

Tribal health care program at Jawadhi Hills, Vellore district



Christian Medical College
Vellore

PART I

AWARD APPLIED BY:

PRIVATE SECTOR ORGANIZATION

PART II

INTRODUCTORY INFORMATION

PROJECT NAME: Tribal health care program at Jawadhi Hills, Vellore district

INSTITUTE: Christian Medical College, Vellore

AWARD CATEGORY APPLIED FOR: SKOCH SMART GOVERNANCE AWARD – Health

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Ida Scudder Road,

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PROJECT COMMENCEMENT DATE: 1980

PROJECT COMPLETION DATE: ongoing

DETAILS OF RESPONDENT:

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TRIBAL HEALTH CARE PROGRAM AT JAWADHI HILLS, VELLORE DISTRICT

Brief overview of the project

The health program at Jawadhi hills is run by the Christian Medical College, Vellore (CMC), to meet the health needs of around 80,000 tribal people residing in a range of hills in the Eastern Ghats. This range houses Asia's second biggest Astronomical Observatory, yet the population has very poor access to health care and other basic amenities due to the difficult geographic terrain and the lack of health professionals willing to work in the hills. All health indicators are significantly lower than in the plains. According to surveys carried out by CMC, 98% of children are born at home and only 20% complete immunization before the age of five. The health care program in the hills initiated in the 1980's and enhanced in the last five years, is run by the Department of Community Health, and aims to improve health through direct health care interventions, improvement in economic and social development, education, and advocacy for rights.

Challenges faced before deployment of the project

The people of this particular area are known as "Malayalis" meaning "people of the hills". Culturally, the tribal people distrust people from the plains due to frequent confrontations with forest guards and the police over smuggling of sandalwood and red sanders. They seek health care only when very sick, leading to higher morbidity and a lower life expectancy. The overall health, literacy and development indicators across age groups are poor, as compared to those living in the plains. This is primarily due to poor health care infra-structure, limited health services, low literacy, lack of quality education, lack of local employment

opportunities, dependence on subsistence farming, migratory labor, and poor relationship with the administrative structure.

Because of the presence of a reserve forest, there are few roads connecting the different hamlets with the main villages where the government offices and Hospital are situated. Due to poor road connectivity, people have to walk several kilometers through the jungle before they can find a motorable road, and then wait for a passing vehicle to take them to the nearest bus- stop to board a bus to the PHC. Understandably, the outcomes for women in labour and very sick individuals have been uniformly poor due to the inordinate delay in reaching a medical practitioner. There are two PHC's in this range of hills and they are often short of staff, equipment and essential drugs. The people of the hills are subsistence farmers and till recently, sold forest produce for a living. Now there is a trend of mass migration for several months in a year, when tribal people go as hired contract laborers to neighboring states. This has led to them being exposed to substance abuse and sexually transmitted diseases from the plains. Children who accompany their parents don't complete their immunization, and miss a large number of school days.

The baseline survey carried out by CMC, revealed a high infant and maternal mortality rate (IMR of 73/1000 vs. 24/1000 for the rest of Tamil Nadu; MMR of 170/100000 vs. 97/100000 for the rest of Tamil Nadu), very low immunization coverage, large number of deliveries in an unsafe environment, and large number of people with non communicable diseases and disabilities. Among the social issues, we found a high prevalence of alcohol, substance abuse and sexually transmitted diseases such as syphilis.

Objectives of the project

The objectives of this program are to provide affordable and accessible health care to the people in the hills, and to make them participants in their health care by improving their social and developmental indicators.

Description of the Program

CMC's Community Health Department has been involved in health outreach in Jawadhi hills since the 1980s. Initial outreach programs were primarily to address Hansen's disease in the hills. With the decrease in the incidence of Hansen's disease, we expanded our program to include general care. Our work consisted of running mobile clinics at fixed spots in the hills and providing referral services to those patients who needed secondary or tertiary care.

In 2008, we expanded our program to address health and development needs of the people in the hills. This was made possible through funding by DANIDA and an initiative by the Government of Tamil Nadu in tribal areas – Tamil Nadu Health Systems Project.

We detail below the chief features of this integrated health and development program.

1. Health related activities: Preventive and curative services for nutrition, maternal and child care, and chronic disease care, to bridge the gap between people and the existing public health system

Till this year, as there was no permanent facility in the hills, a mobile team with a doctor, nurse, social worker and paramedical staff traveled to the hills 5 days a week. A significant amount of time was spent on travelling, with transportation costs using up funds that could have been used for patient care. The need of the hour was a community health and development training centre with residential facility for trainees (residents,

interns, medical & nursing students) which would be accessible to a significant proportion of the population round the clock, have road access to enable easy transfer of critically ill patients, manage most common illnesses, provide emergency care, and serve as a follow-up center for patients with chronic diseases like diabetes, hypertension and disabilities. The Don Bosco Society, who are our collaborators for development work in the hills, were kind enough to offer the use of a building and land they own in Veerapanoor, and thus, a six bedded health center was established. The hospital has a Medical records room, a pharmacy, laboratory, labour room, treatment room and a large Outpatient room, with facilities for ten doctors to work simultaneously. Our mobile teams continue to visit remote areas which are not accessible easily. Patients are referred from the mobile team or the hospital to the base hospital for specialized care.

2. Social and economic development activities

Women's rights, poverty alleviation and other development activities

CMC believes that health and social development must go hand in hand. Development and rights based activities are implemented in collaboration with other NGO's such as Justice Ventures International, a Chennai based NGO, and Don Bosco Organization, both of whom serve geographically distinct areas within Jawadhi Hills. The Community Health Department has more expertise in the area of health care, and hence networking with these two groups allows coverage of a larger population, benefiting the people.

We have networked with the BDO office and Government programs such as Valnthu Katuvom Thittam and NGOs such as Don Bosco Institute in the hills to provide training for the people in Sustainable Income Generation Projects like mushroom farming, sheep rearing, pig rearing and tailoring. A tribal society, the apex Community Based

Organization for the Jawadhi hills, namely, the 'Malaivalvu Malayali Makkalukana Munnetra Sangam' has been formed and registered. It is hoped that this Sangam will be the vehicle for social transformation through collaboration with Christian Medical College, Vellore and other Community Based Organisations.

Education

One of our inputs in the social sector has been in the area of education. Primary Schools, though available, have a poor enrolment and high dropout rate. Many posts for teachers are not filled and when filled, teachers are seldom available. There are only 3 higher secondary schools for the entire range of hills.

Evening / Night Schools/Summer Camp

The high dropout rate for children enrolled in schools is due to lack of regular teachers, and the inability of the parents to help the children with their studies. CMC and Don Bosco run night schools, usually in a community building in the village, where all the children gather for a few hours in the evening and are helped in their studies by a volunteer youth from the village who has completed grade 10 or 12. We also run summer camps for children along with the Don Bosco Institute for tribal development, with the objective of improving their academic performance, boosting their self esteem and inculcating pride in their culture.

Preparatory coaching for professional courses

CMC is collaborating with other NGO's in the hills to identify grade 12 students who have the academic potential, but lack the financial means to continue their studies. In 2013, we provided six weeks of intensive coaching for children who passed Grade 12, to enable them to attempt competitive entrance exams for college courses. As a result of

this, students from the Jawadhi hills have joined prestigious colleges, including CMC, for courses like Nursing, X ray technician, Lab technician etc. It is our hope that these students will opt to come back to work in the hills in order to improve the health status of their own people.

3. Health systems Research

Several research projects have been carried out, which have helped to generate baseline health indicators and measure the prevalence of social and health problems like malnutrition, perinatal mortality, gynaecological disease, soil transmitted helminth infection, alcohol abuse, anemia and school absenteeism. There are several other ongoing research projects funded by agencies like DBT and ICMR. CMC has received funding to survey the prevalence and needs of people with disabilities in Jawadhi hills, and study the prevalence of hazardous use of alcohol and possible interventions to decrease drinking among young people.

4. Medical education

While the community benefits from CMC's services, the institution has benefitted from grassroots level hands-on training opportunities available for all level of trainees and faculty. Our work in Jawadhi directly improved training opportunities in the following areas:

- Post-graduate public health training for MD community health residents and MPH students: students have hands-on training in organizing health activities, documenting and monitoring programs, networking with GO, NGO and CBO, and training community workers.
- Tribal health exposure to medical and occupational therapy interns

- Exposure for Child health and Ophthalmology post graduate residents
- Tribal health residential training for master's students in nursing
- Exposure to tribal health and health status in tribal areas for undergraduate medical, occupation therapy, physiotherapy and dietary students
- Research opportunities for medical students, medical Interns, and post graduates in community health, ophthalmology and nursing

Category of trainee	Approximate number rotated through Jawadhi (2008-2013)
Medical Interns	300
Occupational therapy Interns	45
Community health post graduates	18
M Sc. Nursing	2 batches
MBBS students	Pre-final year- 40 First year- 60
Dietary, OT & PT undergraduates	25
MPH students	29

Details of coverage of the target population

Jawadhi Hills is located about 40 km from Vellore town and extends into the adjoining Tiruvannamalai district. It covers 1664 square kilometers and has a total population of approximately 80,000. There are 11 panchayats and about 175 hamlets; each hamlet a cluster of 20 to 40 houses. Most hamlets are accessible only by dirt tracts, some by mud roads which can be negotiated by tractors or two wheelers, and the remaining by tarred roads. The hilly terrain makes access to health care and other facilities difficult, and medical teams and patients often have to trek several hours to meet each other. At present our program reaches a population of 40,000 in 7 panchayats through mobile clinics, community organization efforts, capacity building of traditional leaders, self help group members, life skill and vocational training for youth, and supporting formal education.

HEALTH OUTREACH PROGRAMS



ENGAGING WITH THE TRIBAL YOUTH



SUMMER CAMP FOR THE CHILDREN OF JAWADHI HILLS



Comparison of the pre-deployment scenario and post-deployment benefits

The Jawadhi Hills tribal health program has resulted in an appreciable difference in health care usage, and health status of the tribal people.

- There was an improvement in the health status of women and children as evidenced from the data collected in routine surveys
- More patients are able to access secondary and tertiary care due to the referral system established, and the familiarity of the people with staff from the Community Health department
- Young people who are enrolled in our education programs encourage people from their hamlets to seek medical care early and help them come to CMC

Key learning from the project

As a department and institution, we have learnt that improving the health status of a population is nearly impossible without addressing the social determinants of health. We have also learnt that the most effective way to benefit a large population is for NGO's working in that area to collaborate with each other, the local government, and the existing government health infrastructure, in order to enhance their capacity to bring about lasting change.

Cost effectiveness of the project

The cost of running this tribal health program is around Rs.20 lakhs per year, and are borne by the Christian Medical College, Vellore. Other costs incurred by the institution relate to transportation, staff salaries, and providing subsidized medical care at the tribal health center and for those referred to the main hospital for specialized care. The societal benefits are savings due to early diagnosis and treatment of diseases, which will increase the health and

productivity of the tribal people. CMC's policy of allowing poor people to pay what they can afford is a strong testament to its mission to serve the marginalized and underprivileged members of society.

Future road map of the project

CMC will continue to expand services in the hills to improve the health status of the tribal peoples. We plan to establish satellite "birthing centers" in geographically remote areas, to enable women to deliver in safe conditions. These birthing centers will have to be built, staffed and equipped. This will increase the number of women being delivered by trained personnel, and will have a positive impact on maternal and infant mortality. On the development front, providing opportunities for primary and college education, and income enhancing programs will continue to be our challenge. CMC plans to establish a training center in the hospital campus which will serve as a base for students to stay and train in medical and related fields. The center will also house a research center to facilitate robust research into the health and medical needs of this population.

The Jawadhi Hills tribal health care team

At present, the following personnel are involved in running the hospital at Jawadhi Hills.

Dr.Jasmim Helen	Department Head
Dr.Anuradha Rose	Consultant
PG Registrars	
Interns	
Driver	
Social workers	

SHORT CV: Dr. Anuradha Rose

NAME Anuradha Rose	POSITION TITLE Associate Professor of Community Medicine, Department of Community Health, Christian Medical College, Vellore		
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE	MM/YY	FIELD OF STUDY
Christian Medical College, Vellore, India	MBBS	1996	Medicine
Christian Medical College, Vellore, India	MD	2003	Community Medicine
University of Toronto, Toronto, Canada	MHSc	2011	Bioethics

Personal Statement: My interest in bioethics during my training in Public Health in India led to my organization of ethics discussions for interns and teaching in the foundation and ethics orientation courses. Following this I obtained a degree in ethics-MHSc –Bioethics, from the University of Toronto. On my return to India, I have become engaged in several activities, including teaching, research ethics and clinical ethics. I teach ethics to undergraduate medical and allied health students. I am a core member of the Undergraduate Ethics Unit which has designed an ethics curriculum for the medical students and am involved in organizing ethics teaching in the institution. I also teach ethics in the research training courses run by the department such as the Research Methodology course, Clinical trials Workshop, and in institution run courses like the GCP workshop, both at my institution and other colleges around the country. I am a member of the IRB and of the internal DSMB. I serve as a resource person for researchers who have clarifications on the ethics of their studies before they submit for review. Some medical and surgical specialties have started ethics discussions for their residents. I serve as a resource person for discussions in neonatology, psychiatry, surgery and community medicine.

B. Positions and Honors**Positions and Employment**

1996-2000 Medical Officer, Herbert Brough Memorial Hospital, Chennimalai
2000-2003 Resident in Community Medicine, Christian Medical College, Vellore
2003-2007 Consultant, Community medicine, Church of South India Hospital, Erode
2007-2010 Assistant Professor of Community Medicine, Christian Medical College, Vellore
2010-2011 Student, Joint Center for Bioethics, University of Toronto, Toronto, Canada
2011-2012 Research Ethics Board, Hospital for Sickkids, Toronto, Canada
2012- 2013 Assistant Professor, Dept. of Community Medicine, Christian Medical College, Vellore
2013- Associate Professor, Dept. of Community Medicine, Christian Medical College, Vellore

C.Academic / Administrative positions:

2009-2010 Deputy Chief Superintendent of Exams, Christian Medical College, Vellore
2011-2012 Member, Research Ethics Board, Hospital for Sickkids, Toronto, Canada
2012- Member, Institutional review Board, Christian Medical College, Vellore
2012- Member, Data Security Monitoring Board, Christian Medical College, Vellore
2013- Core Member, Undergraduate Ethics teaching group, CMC, Vellore

Honors

2004 Dr. Kesavalu Educational Trust Annual Award of Gold Medal,
M.D.(Community Medicine)
2003 Dr. Rangarajan Memorial Prize and Medal for the Best Outgoing PG Student

C. Selected Peer-reviewed Publications

1. Solar disinfection of water for diarrhoeal prevention in southern India. A Rose, S Roy, V Abraham, G Holmgren, K George, V Balraj, S Abraham, J Muliyl, A Joseph, G Kang. Arch Dis Child. 2006 February; 91(2): 139–141. doi: 10.1136/adc.2005.077867.PMCID: PMC2082686
2. Nine Years from the Millennium Declaration on Water and Sanitation. CMC Alumni Journal
3. How 'Informed' is Informed Consent? Findings from a Study in South India. Shuba Kumar, Rani Mohanraj Anuradha Rose, MJ Paul, George Thomas. Indian J Med Ethics.2012 Jul-Sep;9(3):180-6.
4. Survey of Ethical Issues Reported by Indian Medical Students: Basis for Design of a New Curriculum. Anuradha Rose, Kuryan George, Arul Dhas T, Anna Benjamin Pulimood, Gagandeep . Kang. Indian J Med Ethics.2014 Jan-Mar;11(1):25-28..

D. Research Support

Ongoing Research Support

Obama Singh Initiative 2014-2017
Program Director

IA/E/12/1/500750 05/01/2013 – 04/30/2014
Wellcome Trust DBT India Alliance
Comparison of efficacy of single or multiple cycle(s) of preventive chemotherapy with albendazole in reducing the hookworm re-infection rate in an endemic trial population
Role: Co- Investigator

CMC Fluid Research Grant. 11/21/2012-11/20/2014
Descriptive study on risk of unintentional injury among children aged 1 – 5 years residing in an urban slum in South India.
Role: Co-Investigator

CMC Fluid Research Grant. 03/19/2013-03/18/2015

Incidence of unintentional childhood injuries and risk Perception of unintentional childhood injuries among primary caregivers of children between 0-14 yrs of age in a rural block of South India.

Role: Co-Investigator

CMC Fluid Research Grant. 03/19/2013-03/18/2015

Feasibility and acceptability of implementing a program for screening and treatment of gynaecological morbidity among remote tribal population in Jawadhi Hills, South India

Role: Co-Investigator

CMC Fluid Research Grant. 01/07/2014-06/01/2016

A study of risk factors and environmental sources for elevated blood lead levels among pre-school children living in slums of Vellore, southern India

Role: Co-Investigator

CMC Fluid Research Grant. 03/06/2014-03/06/2016

Prevalence of ocular morbidity in children aged 15 years or younger in Tribal area of Jawadhi hills, South India, a cross sectional study.

Role: Guide for post graduate student.

CMC Fluid Research Grant. 04/23/2014-04/22/2016

To study the prevalence of Vitamin B 12 deficiency amongst children in Jawadhi Hills.

Role: Co-Investigator

CMC Fluid Research Grant. 06/19/2014-06/18/2016

An assessment of socio demographic, psychological and behavioral risk factors for obesity among adolescence who are attending schools in the urban area of Vellore district in Tamil Nadu.

Role: Co-Investigator

CMC Fluid Research Grant Sept-2013-Sept 2015

Qualitative study exploring community perspectives on alcohol use and abuse in the tribal hamlets of Jawadhi hills

Role: Principal Investigator

Completed Research Support

CMC Fluid Research Grant. 11/11/2009-11/10/2011

Understanding informed consent in the medical setting.

Role: Principal Investigator

CMC Fluid Research Grant. 06/10/2009-06/09/2011

Combined use of biosand filter and the SODIS method as a low cost method.

Role: Principal Investigator

CMC Fluid Research Grant. 06/10/2009-06/09/2011

Microbial risk assessment tool for water quality control in an urban community

Role: Principal Investigator

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