Title of the innovation

Mobile Health Units: A cost-effective solution to bridge primary healthcare access for high-risk pregnant women in rural India

Lead Organization and Country/Region

Mamta Health Institute for Mother and Child, New Delhi, India

Problem Statement (100-150 words)

Maternal health remains a critical concern in India, with the Maternal Mortality Ratio (MMR) in Uttar Pradesh at 167 and Rajasthan at 113 per lakh live births, above the national average, i.e., 97 [(1)]. High-risk pregnancies (HRPs) account for 20–30% of all pregnancies and lead to 75% of perinatal morbidity and mortality[(2)]. Only 42% and 53.9% of mothers in Uttar Pradesh and Rajasthan receive the recommended four ANC visits, respectively[(3)] resulting into missed opportunity for comprehensive screening and identification of high risk pregnancy for effective management for many women. Accessibility barriers, rural context, financial constraints, poor health literacy, and supply-side gaps hinder service coverage[(4),(5)]. Mobile Health Unit (MHU) is a cost-effective solution for improving equitable access and coverage of health services to pregnant women, especially in the rural context.

Innovation or Practice Description (200-300 words)

Our MHU intervention is enhanced version of conventional MHU. It is designed to strengthen maternal primary health care services including referral addressing the need of high-risk pregnant women through integration with telemedicine services and system engagement. It thus addresses the challenge of accessibility and provide quality care to last mile population at doorstep in remote parts of rural regions in Uttar Pradesh and Rajasthan States of India.

The MHU reaches the targeted villages in a 45-day cycle. The community health workers are informed a day before the visit to ease the mobilization of beneficiaries. During their visit, medical team in MHUs provide clinical care, identify high-risk pregnant women, provide counselling services, conduct health awareness sessions through videos and flipbooks, and link the beneficiaries to government facilities for safe motherhood. MHUs facilitate expert-level teleconsultations for identified high-risk pregnant women, thus supporting the National Telemedicine Service of India, bridging gaps in human resources, and providing accessible services. Through the telecalling service, MHU staff deliver tailored advice to high-risk women and promote institutional deliveries. MHU integrates its data with the sub-district (Block) health system during monthly planning and review meetings. MHU empowers community health workers (also known as ASHA in India) through an onsite mentoring program aligned to national guidelines. This mentorship is aimed at enhancing the skills of ASHA, enabling them to deliver maternal health services more effectively. Thus, our intervention supports the health system to cater the needs of pregnant women at the community level.

Results and Evidence of Impact (150-250 words)

We have reached 11,088 PW and identified 3361 (30%) high-risk pregnant (HRP) women during antenatal screening through MHU (***Source***-Institutional MIS-April 2024-March 2025). The registration of HRP has increased from 0.7% (2021-22) to more than 15% (2024-25) in the government system. More than 90% of HRP had institutional delivery. External assessment report (2024) for MHU indicated that 61% of participants reported lower travel expenditures for routine check-ups, 77% noted reduced travel time for hospital visits, and the estimated social return of the MHU intervention is 4.72 by the end of 5 years of implementation.

Scalability & Sustainability (100-150 words)

The innovation has an inbuilt component of sustainability as it is aligned with the universal health coverage plan and guidelines for the Mobile Health Unit (GOI). Right from the beginning of program

implementation, MHU is engaged to strengthen the capacity of community health workers (ASHA), making them efficient to deliver health services to pregnant women, ensuring continuity and hence sustainability. In the entire operation, government stakeholders are involved in the review of the process and planning to ensure replicability and sustainability. We scaled up the intervention with geographical expansion and are looking forward to develop a model to be integrated at the district level for its scalability.

What resources or policies support it?

National Health Policy 2017, and Operational Guidelines for Mobile Medical Units, Ministry of Health & Family Welfare, Government of India support it.

Lessons Learned or Key insights

This initiative has emerged as a cost-effective, efficient model to identify high-risk pregnancies comparable to national-level estimates. Establishing a strong collaboration with government stakeholders through strategic meetings and data-driven discussions encourages deeper government involvement. Counselling through telecalling services has proven effective intervention for promoting institutional delivery in high-risk women.

Community voice

1. "Through MHU, we have benefited greatly in terms of nutrition, hygiene checks, and access to medicines". – *Reflection of the MHU beneficiary during the external assessment study.*
2. "With the support of intervention, I am now able to identify more pregnant women within 1.5 months of pregnancy. Previously, I used to identify pregnant women at 4 or more months of pregnancy". – *ASHA, Uttar Pradesh*
3. "The HRP identification impact is very noticeable. Earlier, on HRP screening days, our footfall used to be 35-40. This time it was more than 100". –*Public Health Official, Community Health Centre, Uttar Pradesh.*

Sources

(1) Sample Registration System, Office of Registrar General, India. Special Bulletin on Maternal Mortality in India 2018-20. Available at file:///E:/Downloads/SRS_MMR_Bulletin_2018_2020%20(4).pdf accessed on 2nd May 2025.
(2) Ministry of Health and Family Welfare, Government of India. Guidance note for "Extended PMSMA for tracking High Risk Pregnancies (HRPs)". Available at https://nhm.gov.in/New_Update-2022-23/MH/GUIDELINES-%20MH/Guidance_Note-Extended_PMSMA_for_tracking_HRPs.pdf. Accessed on 2nd May 2025.
(3) Ministry of Health and Family Welfare, GOI. National Family Health Survey 5 (2019-21). State Fact Sheet Uttar Pradesh and Rajasthan.
(4) Kasthuri A. Challenges to Healthcare in India - The Five A's. Indian J Community Med. 2018 Jul-Sep;43(3):141-143.
(5) International Institute for Population Sciences (IIPS) and ICF. 2021. National Family Health Survey (NFHS-5), 2019-21:India:Volume 1. Mumbai:IIPS

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