Enhancing the competencies of health care providers in saving lives at birth through a Low-Dose High Frequency pedagogy in Ethiopia

Tachwet Salilih[1], Wotaro Balta[1], Belete Belegu[1], Florence West[2] Alemnesh Teklebirhan[3], Yeshitila Tesfaye[1], Melaku Tamir[1]

[1]Ethiopian Midwives Association, Addis Ababa, Ethiopia

[2]International Confederation of Midwives, Hague, Netherlands

[3]Laerdel Global Health, Oslo, Norway

Corresponding Author: (belete.ema@gmail.com / +251-910-981-798)

Introduction

Despite several measures and interventions put in place by Ethiopian government and other stakeholders to improve maternal and neonatal health, still the country needs to go far in improving quality of maternal and neonatal health care for the community. [1] Conventional in-service training approaches have focused on one-time, extended, off-site, group-based workshops. These approaches have had limited effectiveness in improving and maintaining providers skills after training. On the other hand, this traditional off-site training approach was blamed to be not cost effective and highly challenging to the existing health structure because it affects the already low human resources. [2]

Ethiopian Midwives Association (EMwA) has identified competency gaps in health care providers to provide high quality and acceptable care. Therefore, EMwA designed strategies that can effectively address such gaps in a very short period of time and came up with Low dose High Frequency (LDHF) training and inaugurated the 50K project in partnership with MoH, International Confederation of Midwives and Laerdel Global Health from July 2018 to March 2020.

The LDHF approach uses interactive and engaging techniques, providing opportunities for simulated practice, and delivering learning opportunities at an appropriate dose and frequency help providers retain their knowledge and skills. [4, 5] Therefore this innovative project is designed to improve the quality maternal and newborn care by strengthening health professionals' competencies in saving lives at birth, which leads to achievement HSTP strategic goal.

General Objective

- To enhance quality of maternal and new born care through enhanced capacity of health care providers

Specific Objectives

- Strengthening health care providers competencies in saving lives at birth through a low-dose high frequency (LDHF) pedagogy in Ethiopia
- To introduce a low-dose high-frequency pedagogy in 180 intervention sites

Method

Project geographic area and population

EMwA implemented this innovative project in Amhara, Oromia, Tigray, SNNP regions and Addis Ababa city Administration in collaboration with Ministry of Health (MoH), Regional Health Bureaus and Higher Education Institutions (HEIs). According to the 2017 MDSR Report these regions have contributed to the 87.5% of maternal deaths reported in the one-year period. The project was specifically implemented in 30 midwifery-teaching institutions, 100 hospitals and 50 health centers in the selected 5 regions

Modality of Implementation

When the modality of implementation action plan was put together, there was a recognition

that the initiative must address six distinctive steps.

Program initiation

Sensitization workshop were organized to create local accountability and ownership in cascading the training and to lay down a ground for the sustainability of the project

During the event, scope of work and responsibilities were clarified with implementing partners and collaborators. Finally, the intervention health facilities and training sites at each region were identified. A cascade approach was employed, with an initial training of Master Trainer Facilitators (MTFs) at national or provincial level, who were then deployed to train institutional Master Trainers (MTs). MTs were then tasked with training 50KHB Champions (health workers and students) to prevent, detect and manage common causes of maternal and newborn mortality in Ethiopia. The training was designed to be consolidated by a series of LDHF practice sessions. It is competency-focused and therefore aligns well with ICM's recommended approach to midwifery education and practice. Program implementation was the responsibility of the EMwA, and ICM provided arms-length supportive supervision.

Low Dose High Frequency Practice: What makes this training program innovative and unique was the training approach - Introducing LDHF pedagogy through Establishing Mini-skill lab at each project intervention sites. EMwA provided the training for Midwives and other health care providers working at health facilities on three modules (*Management of bleeding after birth and Management of Severe re-eclampsia and eclampsia and Helping baby breath*) and for Midwives working in HEIs on 5 modules (*Management of bleeding after birth and Management of Severe re-eclampsia and eclampsia, Helping baby breath, essential service for every baby and essential service for small baby*). The training also integrated infection prevention and respectful maternity care.

Intervention sites received training materials and simulators:

Aimed to cascade LDHF training approach a facility level to improve the retention of knowledge and skill of Midwives to provide high quality maternal and newborn care services. EMwA distributed simulation materials (Mamma birth Neonatallie simulators & Upright Newborn Bag-Mask with Penguin Newborn Suction) for 82 Health facilities and PreemieNatalie & Mama Breast, Mama-U model provided for 8 HEIs.

Fig: Norway Prime Minister Erna Solberg visited the work of the association through 50k HBDs project

Supportive supervision and Monitoring conducted: In order to assess the status of the intervention institutions: periodic monitoring with telephone follow up, and further onsite supportive supervisions were done by Master trainers with respective regional trainers. The project was evaluated at mid-term and end-term by external evaluators to evaluate the effectiveness of the project against its baseline data.

Results

The total number health professional trained were: 48 Master trainers (MTOT), 1,167 trainer of training (TOT) and 11,319 Champions.

Project intervention Health Facilities & HEIs Introduced LDHF Pedagogy: About 50% health facilities and 73.3 % of the intervention Midwifery schools institutionalized[8] LDHF practice. The mini-skill lab established at Hospitals enables the health facilities capacity to provide training with LDHF approach for their catchment health centers. The mini-skill lab established at Hospitals enables them to provide refresher training with LDHF approach for their catchment health centers.

[8] Institutionalized means the health facilities and teaching institutions assign one focal person to run LDHF pedagogy using the simulation materials received from the project to provide on-job training. Especially, the Health facilities allocate budget to capacitate their catchment health centers.

There was a large consensus on the strong relevance and value of the program: Most notably, respondents explained the value of hands-on practice using the modules that focus on the main causes of maternal and newborn death, on-site training increased midwives' self-confidence and better quality of care. The quantitative finding showed that there is a significant improvement in practice and knowledge of Midwives on management of postpartum hemorrhage, severe pre-eclampsia and eclampsia and Newborn Asphyxia. The number of skilled birth attended increased significantly.

Contributed for maternal and neonatal health outcome: The stillbirth rate and maternal mortality have reduced by 26.2% and 16.7%, respectively from the baseline compared to the end line. This indicates that the programme had a protective effect against maternal and neonatal mortality in the five-implementation regions.

Sustainability: The project has been adopted by MOH and other EMwA's partners such as UNFPA, Amref, Catholic university, and Pathfinder. The selected project intervention sites (Health facilities and Midwifery teaching institutions) have adopted and using this innovative training approach. In addition, program learning documents and end-term evaluation report prepared to scale up the LDHF pedagogies to other health facilities and higher teaching institutions not addressed by this project.

Conclusion

The impressive results make it clear that the 50K Happy birth day (HBD) program has had a notable impact in all five regions, despite a number of contextual and implementation-related challenges. Beneficiaries were extremely enthusiastic about the program. Two innovative elements of the program were the LDHF practice sessions and the cascade approach to the training. Stakeholders generally held positive opinions about both of these elements. LDHF was felt to be important for consolidating the newly acquired skills and knowledge and for building teams, and the cascade approach was thought to be cost-efficient in that it allowed more beneficiaries to be reached. The enthusiasm of the beneficiaries and the improvements to quality of care and maternal and newborn health outcomes at the implementation sites indicate that the quality of the training was high.

The Way Forward

- ✓ There is a need to scale-up at national level by including the remaining regions, which were not included in this program.
- ✓ LDHF training and practice need to be integrated with existing health professionals' curriculum for pre-service and as part of CPD initiatives for in-service trainings.
- ✓ MNCH program implementers has to integrate LDHF into clinical catchment based mentorship
- ✓ Continuing support and ownership by RHBs and HEI will be required to consolidate and expand the achievements and learning from the programme so the improvements can be institutionalized and thus sustained.

References

1. Wolde HF, Gonete KA, Akalu TY, Baraki AG, Lakew AM. Factors affecting neonatal mortality in the general population: evidence from the 2016 Ethiopian Demographic and Health Survey (EDHS)—multilevel analysis. BMC research notes. 2019 Dec 1;12(1):610.
2. Willcox M, Harrison H, Asiedu A, Nelson A,

Gomez P, LeFevre A. Incremental cost and cost-effectiveness of low-dose, high-frequency training in basic emergency obstetric and newborn care as compared to status quo: part of a cluster-randomized training intervention evaluation in Ghana. Globalization and health. 2017 Dec 1;13(1):88.

3. Rowe AK, Rowe SY, Vujicic M, et al. 2009. Review of strategies to improve health care provider performance. In: Peters DH et al., eds. Improving Health Service Delivery in Developing Countries: From Evidence to Action. Washington, DC: The World Bank; 101–126.
4. Bluestone J, Johnson P, Fullerton J, et al. 2013. Effective in-service training design and delivery: evidence from an integrative literature review. Hum Res Health. 11:51.
5. Ugwa E, Otolorin E, Kabue M, Ishola G, Evans C, Oniyire A, Olisaekee G, Onwe B, LeFevre AE, Bluestone J, Orji B. Simulation-based low-dose, high-frequency plus mobile mentoring versus traditional group-based training approaches on day of birth care among maternal and newborn healthcare providers in Ebonyi and Kogi States, Nigeria; a randomized controlled trial. BMC health services research. 2018 Dec 1;18(1):630.