
# Assessment of Mobile Health Units

صحت زندگی

In 2012, Government of Punjab evaluated the performance of Mobile Health Unit (MHU) Pilot Project instituted in six rural districts. The Project was appreciated by the communities with respect to its quality of services and accessibility but implementation gaps were identifed in logistics, private/public linkages and information sharing. Protocols for identifying deployment sites, regularising MHU visits, robust monitoring, development and implementation of Standard Operating Procedures (SOPs) for MHUs and contracting mechanisms still need considerable attention. Financial implication for MHU Project is signifcant when compared to static facilities with a cost beneft ratio of 0.68 for MHUs and 1.28 and 1.49 for Basic Health Units (BHUs) and Rural Health Centres (RHCs) respectively. In its current form, MHU Pilot Project is serving fewer patients at a higher cost-beneft ratio and over a shorter period than static facilities. However, its utility in providing access and care in post disaster scenarios should be noted.

# Introduction

Pakistan is facing challenges in achieving Millennium Development Goals (MDGs) related to maternal and child health, despite having an extensive network of static health facilities in line with the precepts of the Alma Ata Declaration. This is largely attributed to lower level facilities being non-functional, ofering limited services or having poor accessibility, resulting in poor utilisation rates and a preference for a private provider. To address this the Department of Health, Government of Punjab, launched an innovative outreach and service delivery initiative as a part of its health sector reform agenda through the Punjab Devolved Social Services Programme (PDSSP).

# Background

The MHU Pilot Project was launched in January, 2011 with the aim to deliver quality primary health care and diagnostic facilities at the doorstep to six rural districts of Punjab having poor health indicators (Table 1).

International examples of such MHU Projects can be found in Saudi Arabia, El Salvador and India. Common issues encountered in these Projects revolve around contracting mechanisms, budgetary implications, human resources, site selection criteria and private-public linkages. Models for the MHU Project also exist in Pakistan that used vehicles suitable for areas with poor road infrastructure and rough terrain.

**Table 1: Key indicators in MHU Districts**

| District | Population | Literacy Rate | | Infant Mortality Rate | Under 5 Mortality Rate |
|---|---|---|---|---|---|
| Bahawalpur | 2400000 | 45% | 110 | 110 | |
| Bahawalnagar | 2061447 | 49% | 84 | 123 | |
| Dera Ghazi Khan | 1643188 | 44% | 78 | 113 | |
| Mianwali | 1056620 | 57% | 78 | 113 | |
| Muzafargarh | 2635903 | 45% | 86 | 128 | |
| Rajanpur | 1103618 | 33% | 110 | 170 | |
| Punjab | 73621290 | 59% | 77 | 111 | |

Adapted from 1998 Census and Multiple Indicator Cluster Survey 2007-2008

The Project was designed around an out-sourced model through an independent provider. Key objectives and services as per PC-1 are given in Table 2.

**Table 2: Key objectives of MHU Project as per PC-1**

**Key Objectives**

- To provide improved primary health care facilities in remote areas
- To increase the availability and accessibility of health services
- To design and pilot technically sound, viable and administratively feasible interventions to achieve the above objectives

**Key Services**

- Out Patient Department for common ailments including dispensing of drugs in accordance with essential drug list for BHUs
- Minor surgical treatment including dressings
- MNCH services including pre and postnatal care
- Family planning services beyond the scope of the Lady Health Worker (LHW)
- Diagnostic services including basic lab tests, x-rays and ultrasound
- Referral and training support for Lady Health Workers (LHWs)/Community Mid Wives (CMWs)
- Support to health outreach workers and school health services including eye refraction and hearing examinations

# Evaluation Results

The MHU Pilot Project was evaluated in early 2012 by Government of Punjab and Technical Resource Facility (TRF) to assess its feasibility for scaling up to 50 MHUs to cover all remote rural areas of Punjab. The assessment was based on a mixed approach (quantitative/ qualitative) covering operational efciency, efectiveness of units and quality of service package. Financial implication of the Project was also covered, particularly: a) fnancial viability; b) contribution to economic uplift of general public; c) Project's cost-beneft comparison. Key fndings from the evaluation are as follows:

## Inefcient contracting and monitoring framework

The MHU Project was operating without a signed contract and lacked clarity in monitoring responsibilities. The performance data was generated by the provider but it was not incorporated into the District Health Management Information System (DHMIS). Responsibility for monitoring the Project and role of the

Executive District Ofcer (EDO) Health in this regard was not clear.

## Suitability of vehicle and services ofered

Vehicles procured did not meet the criteria for accessibility to remote areas creating a major hindrance in achieving Project objectives. The service package had high client satisfaction, however, certain services included in the PC-1 were not delivered. There is a need to tailor the service package according to Project objectives whereas procurement mechanisms for MHU vehicles need to be in compliance with service delivery and accessibility to rough terrain.

## Operational planning and management limitations

Site selection did not target remote areas and some were even close to existing static facilities. Out of 472 sites visited, about 204 (43.2%) were located within 5-10 kilometres of existing static health facilities and 71.8 percent were within 3-15 kilometres. Visit schedules were irregular, Standard Operating Procedures (SOPs) for MHU functions were not established, particularly decontamination procedures. Linkages and communication channels with district health authorities or workers, vertical programmes and Non-Government Organisations (NGOs) / Community Based Organisation (CBOs) / International Non-Government Organisations (INGOs) were missing and adversely afecting MHU Project's role in strengthening the local health system. Procurement and availability of consumable items, particularly essential drugs, was a major issue afecting Project performance, therefore, a clarifcation on responsibilities for downstream procurements and mechanisms is needed.

## Financial implications

Financial analysis (Table 3) indicated that for the capital cost of establishing six MHUs of the Pilot Project (PKR 330 million), 11 new BHUs or 4.13 RHCs can be constructed and operationalised, saving PKR 78.80 million for BHUs and PKR 54.54 million for RHCs. Recurrent cost of operating six MHUs can cover operation of either 36.11 BHUs or 7.95 RHCs. The average cost per patient in an ascending order is BHUs, RHCs and MHUs illustrating that MHUs serve fewer patients at a higher cost.

**Table 3: Analysis of average cost per patient**

| Analysis of Average Cost Per Patient | | | |
|---|---|---|---|
| | **MHUs PKR (Millions)** | **BHUs PKR (Millions)** | **RHCs PKR (Millions)** |
| Capital Cost for Establishing 1 MHU | 55 | 30 | 80 |
| Recurring Cost for Operating | 113.33 | 1155.10 | 812.32 |
| Number of Patients Served | 317125 | 4668443 | 2887798 |
| Average Cost/Patient (with depreciation & vehicle insurance) | 357.37 | 247.43 | 281.30 |
| Average Cost/Patient (without depreciation & vehicle insurance) | 256.47 | 200.13 | 249.71 |
| **Beneft-Cost Ratio** | **0.68** | **1.28** | **1.49** |

The calculated beneft-cost ratio suggested that MHUs were operating at a greater cost, yielding low benefts than static facilities and serving fewer patients.

# Key Recommendations

- MHUs may ofer greater utility to Provincial Disaster Management Authority (PDMA); this has been demonstrated by providing access and essential service delivery in post disaster scenarios.
- Improvements are needed in contract management with a robust multi-level monitoring framework (involving the provider, district and provincial management) to ensure contract fulflment in line with PC-1. Modalities for incorporating MHU data fows for evaluation, maintaining quality of services and feedback mechanisms to improve Project implementation, are needed.
- Operational planning and deployment gaps need to be clearly identifed and addressed including linkages and communication channels with local public and private providers as well as visit schedules, SOPs and referral mechanisms, amongst others.
- Criteria for selecting appropriate vehicles for services ofered need to be based on terrain of the area to be serviced and its particular health needs. Smaller vehicles may improve MHU accessibility to remote communities thus fulflling Project rationale and objectives.
- Procurement of each MHU should be handled as a separate Project before its deployment and implementation is considered; rationale, technical need assessment and fnancial feasibility are some of the aspects that will need to be generated anew in each instance.

The process should also consider multiple options for vehicles including parameters such as size, manoeuvrability and of-road handling to ensure access to target areas.

- The Punjab Health Department may serve better by operationalising and revitalising existing health facilities where available and building new facilities in remote areas, rather than procuring additional MHUs for scaling up this Project in its current form.

Though the MHU Project has shown high acceptability and appreciation by the community in both international and local contexts but DoH Punjab decided not to invest in MHUs thus saving a cost of PKR 70 Million. However, in the long run, the MHUs may have more utility for disaster management organisations rather than as a replacement for static health facilities. The latter provide a better cost-beneft ratio over a long period, an essential consideration for Pakistan, a country with limited resources.

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