#313 - Driving Sustainable Changes: Implementing and Scaling Up an mHealth Program for Community Health Volunteers in Low- and Middle-Income Countries - A Nepal Case Study

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Objectives/aims
In Nepal, the challenges of poor maternal health outcomes and rising hypertension rates necessitate effective interventions. Promisingly, mobile health (mHealth) programs have demonstrated their potential in improving health management efforts. The objective of the study is to evaluate the barriers and facilitators of implementation and sustainment of Nepal's mHealth program, a SMS-based program, designed for female community health volunteers (FCHVs) to better coordinate for better maternal and child health outcomes. The study aimed to develop a framework for effective implementation and scalability of comparable mHealth programs in low- and middle-income nations.

Methods
For this qualitative study, primary data was collected in Nepal in August 2022 through in-depth interviews with four mHealth service providers and a focus group discussion with three FCHVs. Local interviewers conducted the interviews in the local language

to ensure relevance and appropriateness. The interview guides were developed based on a preliminary literature review. Multiple researchers proficient in both Nepali and English translated the recorded responses. The transcripts were analyzed using thematic analysis, with codes organized into thematic categories using a combination of inductive and deductive approaches.

Main findings

The SMS-based mHealth program initiated by Medic in Nepal in 2012 has widely expanded, reaching 23 districts and engaging approximately 11,818 FCHVs, constituting a quarter of all active FCHVs in the country. The program has effectively improved care coordination for FCHVs, ensuring regular and timely care for pregnant women.

Major barriers to the mHealth program in Nepal include weak infrastructure, poor government leadership, high staff turnover, training issues, and a shortage of skilled workforce. Despite challenges, the mHealth program succeeds due to a highly motivated workforce that provides services despite low or no compensation, the increasing awareness of the benefits of mHealth in improving health, which garnered governmental support, and the utilization of open-source technology that increased cost-efficiency. FCHVs are motivated by community respect and trust, not just financial incentives. The program has gained credibility among local governments, enabling it to secure reliable funding through federal government buy-in. Medic's open-source technology allows program innovation and adaptation to meet community-specific needs.

Successful implementation and sustainability of mHealth programs in Nepal relies on critical factors including human-centric design, management transition preparation, long-term project sustainability, and capacity building. Human-centric design is at the core of Medic and focuses on the needs of end-users through regular user feedback and challenging assumptions about their capabilities. The management transition preparation is an ongoing process in Nepal, which involves creating a structure for training program for new employees. Online trainings including asynchronous sessions are being prepared by service providers to ensure accessible and timely training. Program sustainability strategies include leveraging cost-efficient tools such as open-source technology by Medic, gaining buy-in from local stakeholders, and exploring collaborations such as public-private partnerships to support the programs. Capacity building and co-development were key factors in ensuring that enough of the local workforce could learn from technical service providers, and government tech experts could effectively maintain data servers.