

An Assessment of Functioning of Mobile Health Units in Jharkhand



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**Department of Community Medicine
M.G.M. Medical College, Jamshedpur**

In collaboration with

National Institute of Health and Family Welfare, New Delhi and UNFPA



An Assessment of Functioning of Mobile Health Units in Jharkhand

Chief Investigator

**Prof. Deoki Nandan
Director
National Institute of Health and Family Welfare**

Study Team

M.G.M. Medical College, Jamshedpur

Prof. Arun Kumar

National Institute of Health and Family Welfare

Dr. Poonam Khattar
Dr. V.K. Tiwari
Mr. J.P. Shivdasani
Dr. Neera Dhar

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PREFACE

The National Rural Health Mission (NRHM) was launched by the Government of India on 12th April 2005 to carry out necessary architectural correction in the basic health care delivery system, with a plan of action that includes a commitment to increase public expenditure on health. The Mission envisages an additionality of 30% over existing annual budgetary outlays every year to fulfil the mandate to raise the outlays for public health from 0.9% of GDP to 2-3% of GDP. Under the Mission, multifarious activities have been initiated to strengthen the rural health care delivery system for the improvement of health of the rural population.

NRHM implementation framework does not envisage significant engagement of medical colleges in delivery of Mission interventions. The role of the medical colleges in RCH-II is largely limited to conduction of clinical skill based trainings. In the absence of any systematic engagement of medical colleges, faculty members of departments are clueless about the evidence-based technical strategies being pursued in the implementation of various National Health Programmes. There is a huge potential available in medical colleges of the country for undertaking innovations, facilitating programme interventions and conducting health systems research, which largely remains untapped.

The Rapid Assessment of Health Interventions (RAHI), a collaborative activity with the United Nations Population Fund (UNFPA), is a unique initiative taken under the wider umbrella of the Public Health Education and Research Consortium (PHERC) of the National Institute of Health and Family Welfare (NIHFW) for developing partnerships with different organisations working in the field of health and family welfare. The objective of the project is to accelerate NRHM delivery in identified states by organising timely, quality and appropriate inputs through rapid assessments/reviews to address priority implementation problems. During the first phase of the RAHI project, the UNFPA supported 12 health systems research projects in five low-performing states viz. Madhya Pradesh, Jharkhand, Chhattisgarh, Uttar Pradesh and Orissa. During the second phase, another 12 health systems research projects from 6 low-performing states viz. Uttar Pradesh, Uttarakhand, Madhya Pradesh, Jharkhand, Bihar and Rajasthan were taken up.

The rationale for supporting such rapid assessments stems from the discussions during the periodic Joint Review Missions and Common Review Missions. An impressive number of innovations have been supported by the states to improve access and enhance service quality. Many innovations are currently underway in the states and districts to deliver healthcare services in an effective manner. The state and district programme managers wish to know how well these innovations are performing so that in case of gaps corrective measures can be taken to achieve the stated objectives. There has been an

increasing recognition for incremental improvements in the programme delivery by undertaking quick and rapid health systems research and engineering the feedback into the processes. As an institutional response to such demand an attempt has been made to develop a network of institutions and strengthen their capacities on rapid appraisal methodologies for generating programme-relevant information at local and regional levels.

The rapid appraisal of some of the interventions taken up in the second phase of RAHI - project covered the issues of contribution of indigenous system of medicine in operationalisation of 24x7 services, interface of ASHAs with the community and service providers, logistics and supply management system of drugs at different levels, functioning of mobile medical units, birth preparedness and complication readiness as a tools to reduce MMR, quality assessment of institutional deliveries, performance-based incentives to ASHA Sahyaogini, referral transport systems, functioning of programme management units, functioning of RKS, utilisation of untied funds at various levels and utilisation and client satisfaction of RCH service. The present study report entitled “An Assessment of Functioning of Mobile Health Units in Jharkhand” by the Department of Community Medicine, M.G.M. Medical College, Jamshedpur, was finalized by NIHFV in consultation with UNFPA.

The findings and recommendations of these studies will trigger of a series of follow-up measures by programme managers in the state. We strongly feel availability of such a resource to the programme managers will provide necessary evidence-based inputs enabling them to make any mid-course corrections and also scaling up. An added benefit will be incorporation of information about newer programmatic interventions in the medical curriculum.

Dr. Dinesh Agarwal
National Programme Officer, UNFPA

Prof. Deoki Nandan
Director, NIHFV

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Prof. Arun Kumar
Principal Investigator
Professor and Head
Department of Community Medicine
M.G.M Medical College, Jamshedpur

ABBREVIATIONS

ANC	Antenatal care
ANM	Auxiliary Nurse Midwife
AIDS	Acquired Immuno Deficiency Syndrome
CMO	Chief Medical Officer
DPM	District Programme Manager
DPHandPM	Dept. of Public Health and Preventive Medicine
F G D	Focus Group Discussion
HSC	Health Sub-Centre
LT	Laboratory Technician
LHV	Lady Health Visitor
MOU	Memorandum of Understanding
MMU	Mobile Medical Unit
MO	Medical Officer
MHU	Medical Health Unit
NRHM	National Rural Health Mission
NFHS	National Family Health Survey
NGO	Non-Government Organization
ORS	Oral Rehydration Salt
POL	Petrol Oil and Lubricant
PNC	Post Natal Checkup
PHC	Primary Health Centre
SPMU	State Programme Management Unit

EXECUTIVE SUMMARY

Introduction

National Rural Health Mission (NRHM) has proposed to provide health care services to people who are staying in the remote areas and have no access to health care services because of lack of transport, illiteracy, ignorance, lack of awareness regarding available health care facilities through provision of Medical Mobile Units.

In an effort to provide health care at the doorstep of the public in the under served areas, the Government has approved one Mobile Medical Unit per district under NRHM. Government of Jharkhand and NGO has signed an MOU for functioning of mobile health units to meet the objective of providing health care facility in outreach areas. One mobile medical van for each district has been purchased. This study has been taken up to assess the status of implementation of mobile units and to identify any gaps in providing the services of MMUs to the community.

General Objective

To assess the functioning of Medical Mobile Units in Jharkhand through rapid assessment mode.

Specific Objectives:

The specific objectives were:

1. To assess the infrastructure, type of services and frequency of visits by mobile health care units.
2. To assess whether the staff has been trained as per the guidelines.
3. To assess the availability of drugs, medicines and equipments as per the need of community in the Mobile Medical Units.
4. To assess the client satisfaction accessing the services of Mobile Medical Units.

Methodology

Sample

Three districts for the assessment of functioning of MMUs were selected based on geographical location with Ranchi as central district; East Singhbhum as nearby district, and

Godda as far of district. The sample population for pur pose of study comprised of two main categories:

1. Service Providers:
 - i. State Programme Managers of government and NGO , and
 - ii. Chief Medical Officers, District Programme Manager, and staff of MMU from each district.

2. Beneficiaries who availed of services of Mobile Medical Units :
 - i. Exit interview of beneficiaries present at the site of MMU.
 - ii. The Focused Group Discussion in the village where the beneficiaries had already availed of services of MMU in recent past (not more than one week).

Data collection were done in three districts based on the route plan chalked out by CMO during the period. The state level service providers and the chief medical officers were interviewed in their head offices. The interview of staff of MMU was done at the site of MMU. The exit interview of beneficiaries was also undertaken at the site of MMU. Every third beneficiary who had availed of services of MMU was interviewed. The focused group discussions were conducted in the villages where the MMU had visited one or two days before only. The data were analyzed using SPSS package.

Salient Findings

Assessing the infrastructure, type of services and frequency of visits:

- The staff pattern and the equipments in the MMU is as per the MOU signed between the Government of Jharkhand and NGO.
- A separate vehicle has also been given along with the MMU, which at times is used for referral purposes.
- No ambulance has been provided for the transportation of serious patients.
- The MMU provides services for 22 days in a month and has sufficient amount of medicines.
- The MMU follows the prepared route plan and if there is any deviation from this, the information is provided by the van coordinator and IEC assistant on telephone to the concerned authority.
- The MMU has all the drugs, but it should visit more often .
- 93% in Ranchi, 48% in East Singhbhum and 100% respondents in Godda districts had no information and knowledge about what type of services are provided and about the functioning of MMUs.
- 94% in Ranchi and 100% in Godda district had no knowledge as to when the MM U was coming in their area. 48% reported that they had no knowledge whereas 35% reported having information one day before and 13% came to know about the visit of MMU on the date of its visit to East Singhbhum district .

Assessing whether the staff have been trained as per the guidelines :

- The staff has been trained in accordance to their work and handling of the equipments in the MMU.
- Regarding accessibility of services, it was accessible to all of them .

Availability of drugs/medicines/services:

- The beneficiaries are provided with general medical health care services along with laboratory, ultrasound, x-ray and E.C.G facility through MMUs free of cost.
- All were of the opinion that drugs were available in the van.
- 81% in Ranchi, 78% in East Singhbhum and 93% in Godda districts reported that they were aware that the van is only for curative purpose.
- Approximately 97% in Ranchi, 96% in East Singhbhum and Godda availed of only medicines from MMU. 3.1% in Ranchi and 2.2% in Godda availed of blood test facility along with medicine. 4.3% in East Singhbhum and 2.2% in Godda availed X - ray facilities along with medicine.
- 100% in East Singhbhum and 97% in Ranchi and Godda mentioned that drugs and medicines were available during their visit to MMU.
- Client satisfaction.
- The services are provided to those people who were not able to avail of any services due to inaccessibility. MMUs have provided an opportunity to provide services to the hard to reach areas.
- 56.3% in Ranchi, 48% in East Singhbhum and 31.1% in Godda mentioned that quality of services provided was of good quality.
- 67% respondents in Godda district mentioned that the behaviour of staff in MMU was very good.
- 94% respondents in Ranchi, 91% in Godda and 65% in East Singhbhum mentioned that there was privacy on examination at MMU.
- 100% in East Singhbhum, 73% in Godda and 63% in Ranchi mentioned that there was separate facility for examining females.
- 100% in Godda, 91% in East Singhbhum and 84% respondents in Ranchi mentioned that they benefited from the services of MMU.
- All the persons in the focus group discussion were satisfied with services of MMU.
- In Ranchi none of the beneficiary in the FGD reported of having prior information about the arrival of MMU in their village but in East Singhbhum and Godda, few beneficiaries had prior information. However none of the beneficiaries were aware of the services provided by the MMU. Regarding the type of services availed by the beneficiaries two had availed X-ray facility, one had blood test, and all others had taken medicines from the M.M.U.
- Behaviour of staff in M.M.U. was good, but there was no privacy for the examination of female patient. All the persons were satisfied with the services of M.M.U. but they opined that the number of visits of MMU should be increased and there should be provision for specialist doctors.

Key Recommendations

- The vehicles should have check-ups at regular intervals.
- The generator vibrates a lot and it affects the accuracy of laboratory investigations. Arrangement should be made so that the generator could be detached from the MMU van during operational stage.
- More medical officers should be appointed to share the increased burden. Effort should be made to appoint gynaecologists.
- Drugs should be stored in the district headquarter and the MMU should carry only the estimated amount of medicines required for that particular days of work.
- Insurance of the MMU staff could be made mandatory.
- The inadequacy of fund could be assessed and fulfilled so that additional medical officers and gynaecologist could be appointed.
- An ambulance should be attached to the MMU for transportation of serious patients. Taking the help of local PHC or NGOs ambulance can also solve this issue.
- Computer operator should be appointed and telemedicine connectivity should be installed.
- Waste disposal bags should be made available and the staff should be trained about the proper method of waste disposal.
- The local health staff and the Anganwadi Workers should be involved in disseminating the information about the visit date of MMU about a week before.
- IEC materials should be made available in the van and they should be displayed at the service site.
- DOTS and MDT (for leprosy) should be made available and distributed with the help of local health staff so that proper follow-up is maintained.

CHAPTER 1

INTRODUCTION

Background

Jharkhand is one of the high focused state under the National Rural Health Mission (NRHM) and came into existence on 15 November 2000. It is the thirteenth most populous state of India with a geographical area of 79,714 square km s. Its population is over 26.9 million (projected population for 2007 based on 2001 census). There are total number of 24 districts. Geographically approximately 60% area is tribal and hilly. Most of the districts are heavily infested with naxalites, which is a challenge for the Government machinery to function properly.

National Rural Health Mission (NRHM) has proposed to provide health care services to people who are staying in the remote areas and who have no or limited access to health care services either because of lack of transport, illiteracy, ignorance, lack of awareness regarding available health care facilities etc. In an effort to take healthcare to doorstep of the public in rural areas, especially in under served areas, the Government has approved one Mobile Medical Unit per district under NRHM. To fulfil this objective, the Government of Jharkhand is working extensively to provide health care to community especially in the under-served areas and to improve health care delivery by making provisions in the form of Mobile Health Units. Under this scheme Mobile Health Units have started working in Jharkhand from the beginning of the year 2008.

Rationale

Under the NRHM and efforts of Public Private Partnership a scheme of Mobile Medical Units (MMUs) has been started from the year 2008 in Jharkhand. This study has been taken up to assess the existing status of implementation of existing mobile units and to identify any gaps in providing the services of MMUs to the community. Hence this study was planned to identify the strengths, weaknesses and any gaps in the implementation of MMUs. It is expected that the study findings would help in providing inputs and guidelines for future planning of the MMUs.

Description of Scheme of Mobile Medical Units in the State of Jharkhand

There are 24 districts in the state and mobile medical units have been provided in all the districts under the NRHM. The Mobile Medical Units have been envisaged to provide preventive, promotive and curative health care in inaccessible areas and difficult terrains, which are under served or un-served areas under usual circumstances. Factors that negatively influence the existing public health system and call for the exigency are:

- Distance of the remote villages from the Public Health Institutions.
- Geographical barriers to reach the hard to reach masses.
- Lack of mobility support for field visit by the staff assigned to do the job.
- Lack of medicines/equipment/manpower.
- Lack of awareness and health consciousness in the community particularly among disadvantaged people, who are socio-economically backward.

Objectives of Scheme of MMU

It is proposed that one mobile medical unit shall be operational in every district for delivering health services in terms of preventive, promotive, curative and effective to rural population especially to poor women, children and the old. Details of the scheme of MMU are given in the Annexure -I.

Research Questions

- What services are being provided by mobile health clinic?
- Whether mobile health units are regularly visiting the community?
- Whether all the staff is trained as per guidelines?
- Whether drugs and medicines are available as per the guidelines and as per the need of the community in the Mobile Health Units?
- Whether the beneficiaries and service providers are satisfied with the services provided?

General Objective

To assess the functioning of Medical Mobile Units in Jharkhand through a rapid assessment mode.

Specific Objectives

1. To assess the infrastructure, type of services and frequency of visits by mobile health care units.
2. To assess whether the staff has been trained as per the guidelines.
3. To assess the availability of drugs, medicines and equipments as per the need of community in the Mobile Medical Units.
4. To assess the client satisfaction accessing the services of Mobile Medical Units.

Organisation of the Report

The report has four chapters. The first Chapter includes background along with the rationale and the objectives of the study. The second Chapter provides a detailed note on methodology including sample design, rationale for selection sample and various methods and tools that have been adopted in the study. The third Chapter reflects the results and analysis of the study along with discussion of major findings. Fourth Chapter contains conclusion and recommendations emerging from the study.

CHAPTER 2

METHODOLOGY

Study Area

Three districts were selected
Ranchi (Headquarter), East Singhbhum and Godda

Study Type

A cross-sectional descriptive study.

Sampling

Sample Population: The selection of three districts for the assessment of functioning of MMUs was based on geographical location with Ranchi as central district; East Singhbhum as nearby district, and Godda as far of district. The sample population for purpose of study comprised of two broad categories:

1. Service Providers:

- a. State Programme Managers of government.
- b. NGO –Vikas Bharti responsible for operationalizing the scheme of MMU in Jharkhand, and
- c. Chief Medical Officers, District Programme Manager, and staff of MMU from each district.

2. Beneficiaries of Mobile Medical Units:

- Exit interview of 10% of total number of beneficiary present at the site of MMU.
- The Focused Group Discussion in the village where the beneficiaries had already availed of services of MMU in recent past (not more than one week).

Table 1: List of Selected Districts, Blocks and Villages

District	Block	Village		Sample Size	
		Exit Interview	FGD	Exit Interview	FGD
RANCHI	Ratu	Tigra	Pali	32	6
EAST SINGHBHUM	Baharagora	Arjunbeda	Balijudi	23	10
GODDA	Meharma	Champa	Gobindpur	45	10

Objective

To assess the infrastructure, type of services and frequency of visits by mobile units in the community.

To assess whether the staff has been trained as per the guidelines .

To assess the availability of drugs, equipments as per the need of community in the Mobile Medical Units.

To assess the client satisfaction, accessing the services of mobile health care units.

Tools and Techniques for Data Collection

The following tools were developed as per the specific objectives of the study:

Study Tools Used

Checklist of the necessary infrastructure of MMU, structured questionnaire to assess the types of services and frequency of visits

Checklist for guidelines of training the staff of MMUs. Structure questionnaire to identify the types of training received. Focused group discussion and interview

Checklist and structured questionnaire. Focused group discussions to identify any problems faced by beneficiaries and providers in availability of drugs.

Checklist and focused group discussion and interview.

Technique used for Data collection from Service Providers

- a. SPMU of government and SPMU of NGO by holding FGD.
- b. CMO and staff of MMU of all the three districts by individual interview.

Selection of Beneficiaries

- a. Exit interview of the beneficiaries: The exit interview of the beneficiaries was undertaken randomly after they had availed of the services of the MMU during the data collection. 10% of the beneficiaries were interviewed.
- b. Focused Group Discussion: Groups were selected from all the three districts, from the villages where the MMU had already visited during the last week.

Study Duration

September-December 2008

Training for Data Collection

Research team was constituted and training of all investigators was done at RIMS, Ranchi, to have uniformity in data collection and recording of responses.

Data were collected using structured questionnaires for the service providers. Focused group discussions were held with the SPMU of Jharkhand state and State NGO Team at their headquarters on the identified

Focus Group Discussion (FGD). Primary data were collected from all the respondents. The responses were recorded in tape recorder and the scripts were transcribed. The place of holding FGD was selected from the sites where the MMU had given service earlier.

The study maintained all the research ethics throughout. All interviews and FGDs were recorded after taking prior consent from the respondents and were transcribed. One FGD was conducted in each block with the selected available beneficiaries.

Data Analysis:

The data analysis were undertaken using SPSS package.

Quality Assurance

The entire project was monitored and supervised by principal investigator (PI). The PI /Co PI personally conducted the in-depth interview of district official and FGDs. Central Monitoring Team from NIHFV closely monitored the training and field activities, data analysis and report writing. Data collected in the form of recorded interviews were coded and further translated after the completion of the study. Each interview was given an ID number to eliminate bias.

Ethical Clearance

The project structure was examined and cleared by ethical committee of the institution review board at NIHFV for ethical consideration.

CHAPTER 3

FINDINGS AND DISCUSSION

The key findings of the study are discussed in accordance with the following objectives:

1. To assess the infrastructure, type of services and frequency of visits by mobile healthcare units.
2. To assess whether the staff has been trained as per the guidelines.
3. To assess the availability of drugs, medicines and equipments as per the need of community in the Mobile Medical Units.
4. To assess the client satisfaction accessing the services of Mobile Medical Units.

Infrastructure, Type of services and frequency of visits:

An analysis of focus group discussion conducted with the State Programme Management Unit of Jharkhand government revealed the following:

- This programme has been given to the NGO – Vikas Bharti under public private partnership.
- The staff pattern and the equipments in the MMU is as per the MOU signed between the Government of Jharkhand and NGO.
- A separate vehicle has also been given along with the MMU which at times is used for referral purposes.
- No ambulance has been provided for the transportation of serious patients.
- The MMU provides services for 22 days in a month and has sufficient amount of medicines.
- The MMU follows the prepared route plan and if there is any deviation from this, the information is provided by the van coordinator and IEC assistant on telephone to the concerned authority.

Focused Group Discussion was also held with the members of the state monitoring team of NGO during which the following points were highlighted :

- The MMU provides service for 22 days in a month as per route plan chalked out in consultant with CMO.
- The beneficiaries are provided with general medical health care services along with laboratory, ultrasound, x-ray and E.C.G facility through MMUs free of cost .

District Health Administrators

CS/CMO of Ranchi, East Singhbhum and Godda were interviewed regarding functioning and infrastructure available in M.M.U. The following findings emerged:

- M.M.U is providing services twenty-two days in a month in each district.
- Regarding visit of MMUs, a micro plan and route plan is prepared in discussion with CS, and Government authorities.
- Any information regarding deviation of route or any other problem is given by phone and fax to higher authorities and center.
- East Singhbhum and Godda were deciding their route plan as per caseload. Whereas in Ranchi route plan was decided based on the distance of PHC, sub-centre and population load.
- All the registers of staff patients, log book, drug register were maintained by N.G.O
- No separate arrangement has been made for examining female patients.
- Tent as per the scheme has not been purchased.
- Radiologist not present in any M.M.U and Gynaecologist was present in Ranchi and East Singhbhum district only.
- Average waiting time for patients is one hour. In case of laboratory investigation and specialized investigation, it takes an additional two hours.
- No ambulance has been available for referrals. A small van is being used in emergency as ambulance.

Health Service Providers

The following findings emerged on analysis of data related to Medical Officers posted in the MMU.

- The staff pattern and the equipments in the MMU is as per the MOU signed between the government and the NGO except that radiologist was lacking in all the three districts and in Godda there was no gynaecologist.
- The Medical Officers of East Singhbhum and Ranchi districts had no problem in accessing the hard to reach areas whereas the medical officer of Godda pointed out that due to improper road condition and heavy weight of the van it becomes difficult to reach the under-served areas.
- The number of days of stay of MMU in a particular area is decided by the distance of that area in consultation with CMO.
- Ranchi and East Singhbhum face problems of shortage of staff, especially gynaecologist due to frequent turnover. Godda medical officer pointed out the shortage of medicines and ECG rolls also.
- The van and the equipments are cleaned regularly and different types of records, (log book, attendance register etc.) are maintained.

- Waiting time by patients depends on the patient load but on an average it is about an hour. However if any diagnostic test is required, it takes additional 1 hour to 2 hours.
- Referral transport system has not been developed and during emergency a small vehicle is utilized.

Staff in Mobile Van

Van coordinators of all the three districts were interviewed about the functioning of their MMU. The following key findings emerged:

- Instruments and diagnostic facilities were available in the M.M.U but computer and tele-medicine system was not at all adopted.
- Mobile van of all the three districts provided services for 22 days in a month. Regarding number of days of posting of M.M.U in an area, it is decided according to local situation in consultation with C.M.O and district programme manager.
- Manpower was available in all the three districts. They were facing difficulty in getting regular Gynaecologist. No Gynaecologist was available in Godda for even a single day.
- The registers and reports are maintained and sent to the state co-coordinators. There is no separate provision for the examination of female patients. No tent has been purchased. Proper referral transport system has not been developed.
- Due to heavy load of patients, proper examination time could not be given.
- At times the staff of MMU has to work till 7 p.m to complete the work and reports due to great load of patients.
- Route plan was occasionally deviated as per instruction of M.O. I/C of P.H.C, C.M.O, or state government.
- The infrastructure related to diagnostic facilities of x-ray is available.

Interview with the lab technician revealed that the MMU has all the infrastructure and machines needed for diagnostic purposes. A major problem faced by all of them was that the generator vibrates a lot and this causes hindrance in proper and accurate laboratory testing. Laboratory technician of Godda was of the opinion that to improve the functioning of the MMU the number of staff needs to be increased.

The MMU follows the route plan as chalked out. MMU has all the prescribed drugs and medicines. They are able to distribute these as per prescription by the doctors.

The counselors of all the three districts of Jharkhand under study were interviewed regarding assessment of functions of Medical Health Unit. The entire necessary infrastructure is available as per the checklist.

Objective 2: Training of staff as per the guidelines:

The MMUs are in operation with the help of the NGO Vikas Bharti who have to provide training to the entire staff in the functioning of MMUs and their working in the set up of MMU. Given this aspect was discussed with the SPMU, NGO coordinator, and all the staff working in the MMU. The following findings have emerged:

- The staff has been given training related to their work and handling of the equipments in the MMU before their posting .
- All the staff has been trained as per guidelines.
- The x-ray technician of all the three MMU van was qualified in their field and Vikas Bharati has given them specific training for working in the MMU. The x -ray plates were developed on the spot and handed over to the doctor for reference.
- The laboratory technicians were interviewed. All the laboratory technicians have been given training by Vikas Bharati about the instruments available in the van. They were performing their duty according to their job responsibility.
- Laboratory technician of East Singhbhum and Godda had complete training about the functioning of the auto-analyzer. They said that they do the tests without any difficulty and the reports were being handed over to the doctors for reference on the same day.
- Ranchi and East Singhbhum counselors have got specific training but the counselor of Godda reported that he did not received specific training regarding counseling.
- The pharmacists were given training by Vikas Bharati. They were performing their job responsibility and duties as played by NGO Vikas Bharati. The pharmacists of Ranchi and East Singhbhum had received specific training for working in M.M.U while the pharmacist in Godda district did not receive any training.

Objective 3: Availability of Drugs/Medicines/Services:

FGDs with service providers at the state level and state monitoring team of NGO running the MMU revealed that the MMU has all the necessary drugs and medicines. However, there is lack of doctors, as they do not want to go to remote areas.

Key interview with the C.S/CMO has also revealed that drugs are available and are provided during visit of MMU. Regarding availability and infrastructure of M.M.U, ultrasound, E.C.G, x-ray, auto analyzer and laboratory facilities were available but ultrasound was not functioning in Godda district. Computer facilities are available in MMU but are not fully utilized. Telemedicine service has not been installed in any of the

MMU. Other laboratory testing materials needed for diagnostic purposes is also available.

Lab technicians informed that the chemicals and reagents related to laboratory tools are available. The x-ray plates and developer are available but the technicians faced problems because they were not familiar with the local language.

According to the pharmacists the necessary infrastructure was available to them related to distribution of drugs. Except for Ranchi, the drugs and logistics were available as per requirement in the other two districts.

Non-availability of posters, banners, pamphlets were reported by all counselors in the study. They stated that the IEC materials should be made available. Counselors were in need of local language training so that they may be able to converse friendly with local beneficiaries.

Objective 4: Client Satisfaction

The clients are extremely satisfied as the MMU is able to provide curative as well as preventive services to those people who could not easily avail of health care services due to far off areas. MMU was accessible to far reaching areas in all the three districts. However, in Godda district, the roads were not suitable for heavy vehicles to reach outreach areas.

All the medical officers were of the opinion that the MMU is doing excellent job because it is providing both curative and diagnostic services to hard to reach areas at the doorstep and free of cost to beneficiaries.

Godda van coordinator stated that there were problems in reaching hard to reach areas located in hilly areas because of no proper approach road. The clients are very satisfied with the service of MMU. They were able to get diagnostic facilities, which were not available at such ease.

All the laboratory technicians opined that the MMU is of great help as it is providing free medical services with laboratory diagnostic facilities such as, x-ray, E.C.G. and ultrasound facility to the people of remote areas where no medical facility was available earlier.

The services of M.M.U can be improved by developing effective referral services and follow-up by involvement of P.H.C staff. All the pharmacists reported that they faced difficulties unlike language problem, illiteracy among the beneficiaries and heavy rush of patients daily.

Other Observations

The following problems were reported by the staff during the focused group discussion:

- There is law and order problem because of naxal infiltration in most of the remote areas.
- They opined that the efficiency and performance of the MMU can be improved by increasing the funds paid and insurance coverage of the staff.
- Coordination between state, district and NGO can be strengthened by frequent monitoring and evaluation.
- The representative of NGOs mentioned that they would like to be involved with the other National Programmes such as leprosy, tuberculosis, etc.
- The Mobile van contains a generator at the backside for providing electricity. When the generator is switched on the whole van starts vibrating, which creates problem in carrying out laboratory works.
- The cooperation from local health functionaries is very less. The medical doctor of PHC should be more involved on the days MMU is visiting in their areas.
- It is very difficult to take the heavy vehicle to remote areas because there were no proper roads.
- The fund is not sufficient to run the system and they suggested that it should be increased.

Findings Related to Beneficiaries

Analysis of FGDs with the beneficiaries revealed that the MMU has all necessary drugs, but the frequency of the visits should be increased. Regarding accessibility of services, almost every one said it was accessible to all of them. All were of the opinion that drugs were available in the van.

All the persons in the focus group discussion were satisfied with services of MMU. In Ranchi none of the beneficiary in the FGD reported of having prior information about the arrival of MMU in their village but in East Singhbhum and Godda, few beneficiaries had prior information. However none of the beneficiaries were aware of the services provided by the MMU. Regarding the type of services availed by the beneficiaries two had availed x-ray facility, one had blood test, and all others had taken medicines from the M.M.U. Behaviour of the staff in M.M.U was good, but there was no privacy for the examination of female patient. All the persons were satisfied with the services of M.M.U, but they opined that the number of visits of MMU should be increased and there should be provision for specialist doctors.

Exit Interview of the Beneficiaries

The exit interview was conducted at the site of MMU. In all 100 beneficiaries were s

i. Distance of house from service point of MMU

Average distance of house from service point of MMU was reported to be about 0.5 km by 81% of the beneficiaries in Ranchi, in East Singhbhum 52% reported distance to be less than 200 meters and 73% by beneficiaries of Godda district.

District	Less than 200 meters	About 0.5 km	About 1 km	More than 2.5 km
Ranchi	9.38	81.25	9.37	0.00
East Singhbhum	52.17	4.36	26.08	17.39
Godda	73.33	6.67	15.56	4.44

ii. Frequency of visits of beneficiary to MMU

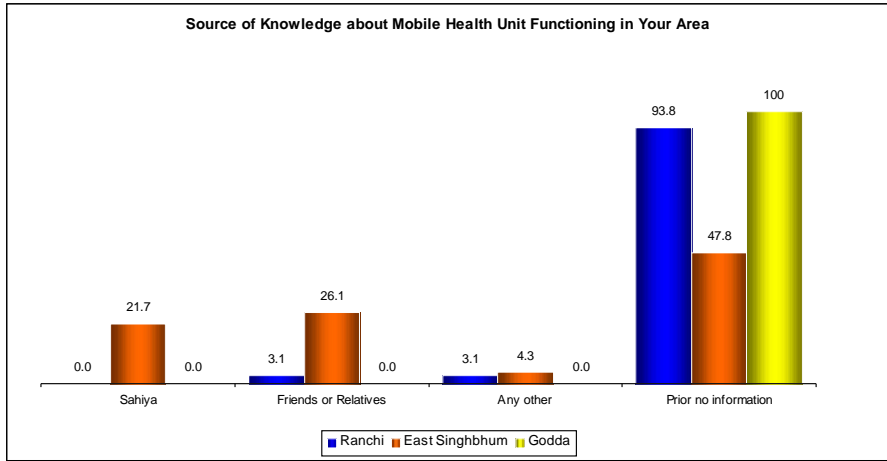
- In Ranchi 84% of the respondents reported as their first visit to MMU and 16% of the respondents reported as their second visit to MMU.
- 100% of the respondents reported as their first visit to MMU in East Singhbhum and Godda districts.

iii. Source of knowledge about functioning of MMU

- 93% in Ranchi, 48% in East Singhbhum and 100% of the respondents in Godda district stated that they had no information and knowledge about the functioning of the MMUs in their area.

Table-3: Percentage Distribution of Source of Knowledge about the MMU Functioning in the Area According to District

Source	Ranchi	East Singhbhum	Godda
Sahiya	0.0	21.7	0.0
Friends or Relatives	3.1	26.1	0.0
Any other	3.1	4.3	0.0
No information	93.8	47.8	100
Total			

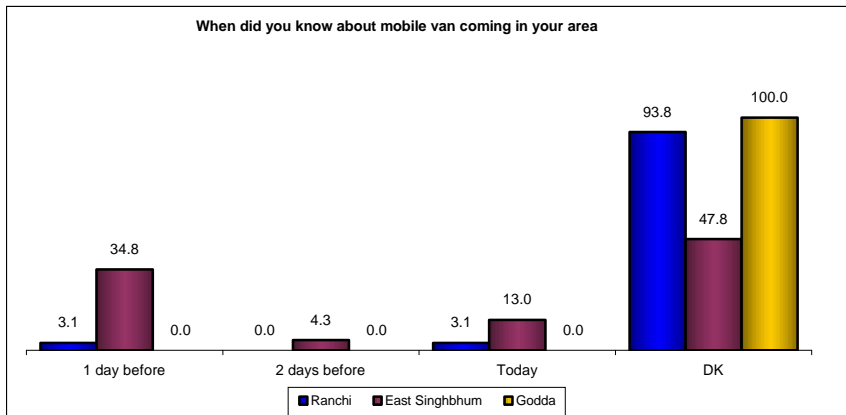


iv. Knowledge about visit of MMU on identified day

- 94% of the in Ranchi and 100% in Godda district mentioned that they had no knowledge as to when the MMU was coming in their area.
- 48% of the respondents reported that they had no knowledge whereas 35% reported having information one day before, 4% two days before and 13% came to know about the visit of MMU on the date of its visit to East Singhbhum district.

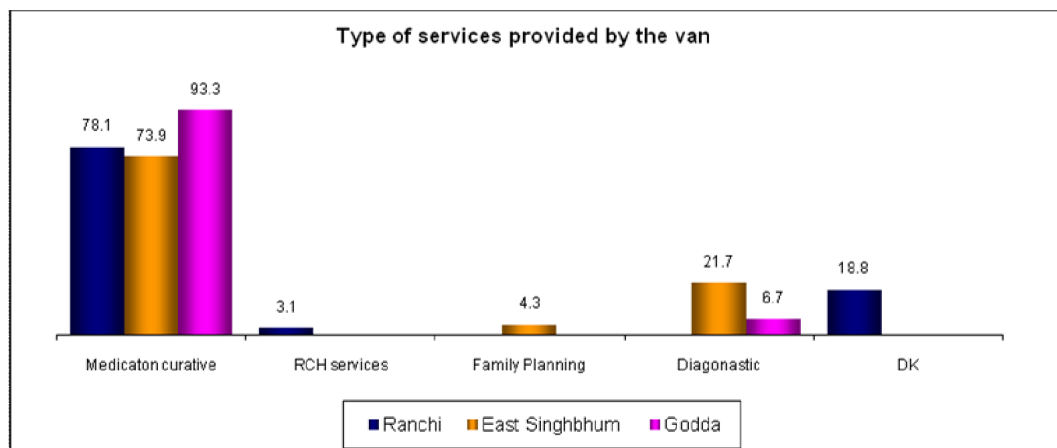
Table-4: Percentage of Knowledge about Mobile Van Coming the Area on Identified Day

Source	Ranchi	East Singhbhum	Godda
1 day before	3.1	34.8	0.0
2 days before	0.0	4.3	0.0
Today	3.1	13.0	0.0
Did not know	93.8	47.8	100.0



v. Awareness about the Type of Services provided by MMU

- 81% in Ranchi, 78% in East Singhbhum and 93% in Godda districts reported that they were aware that the MMU is providing only curative services.
- 3% in Ranchi, 4% in East Singhbhum and 7% in Godda knew that the van is well equipped for providing both curative and diagnostic services.
- 16% in Ranchi and 17% in East Singhbhum were not aware of the services available in the MMU.



Availability of Drugs / Medicines

100% in East Singhbhum and 97% in Ranchi and Godda mentioned that drugs and medicines were available during their visit to MMU.

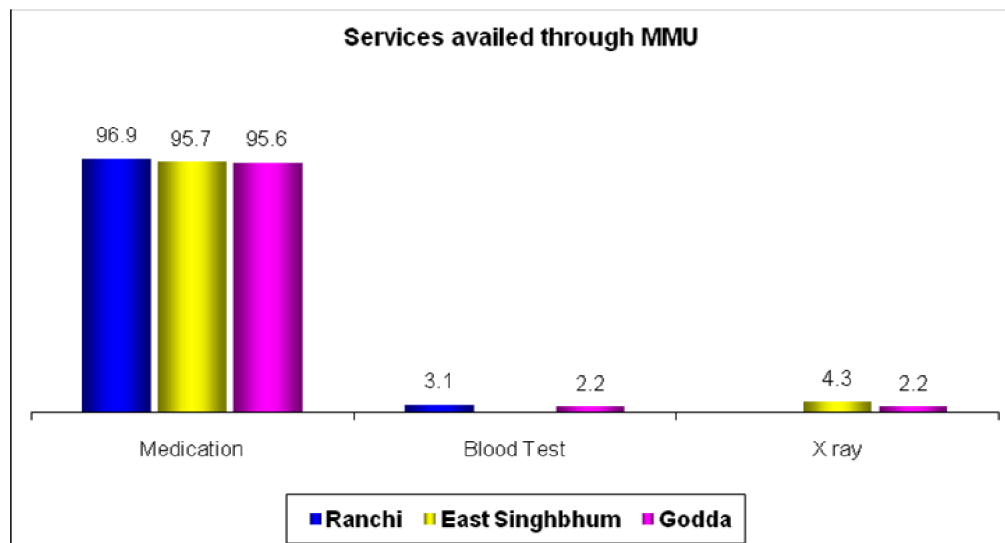
Table-5: Availability of Drugs and Medicines on visit to MMU

District	Yes	No
Ranchi	96.9	3.1
East Singhbhum	100.0	0.0
Godda	97.8	2.2

- Approximately 97% beneficiaries in Ranchi, 96% in East Singhbhum and Godda availed of medicines from MMU.
- 3.1% in Ranchi and 2.2% beneficiaries in Godda availed of blood test facility .
- 4.3% in East Singhbhum and 2.2% beneficiaries in Godda availed of X-ray facilities.

Table-6: Services Availed Through MMUs

District	Only Medication	Medication and Blood Test	Medication and X-ray
Ranchi	96.9	3.1	0.0
East Singhbhum	95.7	0.0	4.3
Godda	95.6	2.2	2.2



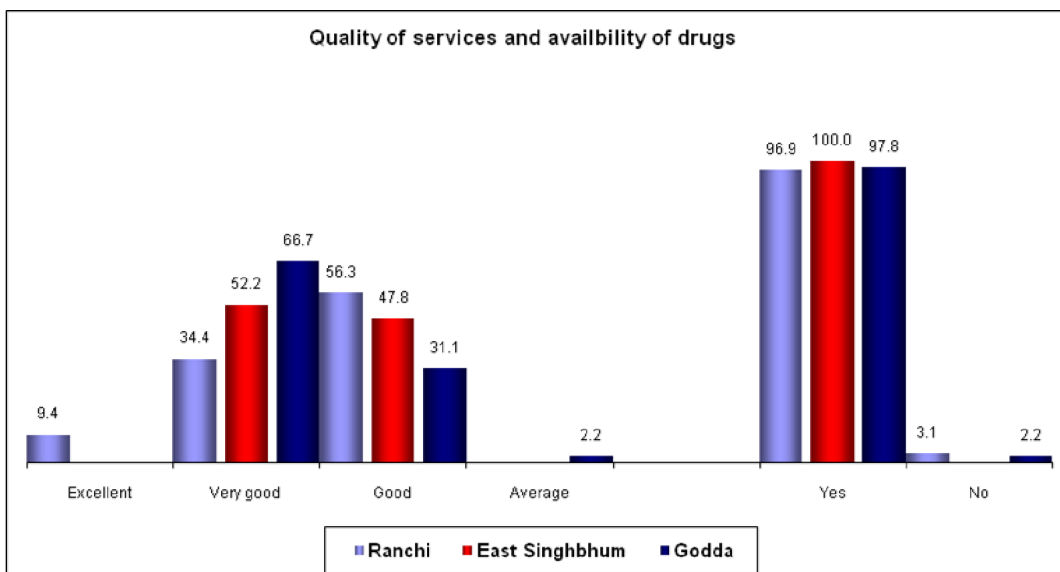
Client Satisfaction:

i. Quality of Services of MMU

- 56.3% in Ranchi, 48% in East Singhbhum and 31.1% in Godda mentioned that quality of services provided was of good quality.

Table 7: Quality of Services byMMU

District	Excellent	Very Good	Good	Average
Ranchi	9.4	34.4	56.3	0.0
East Singhbhum	0.0	52.2	47.8	0.0
Godda	0.0	66.7	31.1	2.2



ii. Behaviour of staff in the mobile van

- 56% in Ranchi, 52% in East Singhbhum and 31.1% in Godda districts stated that the behaviour of the staff was good. 67% of the respondents in Godda district mentioned that the behaviour of staff in MMU was very good.
- 6% of the respondents in Ranchi graded the behaviour of MMU staff as excellent.
- 9% of the respondent in East Singhbhum and 2% in Godda leveled the behaviour of the staff as average.

Table-8: Behavior of Staff in the Mobile Van

District	Excellent	Very Good	Good	Average
Ranchi	6.3	37.5	56.3	0.0
East Singhbhum	0.0	39.1	52.2	8.7
Godda	0.0	66.7	31.1	2.2

iii. Privacy on examination and benefit from MMU

- 94% of the respondents in Ranchi, 91% in Godda and 65% in East Singhbhum mentioned that there was privacy on examination at MMU.

Table-9: Privacy on Examination

District	Yes	No
Ranchi	93.8	6.3
East Singhbhum	65.2	34.8
Godda	91.1	8.9

iv. Separate Facility for Examining Females

- When asked about separate facility for examining females, 100% in East Singhbhum, 73% in Godda and 63% in Ranchi mentioned that there was separate facility for examining females.

Table-10: Separate facility for examining females

District	Yes	No
Ranchi	62.5	37.5
East Singhbhum	100.0	0.0
Godda	73.0	27.0

v. Benefited from MMU Services

100% in Godda, 91% in East Singhbhum and 84% respondents in Ranchi mentioned that they benefited from the services of MMU.

Table-11: Benefited from MMU Services

District	Yes	No
Ranchi	84.4	15.6
East Singhbhum	91.3	8.7
Godda	100.0	0.0

Table 12: Summary of Findings of Exit Interview of Beneficiaries in Percentage

	Ranchi	East Singhbhum	Godda
Age of respondents (20-40 years)	28.1	47.8	24.4
Sex- Male	50	74	58
Female	50	6	42
Main occupation Farmer	62	44	53
Below poverty line	<u>44</u>	<u>74</u>	<u>73</u>
Ist visit to MMU	84	100	100
IInd visit	16	--	--
No Knowledge about functioning of MMU	93	48	100
No knowledge about visit of MMU on identified day	94	47.8	100

On the day of visit	3.1	13	-
Came to know 1 day before	-	35	-
Two days before	-	4.3	-
No Awareness about type of services	16	17	--
Knew about curative services	81	78	93
Knew about diagnostic services	3	4	7
Medicines availed	97	96	96
Medicine and blood test	3.1	—	2.2
Medicine and x-ray	---	4.3	2.2
Availability of drugs /medicines on visiting MMU	97	100	97
Quality of services of MMU	56.3	48	31.8
Behaviour of staff-			
Excellent	6	9	2
Very Good	37.5	39.1	66.7
Good	56	52	31.1
Average	-	8.7	2.2
Separate facility for examining female	63	100	73
Privacy on examination and benefit from MMU	94	65	91
Benefited from MMU services	84	91	100

Discussion

1. Knowledge about functioning of MMU and visit on identified days :

Serves as an important factor in availing of services by the beneficiaries especially in difficult to reach areas. It has been revealed from the findings of exit interview of beneficiaries that about 95% of the respondents did not know about the date of visit and functioning of MMU in their area. The role of all health workers especially ASHA/Sahiya, ANM, AWW and counselors become critical in providing the information to the community if maximum number of beneficiaries have to be tapped from MMU. The service providers at district and block levels with support from NGO must make an all out effort to disseminate the date of visit of MMU at least 3-4 days in advance. This would ensure availing of services by all the new people and also for those who wish to report the developments to medical officer of MMU regarding their progress on health related matters and advise taken on previous visits. Each PHC/Sub-centre can display and notify the date of visit of MMU and plan of visits of MMU at least a month well in advance. They should also inform the community about the type of diagnostic services, which are available in MMU. The ANMs

reported that involvement of ASHA (Sahiya) and AWW could be taken for spreading information about visit of MMU at least 2-3 days in advance.

2. Training of the staff of MMU

All the staff has been trained as per guidelines. As per the scheme of MMU, services of the gynaecologist are to be provided. However, since there is a shortage of gyn aecologists, this service is not being provided satisfactor ily. The State government and NGOs should take appropriate measures to appoint gyn aecologists.

3. Availability of Medicine

As per the findings of the study, all the drugs are available in the MMU and stored in the MMU itself. However, the drugs like DOT also could also be given to the pharmacists for distribution. This would support NRHM component related to integration of national programmes also. The ASHA/ANM could be given training and orientation for the same.

4. Display of IEC materials at the site of MMU

There is a provision of IEC materials to be displayed at the site of MMU. However these were not displayed due to non -availability, the MMU should use this opportunity to the best for information, education and communication of community. These should be in their local language. The counselors also reported that they would benefit, if they were given some knowledge about local language of the community also. They felt the need to get additional training for counseling and dealing with the community.

5. Follow-up of patients:

The follow-up of diagnostic facilities should be done with the medical officers of the PHC. Wherever possible, referral should be done with follow -up during next visit of MMU.

6. Client satisfaction

All the beneficiaries reported to be satisfied with the services of MMU. They appreciated the instant delivery of medicines and reports of diagnostic tests also. They suggested that frequency of visits of MMU should be increased.

Many patients reported that there is no privacy for examination of female patients as there is a provision of purchase of tent/curtain in the scheme, this aspect could easily be take n care of.

7. Technical problems with the MMU

The generator in the van is installed at the backside of van, which provides electricity to equipments for laboratory testing. This causes vibrations in the MMU and affects the accuracy of the laboratory testing procedures. Some remedial measures need to be taken with the agency that has the contract of maintenance in respect to this component.

Provision of water in MMU is most important from the point of hygiene of the staff as well as cleanliness of instruments and vehicle. There is a provision of water storage in the MMU. This aspect was also reported to be giving trouble in all the three districts visited. In one MMU, the tank was reported to be leaking and in other, the water was not filled up.

It is suggested that regular check-up of MMUs should be conducted by the NGO and the concerned agency which has provided the vehicles.

CHAPTER 4

CONCLUSION AND RECOMMENDATIONS

According to the service providers and the beneficiaries, the MMU is very useful because the services are now being provided to those people who were not able to avail of any services due to inaccessibility. MMUs have provided an opportunity to provide services to the hard to reach areas. The staff is well trained. All the prescribed drugs are available in the MMU with diagnostic facilities. The beneficiaries are able to get the prescribed medicines also after the consultation. There have been suggestions from the beneficiaries that the information related to the visit of MMU should be given at least two to three days before the visit of MMU so that they could plan out their work and more people could be covered. The van has visited the districts only once and patients wanted to have follow-up with the physician, for which the mechanism has not been worked out. The MMU staff also suggested better linkages with the concerned PHC and staff.

Based on the study findings and analysis, the following recommendations are suggested:

Areas of concern

1. Vehicle leaks in rainy season.
2. The MMU vibrates when the generator is switched on, leading to difficulty in doing laboratory tests.
3. Workload on Medical Officers
One Medical Officer has to examine on an average 125 patients a day.
4. Drug storage system:
Huge quantity of drugs stored in the MMU making it very congested.
5. Security of health personnel: The MMU staff are going to remote areas and are afraid of their life as the areas are heavily infiltrated by naxalites. Further bad condition of roads makes them prone to accident.
6. Shortage of funds: The current funds are not sufficient to appoint additional medical officer and gynaecologist.
7. Lack of referral transport facility to transport serious patients.
8. Absence of telemedicine facility and computer service
9. Lack of proper waste disposal method.
10. Absence of prior information about the visit of MMU.

Follow-up of the patients

11. Frequency of visits by MMU

12. Lack of IEC materials and information about the facilities given by the MMU.
13. Lack of National Programme medicines.
14. Lack of knowledge about local language.

Recommendations

- The vehicles should have check-ups at regular intervals.
- Arrangement should be made so that the generator could be detached from the MMU van during operational stage.
- More Medical Officers should be appointed to share the increased burden. Effort should be made to appoint gynaecologists.
- Drugs should be stored in the district headquarter and the MMU should carry only the estimated amount of medicines required for that particular days of work.
- Insurance of the MMU staff could be made mandatory.
- The inadequacy of fund should be assessed and fulfilled so that additional medical officers and gynaecologist could be appointed.
- An ambulance should be attached to the MMU for transportation of serious patients. This can also be solved by taking the help of local PHC or NGOs ambulance.
- Computer operator should be appointed and telemedicine connectivity should be installed.
- The local health staff and the anganwadi should be involved in disseminating the information about the visit date of MMU about a week before. This would ensure vast coverage in remote areas.
- Only one visit had been organized in the districts so far. Follow-up mechanism needs to be worked upon to take care of the patients.
- Second visit of the MMU to a site takes more than 2-3 months. Service of more than one MMU in a district can solve this problem. For this additional fund may be generated.
- IEC materials should be made available in the van and they should be displayed at the service site by counselors. IEC materials preferably in local language would be beneficial.
- DOTS and MDT (for leprosy) should be made available and distributed with the help of local health staff so that proper follow-up is maintained.
- The staff could involve the local health staff and anganwadis to have better communication skills in local language.

REFERENCES

1. Government of India, Framework for Implementation (2005 -2012), National Rural Health Mission- Meeting People's Health Needs in Rural Areas, Ministry of Health and Family Welfare, New Delhi, 2005.
2. Government of India, National Rural Health Mission (2005-2012) Mission Document, Ministry of Health and Family Welfare, New Delhi , 2005.
3. NRHM-The Progress so far. <http://mohfw.nic.in/nrhm>
4. NRHM-The Medical Mobile Units. <http://mohfw.nic.in/nrhm>

Scheme of Mobile Medical Units in the State of Jharkhand

Activities proposed under the scheme:

- Procurement of equipments, instruments and drugs .
- Engagement of staff including Medical Officer, Pharmacist, Staff Nurse, LT, ANM (Specialists to be hired).
- Preparation of a calendar for visit of mobile team to blocks and below
- To be managed by NGOs .

There are 2166 villages in the unreachable areas of the Jharkhand. As per norms one HSC to be constructed within 4 and 5 villages. So there are 433 HSC to be constructed which will cost approximately 65 crores. Still there is problem of staying the ANM at the HSC. In place of these HSCs, MMU is very useful for these places. Department of Health, Jharkhand has launched 24 MMUs in all the districts in 2007-08 and their performance and services are very encouraging. We are strongly linking the relationship between the unreached community and the health providers. At present, unreached areas are easily accessed by the MMU. We have proposed another 24 MMUs in the year of 2008-09 because effort in providing health services with MMUs is very cost effective in comparison with construction of HSC in remote areas.

The following services are proposed to be provided through Mobile Medical Unit:

1. Curative:

- Treatment of minor ailments.
- Referral of complicated cases.
- Early detection of TB, Malaria, Leprosy, Kala-Azar and other locally endemic communicable diseases and non-communicable diseases such as hypertension, diabetes and cataract etc.
- Minor surgical procedures and suturing.
- Specialist services such as physician, radiologist and gynaecologist.

2. Reproductive and Child Health Services:

- Ante-natal check-up and related services e.g. injection tetanus toxoid, iron and folic acid tablets, basic laboratory tests such as haemoglobin, urine for sugar and albumin and referral for other tests as may be required;
- Referral for complicated pregnancies;
- Post-natal check-up;
- Immunization clinics (to be coordinated with local sub-centres and PHCs)

- Treatment of common childhood illness such as diarrhoea, ARI/Pneumonia, complication of Measles etc. and
- Adolescents care such as lifestyle education, counseling, treatment of minor ailments and anaemia etc.

3. Family Planning Services:

- Counselling for spacing and permanent method;
- Distribution of Nirodh, oral contraceptives, emergency contraceptives; and
- IUD insertion.

4. Emergency Services and care in times of disasters epidemics/public health emergencies/accidents etc.

- IEC materials on health including personal hygiene, proper nutrition, use of tobacco, diseases, PNDT Act etc.
- Diagnostic:
 - Ultra Sound
 - E.C.G
 - Auto Analyzer
 - X-ray
 - Microscope
- Computer and telemedicine

Selection, Expenditure and Implementation

- The Health and Family Welfare Department had published the tender for implementation for Mobile Medical Unit. Vikas Bharati, Ranchi has been selected for this purpose.
- Monitoring Cell has been constituted to monitor the Mobile Medical Unit. The cell visits time to time to the districts.
- Rs.231088.00 has been given by the Department to Vikas Bharati. Vikas Bharati is submitting the daily report and audited account form.
- After analysis it has been found that approximately 73000 to 75000 patients have been examined and treated. The expenditure per patient is approximately Rs.70.00.
- The services like x-ray, ultra sound, pathological test, blood pressure, ECG etc. are given at an expenditure rate of Rs.70.00 per patient and it is going on.

Equipment in the MMU

Every mobile health unit has been equipped with x-ray, USG, ECG, auto analyzer, operation theater, microscope, computer, autoclave and provision of telemedicine to provide health care at doorstep in difficult to reach area.

Given below is the staff pattern as per the order of the Government of Jharkhand:

Human Resource: The following human resource is proposed :

Staff at State level:

1. State Coordinator	1
2. Finance Division	1
3. MIS Coordinator	1
4. Technical Incharge	1
5. Reporting Incharge	1
6. Medical Technical Adviser	1
7. Divisional Coordinator	1

Staff at District Level Mobile Medical Unit:

1. Physician	1
2. Gynaecologist	1
3. Radiologist	1
4. X-ray technician	1
5. Pharmacist	1
6. Lab. technician	1
7. Nurse	1
8. ANM	1
9. Counselor	1
10. IEC Assistant	1
11. Driver	1
12. Helper	1
13. Health Van Coordinator	1