

REACHING COMMUNITIES AT THE LAST MILE WITH WELL TRAINED HEALTH EXTENSION WORKERS

Ethiopia's flagship Health Extension Program is recognized as a global leader in expanding access to primary healthcare in rural and remote areas through community health workers. The program deploys over 40,000 health extension workers (HEWs), most of whom are female. HEWs provide preventive, promotive, and curative health services in their communities and are credited with contributing to a reduction in child and maternal mortality in Ethiopia over the past two decades.

The Ministry of Health (MOH) has identified a number of key challenges associated with in-service refresher training modules that have adversely impacted HEWs' learning outcomes and skills proficiency. These challenges include ineffective learner engagement and limited interactive content. Moreover, these trainings are delivered face-to-face over the course of many days without the use of technology, which makes them resource intensive.



The MOH and Last Mile Health are working in close collaboration to develop a blended learning approach to revolutionize in-service training for HEWs. Featuring both digital and in-person components, the blended learning training was piloted in 2021 on the Reproductive, Maternal, Neonatal and Child Health (RMNCH) module of the Integrated Refresher Training (IRT).

BLENDED LEARNING TRAINING APPROACH: COST EFFECTIVE, TIMELY AND ENGAGING FOR LEARNERS

The blended approach uses adult learning principles, combined with digital technology, to increase HEWs' access to learning opportunities, build their knowledge, and strengthen their skills. The instructional design includes effective learning activities such as roleplays, case studies, demonstrations, and group discussions. In addition, the design embeds continuous assessment through case-based pre- and post-training knowledge questions, quizzes, and skills assessments, providing even more opportunities for learning.

BLENDED LEARNING APPROACH

Cost Saving

- Fewer in-person training days results in lower costs of logistics and per diems
- Digital learning materials can be updated frequently and shared with learners quickly

Time Saving

- Participants spend less time away from work stations
- Participants spend less time searching for training information as it is available on the app

Engaging

- Contextually relevant multimedia content in local languages presents information in an accessible way
- Evidence-based instructional design sets learners up for success

INSTRUCTIONAL DESIGN FEATURES

Effective Learning Activities

- Role play
- Case studies with non-graded quizzes
- Demonstrations
- Group discussions
- Key takeaways

Blended Design

- A 2-day in-person and 5-day digital self-learning session, followed by 2-day closing session
- Daily schedule for digital self-learning sessions
- Interactive and hands on activities conducted during in-person trainings
- Self-directed, individual content prioritized during digital self-learning training days

Continuous Learner Assessments

- Case-based pre and post knowledge questions
- Pre and post self-efficacy questions
- Case-based quizzes for each session
- Skills assessments

PILOT AND EVALUATION APPROACH

PILOT REACH

The blended RMNCH IRT was piloted in 20 districts serving a population of more than 3 million people across Oromia, Sidama, SNNPR, and Amhara regions. The pilot targeted over 1,000 HEWs and HEW supervisors. In addition, 10 training coordinators, 38 health information technicians, and 88 course facilitators participated in the pilot. Concurrently, 20 districts with approximately 1,000 HEWs and HEW supervisors serving a population of 3.2 million people across the same regions were selected as comparison sites for the research component of the pilot. Traditional in-person in-service trainings implemented by zonal or district health bureaus took place in these districts.

EVALUATION DESIGN

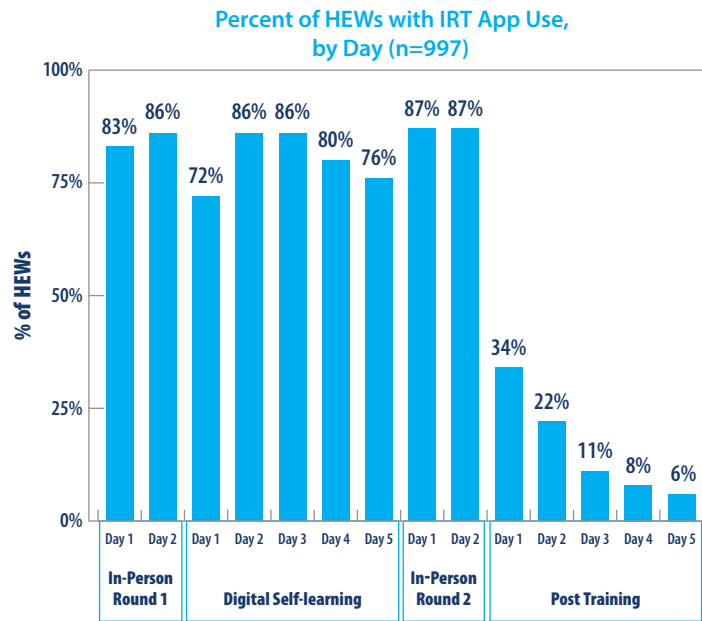
The overarching objective was to evaluate the effectiveness of the blended RMNCH IRT pilot. The evaluation objectives include:

1. **REACH:** To measure the overall reach of the blended RMNCH IRT and determine learner characteristics and reach among target learners.
2. **REACTION:** To understand how the blended RMNCH IRT fulfills learners' needs and addresses gaps in traditional IRT implementation.
3. **LEARNING:** To determine if the blended RMNCH IRT supports increased knowledge, self-efficacy, and skills in key RMNCH competencies needed for community health work.
4. **BEHAVIOR:** To determine how learners apply key RMNCH knowledge and skills within their work.
5. **SYSTEMS:** To determine to what extent the blended IRT approach contributes to community health systems improvements (specifically the cost of implementing quality IRT).

KEY RESULTS: IMPROVED SKILLS AND KNOWLEDGE FOR HEALTH EXTENSION WORKERS THAT IS COST EFFECTIVE

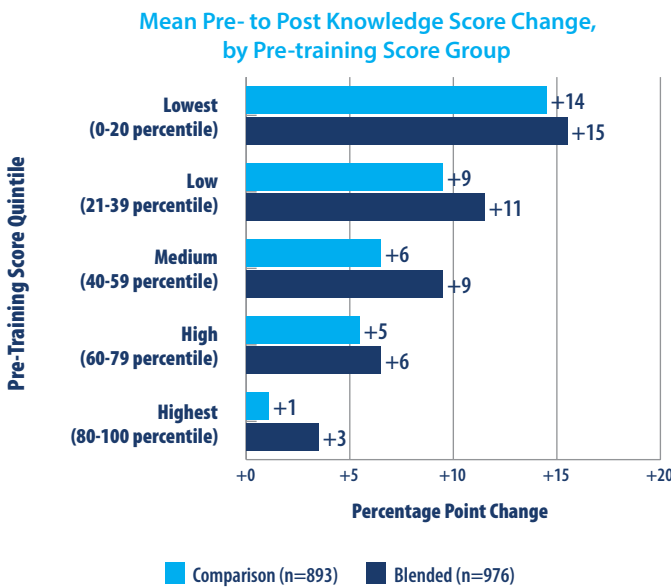
ENGAGEMENT

Learners logged the most hours on the Extension Essentials app during the in-person training days (average of 6.0 hours per day). Learners remained engaged on the app during the digital self-learning period, averaging 2.8 hours per day, surpassing the expectation of two hours per day for this period. Engaging content, a clear daily schedule, and the training design likely contributed to consistent engagement during the self-learning period.

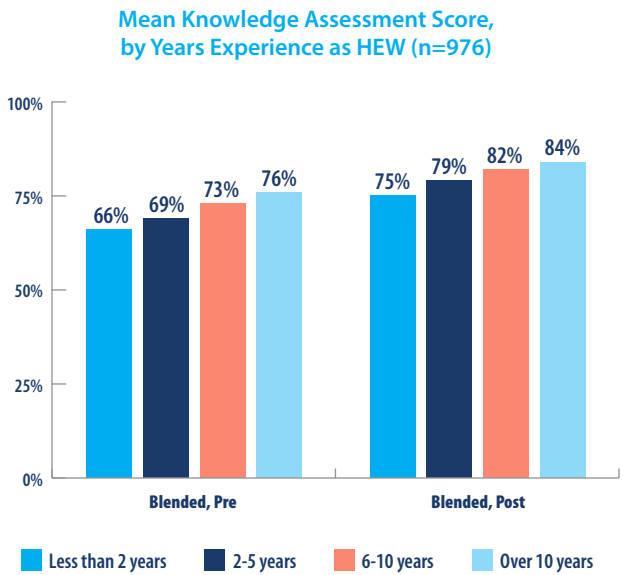


KNOWLEDGE

On average, HEWs who scored lower on the pre-training knowledge assessment showed larger improvements after training. Blended IRT HEWs who scored in the bottom 20% on the pre-test improved an average of 15 points, from a mean score of 55% pre-test to 70% post-test.

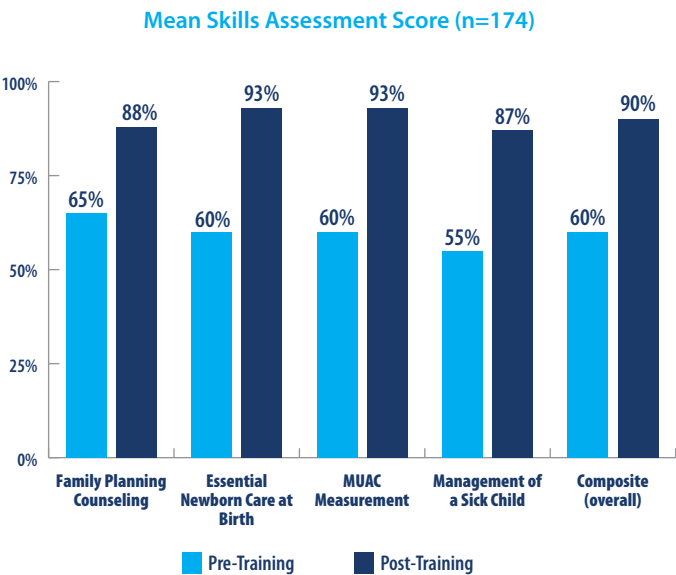


Blended IRT HEWs with more years of work experience tended to score higher on pre- and post-knowledge assessments. Blended IRT HEWs with at least 10 years of experience scored an average of 9 points higher on the post-test than those with less than 2 years of experience. Results were similar for comparison learners, suggesting that the technological platform was not a barrier to experienced HEWs.



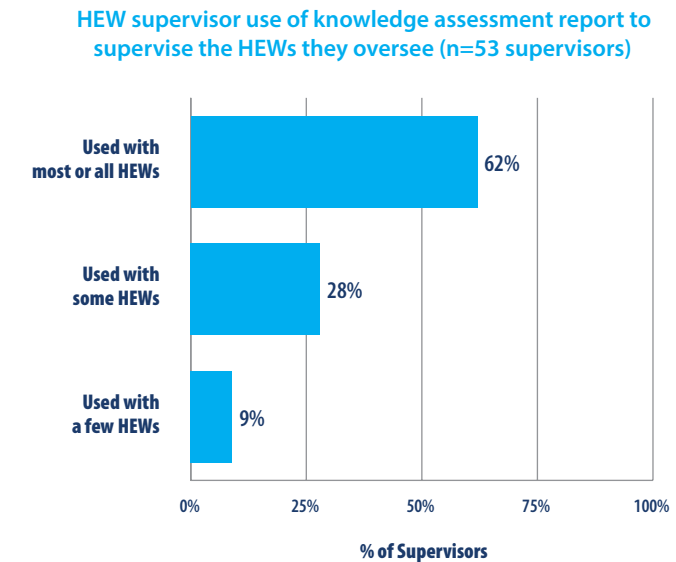
SKILLS

After training, skills assessment scores among blended IRT learners improved dramatically for all RMNCH key competencies. The average composite skills assessment score increased from 60% to 90%.



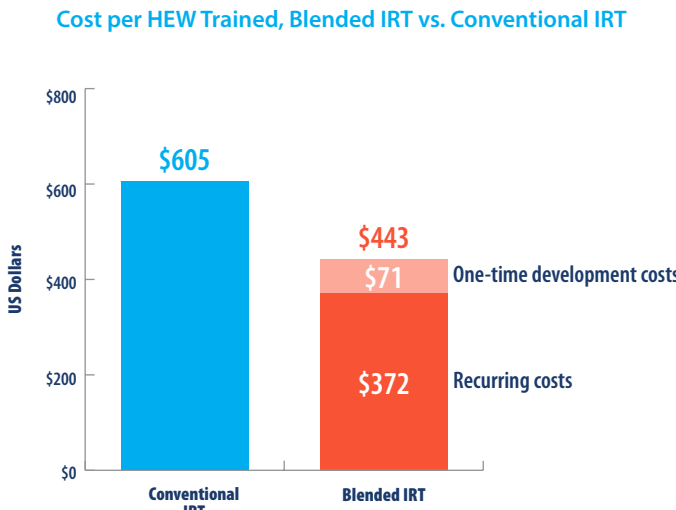
SUPERVISION

One month after the blended IRT training concluded, the team shared individual learner reports with HEW supervisors for the HEWs they supervise. These reports summarized knowledge and self-efficacy scores across RMNCH IRT units. All HEW supervisors who received learner reports for their supervisees reported using them in follow-up supervision visits. Of those, 98% reported finding learner reports useful in planning and conducting supervision visits.



COST

The blended IRT approach costs less than conventional IRT. Recurring blended costs associated with running the training were 39% lower than the conventional approach. Even when including one-time costs such as application development, the blended approach was still less expensive. Scaling the blended training beyond the initial 1,000 HEWs included in the pilot will further distribute the fixed up front costs associated with this model.



WHAT'S NEXT? SCALE UP OF THE RMNCH MODULE FOR HEWs

KEY LEARNINGS:

INCLUSIVE AND EVIDENCE-DRIVEN PROGRAM DESIGN

The blended RMNCH IRT was collaboratively designed with key stakeholders to directly address identified gaps in HEW training; it complements the MOH's plan for HEP optimization.

The blended RMNCH IRT is an exemplary in-service training experience; it utilizes user-centered design, adult learning principles, digital technology, localized multimedia content, and continuous assessment to provide learners with a more engaging and meaningful training.

The digital platform provides real-time data to evaluate the training, including participation and time spent in activities and course completion, learners' reaction to the course, pre- and post-training knowledge and self efficacy assessments, quizzes, and engagement with digital components after the training.

LEARNER ENGAGEMENT AND REACTION TO DIGITAL LEARNING

Learners remained engaged on the app during the digital self-learning period, averaging 2.8 hours per day, surpassing the expectation of two hours per day for this period.

In-app components of the blended approach including illustrations, lecture videos, and animation videos received the highest proportion of "extremely useful" ratings from both learners and facilitators.

KNOWLEDGE AND SKILLS ACHIEVEMENT AND APPLICATION

The blended RMNCH IRT costs less and takes less time to implement while achieving similar knowledge outcomes as conventional IRT (as measured directly after the conclusion of training).

After training, skills assessment scores among blended IRT learners improved dramatically for all RMNCH key competencies.

When HEW supervisors received customized learner reports, they used the data to inform follow-up supervision visits and found the reports useful. The ability to generate and use individual data for targeted supervision is a powerful quality-improvement tool of the blended approach.

The blended RMNCH IRT provides a more interactive experience for learners, data for decision-making and targeted follow-up, and increased availability of training materials to learners after training. These program design components could contribute to sustained improvement in learning outcomes and service delivery, but further measurement would be needed.

INSTITUTIONALIZATION & SCALE

INSTITUTIONALIZE BLENDED LEARNING:

Incorporate a blended learning approach to the MOH guidelines for the implementation of competency-based IRT on health extension packages.

ADAPT NEW BLENDED LEARNING MODULES:

The MOH and LMH will continue their close collaboration to develop a blended learning approach using digital technologies for the remaining IRT modules, starting with the major communicable diseases (MCDs) and non-communicable diseases (NCDs) modules, for scale- up across all regions.

SCALE BLENDED IRT ACROSS ETHIOPIA:

Scale up the blended IRT across all regions with MOH leadership.

- The scale- up will prioritize eCHIS- implementing woredas and will follow the pathway for the eCHIS expansion.
- LMH will provide technical support to regional health bureaus (RHBs) and continuous professional development centers (CPD) to build local capacity on a blended learning approach.
- LMH has committed to providing technical and financial support for scale- up efforts of the blended IRT in selected woredas.
- LMH will collaborate with the MOH, RHBs, donors, and partners to mobilize resources in support of the scale- up efforts

