

Synopsis
on
Mid-Term Evaluation of Mobile Health Units (MHUs) for Delivery of Health
Services in Selected Gram Panchayats of Jaipur District, Rajasthan

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A. Introduction

Good primary healthcare is still very hard to access in rural India, mainly in remote and poor areas^[1]. Since barriers such as lack of service provider, lack of well-equipped infrastructure, lack of medicine and diagnostic and many more exist, clinics on vans called Mobile Health Units (MHUs) have been developed to help remote and poor communities receive essential healthcare at their own locations. These compact clinics are able to travel with medical teams, simple checking tools such as hemoglobinometer, sphygmomanometer, medicines and diagnostic instruments etc. and essential medical health related supplies, aiding in identifying, handling and referring cases of common illnesses quickly^[2]. In Rajasthan, ideas from MHUs are put into action in Jaipur district together with local NGOs named Dhara Sansthan to provide health services through CSR. They are helping the community to increase community services, spread awareness on health and generate evidence how public health operates in remote Gram Panchayats of India. For this, vehicles have been customized and converted into MHUs, designed to carry medical teams i.e., selected service providers, basic diagnostic equipment, patient examination tables, essential drugs, and health communication materials. The services typically offered include general health check-ups, antenatal and postnatal care, immunization, screening for non-communicable diseases, referrals for higher care centers, minor treatments, and health awareness campaigns^[3]. Access barriers in these areas are multifaceted however, key obstacles include long distances to health centers, lack of transport, shortage of trained healthcare professionals, and weak infrastructure and other reports including the NRHM reports^{[4][5]}.

Further, Socio-cultural issues such as gender bias, caste discrimination, and low health literacy further worsen service delivery, especially for women and marginalized groups was also reported^[6]. Along with this, financial hardships and lack of trust in public health services also discourage timely care-seeking behavior of the community on the health system. Together, these factors significantly hinder access to consistent and quality primary healthcare in rural India. Therefore, the government and many corporates join hands to develop MHUs so that service can be provided in the hard-to-reach areas of the country.

B. About the project

Dhara Sansthan, a registered non-governmental organization of Rajasthan with support from Corporate Sector Responsibility fund operating MHUs in selected GPs of the Jaipur district. The organization has selected the Jaipur district was selected for MHU operation based on health vulnerability indicators, some of the hard-to-reach geographical terrain, scattered rural populations, and gaps identified in routine service utilization reports. This organization is active in Jaipur for a long time, making local implementation feasible and impactful^[7]. Dhara Sansthan is implemented in the district because Sub-Centers (SCs), Primary Health Centers (PHCs), and Community Health Centers (CHCs) are typically located within a 5 km radius of the villages, however, many rural GPs still face severe service gaps due to unavailability of staff, absenteeism, poor infrastructure, or limited outreach. Giving these gaps, MHUs were introduced as a supplementary strategy to fill these gaps by taking healthcare to the doorstep of people for preventive, promotive, and basic curative services ^[8].

To keep changing and measure the output and outcome, reviews were done by the organization, however they were not able to identify the correct problem due to lack of fund and time. Review reports suggested that although initial indicators are going well, after several months a thorough evaluation should be done to check its effectiveness and its ability to continue and scale- up. This evaluation is necessary to discover the strengths of operations, difficulties with logistics and what the community thinks which guides future steps and policy choices.

C. Review literature

It has been reviewed in the literature that MHUs are one of the best tools to address and provide primary healthcare services where direct care through health systems is unavailable. More than one national and international assessment has looked at the design, implementation, and results of their policies in many circumstances. A report published by the Ministry of Health and Family Welfare says that mobile health units have improved connections to health services in regions that are hard to reach or populated by tribal community ^[9]. These interventions have helped the community to lower the out-of-pocket expenditure of patients and their families, and increased the participation of people receiving different services such as immunization and maternal-child

care. In the same study, conducted at the state of Madhya Pradesh, it was discovered that MHUs improved rural women's access to both before- and after-childbirth care ^[10] It was also reported how often people visit, if they get the medicines they need, and how aware the community is each impact the use of health services. Another similar study shows how mobile medical units performed in Uttar Pradesh (UP) at a given period of time and concluded that MHUs brought more patients and expanded the services, but there were still difficulties with staff, record management, and connecting with main hospital resources ^[11].

The World Health Organization ^[12] has stated that mobile health services play a key role in reaching universal health coverage in nations where people are spread out and transportation is not easy. The use of mobile clinics was seen to have the most impact when joined with the local health system and regularly supervised by staff and community members. According to their study in Rajasthan ^[13], found different results from using mobile health outreach in tribal areas. Patient satisfaction was positive, though challenges like improper scheduling, needing to keep vehicles in good condition, and problems with testing tools slowed down care. In the context of Jaipur district, very few systematic evaluations have been conducted, though grey literature and field reports indicate similar operational concerns. For instance, reported that in government-run MMUs in Jaipur, challenges included staff shortages, irregular schedules, and limited diagnostic capacity ^[14]. However, these findings mostly came from publicly funded Medical Mobile Units (MMUs), not those run by NGOs or PPPs (public-private partnerships). This lack of formal, peer-reviewed assessments of NGO-operated MMUs, like those by Dhara Sansthan, highlights a critical research gap. Hence, the current study proposes to focusing specifically on MHUs implemented through a grassroots NGO in Jaipur's Gram Panchayats. It introduces three variables—(1) **patient satisfaction**, (2) **health system integration**, and (3) **inter-agency collaboration**—that were largely under-reported or absent in earlier literature. Additionally, while most past research measured service delivery outcomes (e.g., OPD count, ANC coverage), this study emphasizes mid-term performance evaluation and qualitative feedback from service recipients and providers. There is not much rigorous assessment of MHUs in the Jaipur district, mostly absent in cases where they are NGO-operated, such as those by Dhara Sansthan. It points out a major difference in current research. Furthermore, apart from how MHUs deliver services, it is important to study how well users are satisfied, how agencies cooperate, and how MHUs join the health system. Accordingly,

this study indicates that MHUs play an increasingly critical role and suggests that mid-term, local assessments should be done to check their success, lasting value, and influence on communities.

D. Problem Statement

Dhara Sansthan NGO has introduced MHUs to some GPs in Jaipur with the help of CSR funds to increase access and information about health services. As more than two years have been completed, no mid-term appraisal has been carried out by the organization due to lack of funds and time. Second, as per the literature studies of MMUs were done which are governed by the government. In this case, the MHUs are being run by the NGOs in collaborative partnership with a corporate in public-private partnership (PPP) mode. Hence, the organization has given a chance to explore the status of the services provided to the community and satisfaction level received by the patients and what kind of modification is required for further continuation of the project and scaling up in different places.

Even though many actors are trying to fix healthcare issues in rural India, many people in remote and needy regions still do not get timely, cheap, and good quality health services. Mobile Health Units (MHUs) may be the answer to closing this gap by taking care of rural communities nearby. Primary healthcare services were delivered in the Jaipur district of Rajasthan by MHUs run by Dhara Sansthan in a number of Gram Panchayats. Still, there is no organized evidence showing the effectiveness, efficiency, and community impact of these MHUs after a couple of years of implementing them. If there is no mid-term evaluation, it becomes hard to understand:

- whether these services are addressing the actual healthcare needs of people who live near the Gram Panchayat,
- what problems are encountered during the actual actions on-site,
- the way the target population sees and reacts to these services,
- if the MHU model can continue and expand over the years.

In the absence of sufficient empirical evidence, it is very difficult to check whether the intervention needs any amendment in the mid of the project or not. This mid-term evaluation aligns with the study's core objective—to assess the implementation, outcomes, and sustainability of MHUs in selected Gram Panchayats of Jaipur. The evaluation seeks to answer key research

questions: (1) Are MHUs meeting the essential primary healthcare needs of the rural population? (2) What challenges are encountered in on-ground operations? (3) What is the level of community satisfaction with these services? and (4) What is the feasibility of long-term continuation and scaling of the model?

Dhara Sansthan selected six Gram Panchayats—Rampura, Bassi, Madhorajpura, Bhateri, Kanota, and Chhapra—based on multiple criteria: geographical remoteness, socio-economic vulnerability, limited public health infrastructure, and poor health indicators as identified in district health records and baseline surveys^[15]. These areas were under-served by static government health services such as PHCs and SCs, making them suitable for MHU-based interventions. The contract period for this intervention spans from January 2022 to December 2024. Under the public-private partnership with the Rajasthan State Health Society, the MHU program includes a defined service package: outpatient consultations, antenatal and postnatal care, immunization support, screening for non-communicable diseases, distribution of essential medicines, referrals to higher-level facilities, and periodic health awareness campaigns^[16]. This study, therefore, becomes timely and necessary, providing evidence to guide course correction, policy adaptation, and potential replication in other rural blocks of the state.

E. Rationale and scope of the study

For the past few years, India has changed its public health approach to emphasizing reaching to the unreachable areas through MHUs to help people who live in distant and underserved areas. The unreached area of rural Rajasthan now a days depends on MHUs because of unavailability of health facilities and doctors, and the community often needs more medical assistance. The region in which Jaipur is located is fairly developed, yet there are still big differences in rural health care, mainly in the GPs which are located at a distance place. As mentioned earlier, Dhara Sansthan is operating MHUs in selected GPs of Jaipur district, observations and personal accounts suggested that the efforts by Dhara Sansthan helped the community to get proper services related to health, yet there are no solid evaluations done to measure performance, efficiency or what others think about the MHUs run by the group in the middle of the program. This proposed proposal helps to find the strengths and weaknesses of the model and facilitate developing future policies and decisions. In this regard, this study proposes to

do a mid-term evaluation of the MHUs in a selected GPs of Jaipur district. The mid-term review report on the project will give detailed information such as working processes of MMU, satisfaction level of the patients, team effort and how people are getting help will provide useful information for boosting mobile health programs across rural Rajasthan ^{[9][10]}. More specifically, Key indicators for the mid-term evaluation will include service utilization (e.g., number of OPD consultations, ANC check-ups), community satisfaction, referral success rates, team functionality, regularity of visits, logistics management, and coverage of vulnerable populations. These will be assessed using primary field data, patient feedback, and program reports [17].

F. Research Questions

As earlier literature has been reviewed and concluded regarding the factors affecting the MHUs operation, this study may be a different one as it is associated with PPP based MHUs operated through CSR fund. Based on these reviews, few research questions come to the mind of the researcher which are as below:

1. Are Mobile Health Units (MHUs) able to satisfy the basic healthcare needs of the rural communities located in the selected GPs of the Jaipur district under the project?
2. How are the roles and responsibilities divided between Dhara Sansthan and the Mobile Health Units (MHUs), and
3. Which service delivery challenges do MHUs experience in their work and what important parts should be improved to increase access, coverage and efficiency of the given project?

G. Objectives:

The primary objective of the assessment is to conduct the mid-term evaluation of the MHUs in terms of satisfaction level of the patients, and the services provided by them in the selected GPs of the Jaipur district.

Based on primary objectives, the secondary objectives are to

- (i) identify the satisfaction level of the MHUs operated in the selected GPs to meet the primary health care needs of people living in the selected Gram Panchayats of Jaipur district. And
- (ii) identify what are the challenges MHUs team and Dhara Sansthan are facing while implementing the project and how services are delivered and propose ways to boost outreach and improve operations.

H. Research Methodology

1. Study Design

The mid-term is primarily implemented with Descriptive and explorative study design and data will be collected using blended methodology i.e., quantitative and qualitative.

2. Study Area

For the purpose of this mid-term evaluation, six GPs of Jaipur district will be selected. These GPs include areas with diverse population profiles, varying degrees of remoteness, and previous records of low health service utilization and where MHUs have been operationalized by Dhara Sansthan.

3. Sampling Strategy

This proposed sampling is manageable for in-depth field assessment and allows for both quantitative and qualitative data collection within available resources and time constraints. Moreover, these GPs reflect different levels of accessibility, health infrastructure gaps, and levels of community engagement, making them suitable for comparative analysis. This targeted mid-term evaluation is expected to generate context-specific insights on service delivery, patient satisfaction, and system-level integration, which can guide the scaling and replication of the MHU model in other similar rural contexts of Rajasthan.

The sample GPs of the Jaipur district will be altogether six and it will be selected purposively as the programme is not being implemented in every GPs of the district. The rationale behind selecting six GPs is to ensure representativeness in terms of geography, community needs, and operational variations of MHU deployment. After selection of the GPs, a list of the beneficiaries who availed services from MHUs will be collected from the Dhara Sansthan's

officials and randomly beneficiaries will be selected. In addition to this, stakeholders will also be interviewed to understand the program challenges.

4. Sample Size

Overall, 210 samples will be selected from the study villages based on the beneficiaries. For this, a list will be procured by the researcher, and beneficiaries will be selected randomly from the selected villages. The overall sample will be distributed according to the proportion to population size of the villages. The sample size of 210 was determined in consultation with Dhara Sansthan, based on their service delivery records from January 2022 to December 2023, which showed an average monthly footfall of approximately 35–40 unique beneficiaries per Gram Panchayat. This figure ensures adequate representation across the six selected Gram Panchayats while remaining feasible for fieldwork. Besides, to identify the challenges, officials from Dhara Sansthan, grassroot-level officials of the health department, ASHA, and MHUs staff will be interviewed.

5. Study tools

To review the mid-term status a semi structured tool will be developed for the beneficiaries and in addition to this, Key In-depth tools will be developed for the stakeholders. These tools will be reviewed by the mentor at the University as well as at the Organization level. The beneficiaries survey will be conducted through semi-structured questionnaires consisting of questions related to services provided, quality of services, patient satisfaction, operational challenges observed and health outcomes. These outcomes will be supported with the qualitative data collected from Key Informant Interviews (KIIs), and FGDs to understand the dynamics of association with MHUs, challenges faced, and service acceptability by the different cadres of community such as pregnant and lactating mothers, children, old age population, vulnerable groups etc.

6. Data Collection Methods, cleaning of data and Dummy tables

To meet the objective, data will be collected by reviewing secondary data of the MHUs over the year by different diseases and conducting a survey of beneficiaries. Further the primary data will be collected in the period of 90 days starting from March 1, 2025, to 31st May 2025 where the researcher will collect the data. After data collection, it will be entered into Microsoft

Excel worksheet followed by data cleaning. Simultaneously, to answer the objectives, dummy tables will also be prepared.

7. Data Analysis

Data will be analyzed using statistical tools Excel and narrative form, focusing on frequencies, percentages, and comparative analysis across GPs.

I. Chapterization scheme

The whole dissertation will be developed chapter wise such as Introduction, review of literature, Research Methodology, Key findings, Discussion, Conclusion and recommendations, and Bibliography.

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