By Dr. Daniel G. Datiko, Mr Webalem Mengesha, Prof. SallyTheobald, Rosalind Steege

Applied research on HEWs using eHealth to strengthen equitable health system in Southern Ethiopia

Study setting:

Intervention zone

The project was conducted in Sidama zone, Southern Ethiopia. The project was implemented in six Primary Health Care Units (PHCU – includes health center and satellite health posts) based in six districts of Sidama zone. The health centers and districts (Arbegona, Bona Zuria, Hula, Boricha, Dale, Shebedino)

The HEWs in this region are all female by policy and work at health posts based in Kebeles (the smallest administrative unit). Two HEWs are assigned in each kebele with an average population of 5,000 people (about 1,000 households). The HEWs devote 70% of their time to making house-to-house visits. Coverage of health services has improved from the implementation of HEP; however, there is still a long way to go to achieve universal health coverage. There are 16 health extension packages under four major components that fall under the HEWs' responsibilities. Maternal and child health and TB prevention and control are included in the sixteen packages delivered by HEWs and are both key national public health priority areas. Improving maternal health outcomes and effective TB prevention and control requires early identification, linkage to community or facility-based services, follow-up and an improved reporting system whereby local data collection can be acted upon to support service delivery to those most in need.

No	Districts	Health Centers	Population	Health Posts/Kebeles
1	Arbegona	Bochesa	29410	6
2	Hula	Teticha	23746	5
3	Bona_Zuria	Worancha	39076	7
4	Boricha	Yirba	33076	5
5	Shebedino	Dulecha	38141	4
6	Dale	Mesenkela	30182	4
Total Population of Implementation area			193586	31

Control zone:

Gedeo zone shares a border with the Sidama zone which shares similarity with Sidama zone in terms of health system functionality, topography and population density. The study sites were selected to capture diversity in geography (distance from zonal headquarters, topography, health service coverage and utilization, population density, and general socio-economic conditions).

The intervention:

Prior to the intervention there was no mHealth system in place. The integration of mHealth within this project was done through extensive consultations and iterative local design and testing efforts and developed in collaboration with MoH to ensure interoperability of the tools. The main features of the system allowed the HEWs to register clients directly

onto the m-health platform data was then stored and uploaded to the cloud when network connection was available and immediately available to higher levels of the health system to track. To support the HEWs in their workload, text messages were sent out to remind HEWs to follow up with patients (see Diagram 1). The intervention had a strong focus on training and sensitization programs to strengthen incentives and lay the foundation for sustained positive change among the female HEWs, their supervisors and decision-makers. A carefully designed engagement strategy was used to ensure ongoing communication and problem solving throughout the different stages of the project, through the set-up of a technical working group and district level meetings for example.

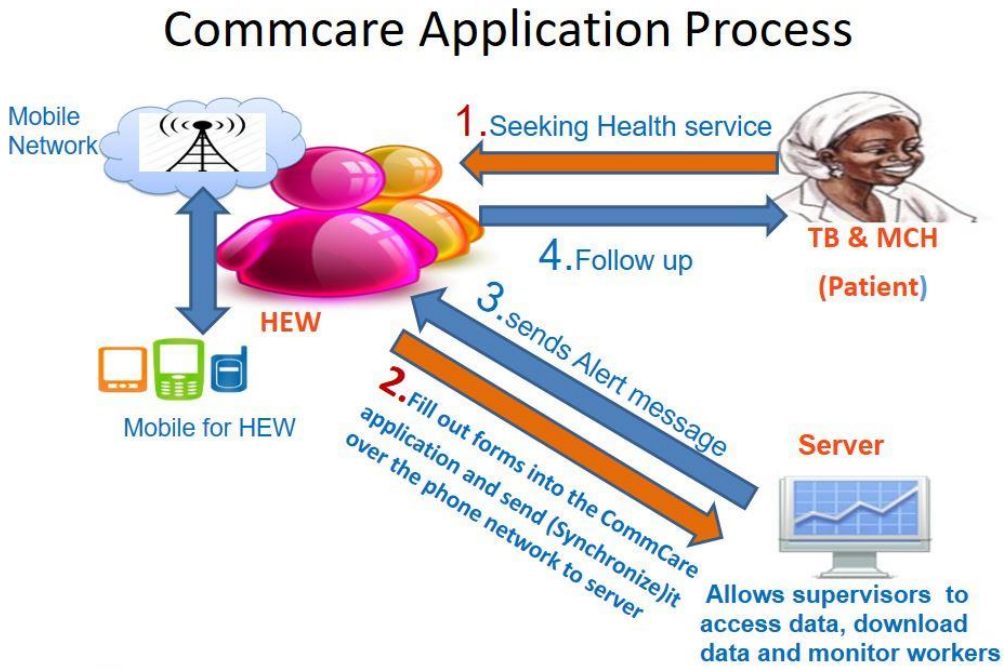

Diagram 1 Commcare Application Process

Improving maternal health and TB control efforts:

Maternal health service delivery and TB prevention and control efforts were among the top public health priorities of the country. Hence, the project is aligned with the national priorities and has continued supporting the implementation in rural districts of Sidama zone. Compared to the baseline data, increases were observed in the number of pregnant women identified, presumptive cases referred and TB cases detected. These activities ultimately increased skilled delivery and TB patient follow up and hence demonstrate that using mobile data capturing and reminders as main tool support detection, adherence to care and utilization.

Key results

- Feasibility of implementing mHealth in rural communities of southern Ethiopia
- Use of mHealth to improve patient or client care in communities
- Strengthened key stallholder's engagement
- Real time action and local problem solving
- Improved data quality, accuracy and management
- Improve service quality and uptake

- Increase Participation of stakeholder

Challenges

- Power failure is the main challenge to make Lab test. In addition to this it is impossible to collect Clients data early.
- Network problems made HEWs unable to synchronize data to the server early.
- Health campaign made by Government and other Partners.

Strengthening the generation and use of knowledge

REACH Ethiopia staff participated in 1st International Symposium of CHWs in Kampala, Uganda from 21st-23rd February 2017 and presented on our work and again at the 4th Global Symposium on Health Systems Research in Vancouver convention center, Canada from 14-18 Nov 2017 on Women health extension workers: "*core players using eHealth to strengthen equitable health systems by responding to community health needs in Southern Ethiopia*." The project has generated evidence to be shared and created a pool of researchers and implementers in the community to continue efforts to strengthen and generate evidence based health information for decision making in the project areas. It has also ignited the interest of partners to engage in mobile health in the country. Our office had discussion with JSI to explore the possibility of working together after we have shared our experience in Kampala, Uganda.

Sustainability and way forward

The involvement of all stakeholders: target beneficiaries, target woredas, zones and regional pertinent and funding partner in all project cycle form a common understanding of the project phase in. In addition to these, clearly spelled out each stakeholder responsibility in the project agreement and signed by all concerned parties also figure out a proper ground for the intended project phase in strategy. We closely worked with the MoH at all levels using the existing health structure which would make it easy to undertake.

It is the responsibility of the government to continue undertaking the health service delivery in the community. REACH Ethiopia will take the responsibility to ensure and fill the gaps to address the common health problems by providing service to our community. The project work started with a clear understanding among all the stakeholders and will be paralleled by informing the progress to the respective bodies regularly which will create a platform.

Pictures below describe Catchment meetings, Regional meetings, National Dissemination meetings with stakeholders for a purpose of Sharing experience & Case findings, Review results and lessons learned and share ideas on further customization of the findings and expansion.


equitable Health System in Southern
REACH Ethiopia & Sidama Zone
Central Hawassa Hotel, July 25/2
IDRC CRDI
Canada