



mLABOUR: MOBILE TECHNOLOGY FOR IMPROVING INTRAPARTUM CARE

Grantee
DIMAGI

Grant amount
GBP 374,300

Project duration
1 July 2016–31 January 2019

Implementing partners
FHI 360, APHFTA, PRINMAT, ITIDO, CSK

Beneficiaries
Nurses, midwives and pregnant women

Location
Dar es Salaam and Bagamoyo District



Health-care workers use Dimagi's m-health application to record patient information.

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PROJECT BACKGROUND

In spite of significant strides made by the global health community, maternal and neonatal mortality rates are still high in low-income countries such as Tanzania. A shortage of skilled health-care workers, inadequate equipment and a lack of routine monitoring all contribute to the premature deaths of both women and their babies. For example, 18 per cent of all deaths of women age 15-49 are due to complications experience during pregnancy or childbirth (WHO).

The low-tech paper partograph records maternal and foetal progress during childbirth and is regarded by the World Health Organization as one of the most essential tools in the fight against maternal and neonatal mortality. Used properly, it can help health-care workers prevent, identify and manage emergencies such as obstructed labour and foetal distress if they occur. However, the complexity of the data tool makes it especially difficult for health workers with limited training to operate, meaning that it is not always used accurately or efficiently.

Global health tech firm Dimagi initially developed its mobile-based application mLabour in India. The app is a real-time, digital decision-support tool that aids skilled birth attendants (SBAs) to deliver evidence-based intrapartum care. mLabour facilitates timely and appropriate labour monitoring, careful screening

for life-threatening risks, and application of global standards of care.

In 2016, Dimagi received an innovation grant from HDIF to adapt mLabour for the Tanzanian context. The project came to an end on 31 January 2019.

PROJECT DESCRIPTION

mLabour includes all the evidence-based assessments included in the paper-based labour management tools, but provides the added benefits of automated visualisations and alerts, examination reminders, and real-time decision support. In facilities in remote areas, the tool can provide confidence and reassurance to the isolated midwives. At high-volume facilities, it can enable patient prioritisation and improved efficiency.

Dimagi worked with local partners and the research organisation, FHI 360 to build upon its impact by conducting user-centred design and engaging with a wide range of stakeholders to understand the requirements for taking the app to scale. Dimagi launched mLabour at three facilities: Kairuki Hospital in Dar es Salaam, FACGBF Maternity Home in Bagamoyo district, and Waebrania Maternity Home in Gongo La Mboti. Twenty-six nurses and midwives were trained to use the tablet and integrate it into their existing work.



PROJECT RESULTS

At the end of the project, Dimagi and FHI 360 evaluated the use of the app within the three pilot facilities and found improvements in timeliness of clinical assessments and risk screening and positive perceptions from users and patients.

- After three months of use, 93 per cent of eligible deliveries were followed with mLabour.
- After nine months of use, clinical adherence to labour management protocols improved by 22 per cent.
- Health providers now universally screen women for bleeding, infection, and eclampsia risk.
- Health providers reported that mLabour is a useful tool that helps them better manage patients.
- Patients perceive the use of a digital tool as 'modern' and are comfortable with its use.

Following these results, five additional facilities in the APHFTA and PRINMAT networks have opted to implement mLabour in their labour and delivery wards.

KEY LESSONS

Implementation of a clinical tool requires careful planning for training and support: Based on feedback during the design stages, Dimagi trained some midwives and obstetricians who work in public health facilities across Tanzania to be national trainers, to train the SBAs in using mLabour. By implementing this training model, Dimagi could scale locally, in Swahili, and establish a system in which women empower women to learn new tools from people in their own field.

Involve a local technical partner from the beginning: Identifying a partner at the start of the project who could support SBAs with the app in-person would have been beneficial to the launch of mLabour and helped facilitate their relationship with the facilities.

NEXT STEPS

Dimagi and FHI 360 continue to monitor the app with a view to building and maintaining a sustainable innovation that can be adapted as user needs and context change. The partnership will further explore the market for mLabour in Tanzania beyond the eight facilities currently using the tool, identify funding for non-profit organisations wishing to use mLabour and engage with the public sector as their work in this area continues to grow.

GENDER AND SOCIAL INCLUSION

During their consultations with users, Dimagi unearthed a number of barriers facing female health workers that were not related to the challenges of resources, time or skills but nonetheless impacted on their capacity to deliver quality health care. For example, many of the midwives they spoke to felt unsupported or unheard by their male counterparts and senior colleagues. As a consequence of their disempowerment, they were unable to implement new ideas to improve their efficiency and deal with the burgeoning numbers of mothers they were assigned to help. The mLabour app helped to improve inter-professional relationships as health-care workers (i.e. mostly female midwives) use the app data as evidence to back up their professional opinions and make the argument for certain interventions.

PRINCIPLES FOR DIGITAL DEVELOPMENT

Design with the user: Dimagi and FHI 360, in partnership with local organisations, worked closely with SBAs to adapt the mLabour prototype to the Tanzanian context, carefully instilling a sense of ownership over the implementation at each of their facilities. SBAs who ultimately used the tool were actively involved in content decisions including the addition of a postpartum module that covers important counselling elements for kangaroo mother care, family planning, and breastfeeding.



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