

# Using mHealth to Improve Timeliness and Quality of Maternal and Newborn Health in the Primary Health Care System in Ethiopia

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## Abstract

The Last Ten Kilometers 2020 Project (L10K 2020) designed a strategy for piloting, implementing, and scaling a mobile health (mHealth) digital solution to improve the quality of community level maternal and child health service delivery in Ethiopia. L10K 2020 first conducted a landscape assessment to design a context appropriate smartphone-based mHealth solution for the Health Extension Workers and tablets for their supervisors and the midwives managing the same clients at the health center level. These applications included multiple modules and packages including client registration and appointment management; follow-up and notifications; digital job aids for each of the maternal and child health program packages (for Health Extension Workers only); and referral and client tracking systems. Findings from the process evaluation of the mHealth app usage and user experience indicated that the application was user friendly and facilitated real-time information exchange, defaulter tracing, referral, and feedback systems. It improved the timely identification and registration of pregnant mothers. Adherence to treatment protocols also increased in all domains across the pregnancy continuum of care. L10K 2020 has developed a user-friendly model for implementing mHealth solutions at the community level through stakeholder engagement across levels when developing, testing, and deploying the applications, which was critical to effectively cultivating ownership as well as skills and knowledge transfer at all levels. To replicate and scale this model, context-based scoping, resource analysis, and mapping are essential to determine the infrastructure, cost, time, risks, and key stakeholders involved throughout the implementation of the intervention. During implementation, vigilance in consistently mitigating the challenges related to mHealth infrastructure, such as mobile data capacity, electricity, smartphones and tablets, solar chargers, and internet connectivity, is critical for continued success.

## Photograph



## Biography (150 word limit)

Mr. Zeleke has his expertise in public health working in monitoring, Evaluation, and Research in the health sector. He is well familiar for health system in liaising, development, and adaption guidelines like Ethiopian hospital reform implementation guideline (EHRIG). His skills on tool development and collection using electronic application (CommCare, ODK, and SurveyCTO), is first rated, when this combined with extensive experiences on statistical data analysis (epi info, SPSS, STATA, etc.) will added value to his professional expertise. He has honorable research publication in global journals which has been cited numerous times and has been proving to a significant work in the field of management.

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## Image

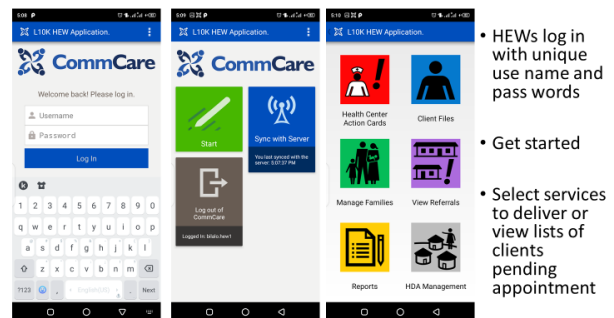


Figure 1: HEWs mHealth application for client registration and tracking

## Recent Publications (minimum 5)

1. Zeleke Y (2021) Using mHealth to Improve Timeliness and Quality of Maternal and Newborn Health in the Primary Health Care System in Ethiopia. *Global Health: Science and Practice*, 9(3), 668-681.
2. Zeleke Y (2013) Occupational Exposures to Blood and Body Fluids (BBFS) among Health Care Workers and Medical students in university of Gondar hospital, Northwest of Ethiopia. *Glob J Med Res Microbiol Pathol* 13, 17-23
3. Zeleke Y (2013). Managements of exposure to blood and body fluids among healthcare workers and medical students in university of Gondar hospital, Northwest of Ethiopia. *The Global Journal of Medical Research*, 13(5).

## Notes/Comments: