



Portable Mobile Learning System

A Rural Training Solution
for Health Workers





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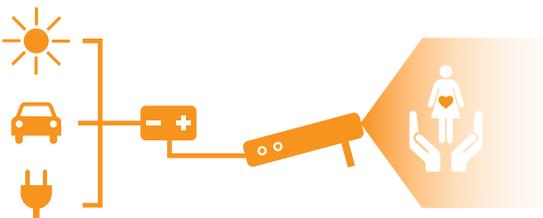
A critical challenge that most governments and development partners face is finding solutions to reach marginalized populations in rural areas and providing them with quality maternal and newborn health services.

To surmount this challenge, UNFPA launched a portable **Mobile Learning System (MLS)**

in 2016 to train midwives and health workers in key skills to combat the most prevalent causes of maternal and newborn mortality. This project was made possible through a generous grant by the Government of Denmark to UNFPA to find innovative ideas and solutions to address sexual and reproductive health issues.

What is the Mobile Learning System?

- The environmentally friendly MLS comprises of a Technology Kit that contains a palm sized WiFi battery-operated portable projector, portable speakers, and a solar-charger kit. Each projector contains a built in android tablet and has a speaker, USB port, Micro SD card slot, as well as a SIM card port.
- The solar-charger kit comes with a portable battery that allows each projector to be charged using either electricity, a car charger, or solar-panel — all included in the kit.
- Each projector comes pre-loaded with various world-class interactive multi-media training modules on key midwifery life-saving skills and obstetric emergencies like post-partum hemorrhage, eclampsia and pre-eclampsia, sepsis, obstructed labour, and post-abortion care that account for more than 90% of all maternal deaths. In addition, modules on family planning, essential newborn care, and female genital mutilation are also included.
- The modules are designed to improve the skills of midwives and the quality of care they provide to avoid preventable maternal and newborn deaths.



What makes the MLS so Innovative?

- MLS is an innovative, simple, mobile, and cost effective solution for the training of health-workers in low resource settings that provides a manifold return on investment.
- It is highly suitable for remote rural settings where there are challenges of infrastructure, lack of electricity, poor internet connectivity, and lack of trained tutors.
- The solar charger kit provides an alternative to vagaries of electricity and the pre-loaded world class training materials make internet access unnecessary.
- The Micro SD card port can allow additional data storage; additional presentations can be made using a flash-drive that can be operated through the USB port.



- The MLS allows for any blank white wall in any setting (remote or urban) to become a classroom, thus making MLS an innovative way to bring current multi-media training solutions to health workers even in remote rural locations where there are few skilled trainers.
- Since the projector contains a built in android tablet, it makes it vertically and horizontally scalable, allowing for any kind of training to be seamlessly adapted.
- If new courses or updates to the modules are required, the projectors can access the internet to download course materials as and when available.
- Rural health workers are able to get world class quality training, even without trained instructors.
- The MLS platform can easily be deployed for training courses covering all thematic areas of UNFPA.



Successful MLS Pilot

A total of 22 health centres and midwifery training sites in rural areas of Ethiopia and Tanzania were identified to pilot test the MLS in collaboration with their respective governments and midwifery associations. These two countries have exceptionally high rates of maternal mortality at 353 and 398 deaths per 100,000 live births respectively (WHO 2015 report).

The objective was to utilize MLS to train health workers through back to back stakeholder workshops in the first quarter of 2016. The health facilities and/or training institutions were to utilize the MLS for pre-service and in-service trainings and any other trainings they thought necessary; then report back on the outreach, usability, and effectiveness of the MLS. The total duration of the pilot was one year from concept to execution, to compilation and evaluation of results.



In Ethiopia:

- Total of 52 trainings were performed using MLS between April and September 2016 (30 sessions conducted using the midwifery e-learning modules and 22 other trainings on different topics, i.e. basic emergency obstetric care, antenatal care, acute watery diarrhea, food preparation, etc.).
- MLS trainings in Ethiopia were able to reach 484 midwives and students, 283 healthcare workers, and 246 non-healthcare workers, bringing the total number of beneficiaries reached between mid- March and October 2016 to 1,013.



484

midwives and students



283

healthcare workers



246

non-healthcare workers

In Tanzania:

- Total of 64 trainings sessions were conducted using the MLS between April and December 2016.
- 2,024 people benefited from these trainings (1,169 midwives, 589 other healthcare workers, and 266 non-healthcare workers).



1,169
midwives and students



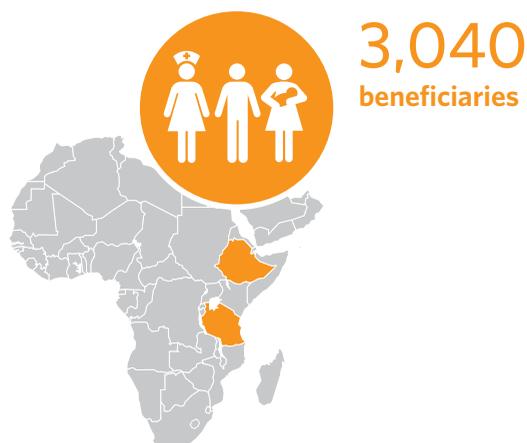
589
healthcare workers



266
non-healthcare workers

In Total:

- In Ethiopia and Tanzania combined, MLS was a part of 116 pre-service, in-service, and other trainings.
- MLS helped trained 2,525 health workers (nurses, midwives, midwifery students, community health workers) and over 500 non-healthcare workers in a short span of 9 months (April-December 2016), bringing the total to about 3,040 beneficiaries.
- This high level of engagement and rapid momentum of MLS implementation suggests the deep interest in the medium and need for plans, resources, and strategies for scale up. This successful experiment also reveals the need for continued innovation in education dissemination.



Evaluation Results from Countries

Medical professionals who received in-service training at health institutions through the portable MLS have testified to the excellent quality of the multi-media training materials. The trainings have contributed towards enhancing their clinical skills, building their confidence in dealing with clients, and assisting with compassionate and respectful maternal health care. The MLS has also proven very successful in a short span of time in educating other health workers on important practices such as bleeding after birth, watery diarrhea, nutrition etc.

The MLS evaluations submitted by the training sites in Ethiopia and Tanzania have affirmed that:

- The MLS is easy to handle, operate, understand, and highly portable, thus making it easier for health workers to use in remote areas unlike carrying laptops and bulky overhead projectors.
- It is inexpensive and suitable for developing countries.
- Lasts up to 8 hours without the need to interrupt class due to electricity outage.
- Can be easily operated without having complex ICT skills.
- Instrumental in improving the quality of education using a rich variety of teaching-learning methods.

- Useful for flexible group sizes—from small size groups to even larger groups of about 50 people.
- High-quality — No breakage or mishandling was reported.
- Easily adapted to impart other trainings apart from those intended for midwives.
- Younger generation of midwives were able to quickly grasp the operation of the projector as it works just like a smart phone.



Some Challenges noted with the implementation of MLS in Tanzania and Ethiopia include:

- Remote sites without an in-house ICT person reported challenges in navigating through the courses as they were not familiar with the android technology.
- One kit per site proved limiting. There was an increased demand from sites for additional MLS kits.
- Delay in receiving reports and feedback from rural training sites contributed to communication challenges.
- A few sites reported challenges with the solar charger battery, though most sites reported no issues with electricity or solar charging.
- Few training centers had difficulty operating the technology kit due to language barriers.



Sustainability and Scalability

The concept of MLS and its wide range of capabilities is drawing interest from various donors. UNFPA Tanzania has mobilized funds from Johnson & Johnson and Canada Department of Foreign Affairs, Trade and Development (DFATD) for the reproductive, maternal, newborn and child health (RMNCH) project which would further aid scalability of this pilot to other sites.

- This pilot has proven that MLS is an effective and low-cost solution for low resource areas
- Raising awareness and ensuring support from various stakeholders will contribute to further success of the project
- Additional funding and resources are required for a sustained strategy
- New and continued partnerships can assist in scale-up implementation
- A full scale strategy is vital for MLS long term success and viability





Mobile Learning System for Sustainable Agribusiness
Kampala School of Nursing



Delivering a world where
every pregnancy is wanted
every childbirth is safe and
every young person's
potential is fulfilled



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