district hospitals caters to the people living in both urban areas, such as the district headquarters, towns and adjoining areas, as well as the rural areas of the district. The district hospital works not only as a curative center but also as an interface with the institutions external to it, including referring patients to other tertiary care centers for specialized care, including those controlled by non-government and private voluntary health organization (Price Waterhouse Coopers, 2008f).

There were no area hospitals in the Integrated Tribal Development Agency area in Warangal. The area hospitals located in the district, one in *Jangoan* and another in *Mehabobabad,* were not accessible to the ITDA. The community members from the Integrated Tribal Development Agency area were not aware of the location of the area hospitals let alone using them. Hence, it could be safely stated that, in terms of location of the first and second referral health facilities, the Integrated Tribal Development Agency area was being underserved. People were dependant on 108 services for reaching the referral hospitals located at *Warangal*.Under these circumstances, converting one of the community health centers of either *Mulugu* or *Eturnagaram* into an area hospital would be appropriate.

Since the area hospitals were not conveniently located, the Integrated Tribal Development Agency area patients were referred to the Mahatma Gandhi Memorial (MGM) Hospital, Warangal and the Government Maternity Hospital, Hanumakonda. The distance between the farthest PHC in the ITDA to the Mahatma Gandhi Memorial Hospital or the Government Maternity Hospital was about 145 kilometers. The available public transport was the only mode of travel to reach these facilities, apart from occasional vehicle support provided by the Integrated Tribal Development Agency area or the 108 services. There were 46 vacancies of the medical officers in the MGM Hospital. Among the other cadres, significant number of vacancies was observed especially with regard to head nurses, pharmacists, cardiology technicians, dark room assistants and dark room attenders (see table –6). It is 1000 bedded hospital with functional citizen's charter in the hospital.

Table -6
Staff Position in Mahatma Gandhi Memorial Hospital Warangal

S.No.	Indicator	Vacancy
1	General Medicine	7
2	General Surgery	4
3	Orthopedics	3
4	Pediatrics	1
5	Anesthesia	1
6	CT Surgery	4
7	ENT	1
8	Plastic Surgery	2
9	Cardiology	3
10	Pediatric Surgery	1
11	Urology	2
12	Radiology	3
13	Neurosurgery	2
14	Neurology	2
15	Radio Therapy	2
16	Psychiatry	2
17	STD	1
18	Endocrinology	2
19	Gastroenterology	1
20	Nephrology	2
21	Head Nurse	-
22	Nurse Superintendent	-
23	PN	5
24	Pharmacist	6
25	MPHS (F)	-
26	ANM	-
27	Staff Nurse	6
28	Cardiology Technician	14
29	Radiographer	2
30	Dark Room Assistant	11
31	Dark Room Attender	10
32	Senior Mould Technician	-
33	Junior Mould Technician	-
34	Dental Technician	-
35	Dental Hygienist	1
36	Speech Therapist	1

Source: MGM Hospital, Warangal

Services Provided by the Tertiary Hospital

On an average, the number of OPs at the MGM Hospital was 43,200 per month (see table-7). The share of IPs admitted among the OPs was 9.7%. The rate of major surgeries conducted among the IPs was 13.1%. X-Ray tests were conducted on 5.7% of the OPs. The percentage of the lab tests conducted among the OPs was worked out to be 50. These figures indicated the fairly good performance with regard to the cases seeking health services from the MGM Hospital, Warangal. However, there was no separate account of patients utilizing the services from the Integrated Tribal Development Agency area or from the Scheduled Mandal, Mangapet at the Mahatma Gandhi Memorial Hospital.

Table –7
Services Rendered by Second Referral Hospital MGM Hospital, Warangal

S.N.	Indicator	Monthly average
1	Ops	43200
2	IPs	4180
3	Major Surgeries	549
4	Minor Surgeries	70
5	Neo-natal admissions	145
6	Tubectomies/vasectomies/IUD	70
7	Family Planning Camps	4
8	Tuberculosis	22
9	Gastroenteritis	151
10	X-Rays	2469
11	Lab Tests	21898
12	Surgeries performed under Rajiv Arogysri	195
13	Camps conducted in ITDA under Rajiv Arogyasri	5
14	Patients screened in ITDA under Rajiv Arogyasri	873
15	Patients referred under Rajiv Arogyasri from ITDA	83
16	Ratio of patients screened to referred from ITDA	9.5

Source: MGM Hospital, Warangal.

Nutrition Issues

The health and the well-being of the tribal households not only depended on the health services provided but also on their levels of nutrition. Discussions with the MOs of PHCs, CHC and MGM Hospital indicated that the major health complaints in the district were anemia and physical weakness associated with unhealthy food habits and lack of sufficient food. Consumption of Gudumba (local alcohol) without taking necessary food further weakened the nutritional condition of the tribal people. Among the women, nutritional anemia was a common problem. Nutritional anemia, a condition with low haemoglobin in the blood resulted in detrimental effects in three important areas viz., pregnancy, infection and work capacity. In pregnancy, anemia increased the risk of maternal and foetal mortality. In India 20 to 40 per cent of the maternal deaths were found to be due to anemia. Anemia could be caused and aggravated by malaria and intestinal parasitic infestations. The iron deficiency impaired the cellular responses and immunity leading to increased susceptibility to infections. The iron and other nutritional deficiencies in the ITDA could be gauged based on the complaints of weakness and generalized body pains. To overcome these problems the population of the ITDA considered the administration of Intra-Venous Fluids (IVFs) as a solution, as it gave them immediate relief. The patients considered diagnosis and medication as incomplete unless the IVFs were given. About 50% of the IPs was given IVFs, indicating the seriousness of the issue.

Coordination among Line Departments

There was no coordination between the health staff, the RWS and the Gram Panchayats with regard to sanitation supply of clean drinking water and dealing with the mosquito menace. The incidence of water borne diseases was very high in the Tribal Sub Plan area in the remote villages of high-risk mandals. Ensuring the supply of clean water at the rate of 50 lpcd is an essential pre-requisite to minimize the morbidity arising due to intake contaminated water. The task of minimizing the incidence of these diseases called for effective coordination between the Panchayat Raj rural water supply wing and the DM&HO. The DM&HO indicated that the rural water supply wing had its own priorities and funding pattern, which did not take into account the acute water related health problems (shortage of quantity, poor quality and long distance to the source) recurring in the remote areas of the high-risk mandals.

Therefore, there is a need for a convergent action plan taking into account the occurrence of recurrent water borne diseases. Further, coordination between the two line departments was needed to ensure cleaning of all the water resources and overhead tanks, their chlorination and protection. The Panchayat Raj Institutions in general and the Village Health and Sanitation Committees in particular need to be involved in maintaining the drinking water distribution system in a hygienic manner. This would require greater coordination between the health staff, the rural water supply scheme and the Gram Panchayats.

There was no coordination between the DCHS, the DM&HO and the ITDA office in the purchase of drugs and equipment and utilization of the services of the staff. There is a need for delivering convergent health care services through a co-ordinated effort of the offices of the DM&HO and the DCHS. Some administrative units had surplus staff while others faced a critical shortage of the staff. The staff positioning and shortages need to be reviewed on a periodic basis, preferably quarterly and the surplus staff needs to be deputed/transferred/posted to the needy areas. Coordination could be extended to the other areas such as procurement and issue of drugs and equipment. Further, procurement and distribution of the drugs and the equipment could be undertaken through a single window system rather than all the three organizations supplying them, irrespective of the scheme under which they were procured. The operation theaters of the CHCs were not made available for the conduct of family planning camps organized by the PHCs. This issue needs to be addressed immediately as the CHCs were found having better infrastructure and the support staff. Hence, there is a need for coordination between the District Medical &Health Officer and the Andhra Pradesh Vaidya Vidhan Parishad.

Discussion

The Government of Andhra Pradesh for the last couple of years has taken several innovative approaches to improve the access to health care in rural and tribal areas. Despite remarkable progress in the field of rural and tribal health care services, there has been shortfall not only in terms of physical infrastructure but also human resource in tribal areas of Warangal district. In terms of location of the second referral health facilities, the Integrated Tribal Development Agency area was found to be underserved. There are three community health centers within the Integrated Tribal Development Agency area mandals. However, only one i.e. *Eturnagaram* was located at a place accessible to a majority of the primary health centers. The other two *Mulugu* and *Narasampet*, were located at the periphery of the Integrated Tribal Development Agency area. Average distance between the sample primary health centers and the nearest community health centre was 35 km. Reaching the community health centers that were located at the periphery was found to be difficult due to the high time and transport costs involved. There were no area hospitals close to the Integrated Tribal Development Agency area. The district (tertiary) referral health facilities were available only at the twin towns of Warangal and Hanumakonda.

In the sample community health centre, out of the nine medical officers on rolls only two were available in the community health centre on the first day of the visit. Of the seven absentees, only two had applied for casual leave and the other five were not on certified leave of absence. The current community health centre at Eturnagaram needs to be converted into an area hospital as the available area hospitals were located outside the Integrated Tribal Development Agency areaand were far away from the Scheduled Mandal, Mangapet. The ICTC located at the community health centre needs to be relocated at an appropriate place at Eturnagaram as the current location was about 3 km away from main town. The CD4 testing and ART facilities need be made available at Eturnagaram as currently available facilities were located at Warangal, a faraway place to the Integrated Tribal Development Agency area.

The pharmacy maintained earlier by the CDS at Eturnagaram need to be revived. Such a revived pharmacy would be in proximity to majority of the Integrated Tribal Development Agency area mandals, including the scheduled mandal, Mangapet. Drugs need to be arranged in the pharmacy in ‘first received first issued’ basis to avoid wastage of drugs due to expiry. Procurement and distribution of drug and equipment could be undertaken through a single window system. A mobile drug delivery system could also be undertaken to save the time of primary health centre staff used in collection of drugs. The medical officers need to be given training in the conduct of sterilizations. They are also to be trained in financial accounting as well as management of paramedical staff.

In addition to the weightage given to minimum service in the Integrated Tribal Development Agency area, the actual performance of the medical officers should be taken into account while giving preferential admission into the post-graduate course. The performance in terms of number of deliveries and sterilizations conducted could be a good indicator. Vacancies of the medical and paramedical staff may be filled-in on a priority basis either on part-time or on contract basis.The attendance of medical and paramedical staff needs to be monitored to improve service delivery. Strict action needs to be taken for dereliction of duty, if any. Attendance register should be maintained for both the medical officers and the paramedical staff. Working hours of the staff, the staff on duty, timings of the staff, dates, timings and places of field trips of the staff need to be displayed in the community health centre at a prominent place. Staff residing at community health centre headquarters needs to be made mandatory. Looking at the above shortfall in health care system it is imperative to revitalize the existing tribal health care system from both structural and functional point of view. And to overcome the present challenges, the coordination between primary, secondary and tertiary health care institutions needs to be strengthened.

References

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