

Ethiopian Midwives Association



Best Practices and
Lessons Learned

CATCHMENT-BASED MENTORSHIP

Best Practices and Lessons Learned



የኢትዮጵያ ማድኃኒኛ ማህበር
Ethiopian Midwives
Association



Alula M. Teklu, Ibrahim Yimer, Yeshitila Tesfaye, Belete Belgu, Aster Berhe

Table of Contents

Acronyms:	3
Preface	4
Executive Summary:	6
Introduction:	10
Status of Maternal and Child Health	10
Catchment Based Clinical Mentoring:.....	12
Catchment Based Mentorship Implemented by Ethiopian Midwives Association in Partnership with UNFPA	14
Need for documenting Best practice on Catchment Based Mentorship	15
Objectives	15
Methods for Identification and Documentation of Best Practices	16
Selection of sites	16
Identification of Best practices.....	17
Selection of the best practices	19
Synthesis and Analysis:	20
Permissions:	20
Best Practices – Part I:	21
Engaging the RHB	21
Understanding the starting point:	22
Implementation Strategies:	22
Best Practices	23
Implementaion of catchment-based Mentorship at Lead Hospitals	23
Implementation of catchment-based Mentorship at Catchment Health Centers	24
Practice II: Improved Availability and Arrangement of Drugs, Supplies and Equipment	1
Practice III: Improving the knowledge and skills of Providers at Health Center levels	3
Decentralization of the trainings:.....	1
Cost of implementation:.....	1
Unnecessary referrals:.....	2

Proper Diagnosis – identifying the problem more accurately:	3
Best Practices : Focused Experiences	4
Practice IV: Integration of services and preparation of New follow up sheet	4
Neonatal NICU transfer form	4
Postpartum family planning service integration and log sheet	5
ANC daily summary sheet	6
Quality of service Improvement	7
Observed change in mortality	9
Improving Data Handling and Other follow up Charts	10
Best Practice III. Using Squatting position during second stage of labor.....	11
Effects on Quality of Care?	2
Improved Infection prevention practice.....	4
instrumental delivery	6
Management of preeclampsia	6
Partograph Utilization	6
Improvement in communication.....	7
Relevance of the Catchment based Mentorship Program	8
Is this program Sustainable?	9
Key challenges:	10
Conclusion and key lessons	11
Key consideration in the implementation of the Catchment-based mentoring:	15

Acronyms:

BEmONC	Basic Emergency Obstetric and Newborn Care
CBM	Catchment Based Mentoring
CEmONC	Comprehensive Emergency Obstetric Care
CPR	Contraceptive Prevalence Rate
DHS	Demographic and Health Survey
EMONC	Emergency Obstetric and Neonatal Care
EMwA	Ethiopian Midwives Association
EPHI	Ethiopian Public Health Institute
FMOH	Federal Ministry of Health
HBB	Helping Babies Breathe
HBS	Helping Babies Survive
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HMS	Helping Mothers Survive
HSTP	Health Sector Transformation Plan
IM	Infant Mortality
MMR	Maternal Mortality Ratio
MCH	Maternal and Child Health
NICU	Neonatal Intensive Care Unit
PHCU	Primary Health Care Unit
CNBC	Community based Newborn Care
HIS	Health Information System
RHB	Regional Health Bureau
TFR	Total Fertility Rate
UNFPA	United National Fund for Population Activities
WoHO	Woreda Health Office
ZHD	Zonal Health Desk

Preface

With a population that has crossed the 110 million mark, and predominantly rural population, Ethiopia is using a three-tier health system.

The lower tier comprises of primary hospitals, health centers and health posts. There are more than 4000 health centers in Ethiopia. Most deliveries in Ethiopia take place at health center level.

Studies done at the lower levels, have shown that gaps in Knowledge and skills of the providers have significant contributions in the poor outcomes of maternal and child care. Thus targeting the lower level health service outlets and those working on those facilities is pragmatic.

The catchment-based mentorship program was started by the Ethiopian Midwives Association, with the intention of enabling primary hospitals to provide better services as well as to equip them so that they can mentor their catchment health centers. This approach basically relies on available resources as well as existing structures.

After a 2-year implementation period, this program was found to be a best practice because of the fact that it is replicable and in terms of return for the dollar this may be one of the most effective interventions.

The practices are given as an overall experience as well as specific lessons. The key considerations in the implementation of the program and the potential challenges are also stipulated.

The main purpose of this document is to share the experiences in the implementation of the catchment-based mentorship, so that EMwA would scale up this program and others who are planning to implement this program can learn from what has been done by the Ethiopian Midwives Association.

Acknowledgement:

The Ethiopian Midwives Association would like to express its heartfelt appreciation to the UNFPA for supporting this critical intervention.

Our appreciation also goes to the Tigray Regional Health Bureau and SNNP regional health bureaus and all the structures below for owning this initiative and facilitating the meaningful implementation of this program.

We would like to also express our gratitude to the respondents from the various levels who informed the preparation of this document.

Executive Summary:

Introduction: Despite the remarkable improvements witnessed in recent years, Ethiopia still has unacceptably high maternal and child mortality and morbidity, which is one of the highest in the world. This calls for interventions targeting on the key contributors.

A recent BEmONC assessment found that lack of knowledge and skills at health centers in rural parts of the county have a significant role in the poor quality of care that we provide.

Interventions targeting those providers were highly recommended.

Cognizant of that challenge, the Ethiopian Midwives Association developed a program which could address the identified gap through support from UNFPA. The program was called “catchment based clinical mentoring”.

Rationale: Catchment-based clinical mentoring is a clinical mentoring strategy where both mentors and mentees work in health facilities that have direct referral linkage within a catchment. In the context of Ethiopian health care system structure, catchment based Clinical mentoring is believed to be effective and sustainable approach, given that it is tailored to needs of individual mentees at the lower level in the tier system.

This program was underway for some time and a preliminary review of the program has shown that the intervention is ethically sound and politically acceptable that can be replicated. It has benefited the patients, facilities and providers alike. Thus, consensus was reached on the need to document the activities.

Methods: This best practice document systematically identified and described important features, key success factors and lessons from the eight better performing health centers and four hospitals. Selection of the best practices – with some level of subjectivity, took the following key parameters: **Effectiveness:** The practice must work and achieve positive results that are measurable, **Efficiency:** The practice must produce results with a reasonable level of resources and time, **Relevance:** the practice must address the priority health problems, **Ethical soundness:** The practice must respect the current rules of ethics for dealing with human populations, **Sustainability:** The practice must be implementable over a long period of time without any massive injection of additional resources and **Possibility of duplication:** The

proposed practice, as carried out, must be replicable by other health facilities, woredas, regions, and countries.

The following steps were followed to implement the program:

Step 1: Identification deployment of a temporary mentor who will mentor hospital level staff is identified and trained

Step 2: the hospital level mentors are trained on selected contents and on how to do mentoring

Step 3: hospital level mentors are closely followed by the temporary mentor, which culminates with an assessment

Step 4: shadowing of the hospital-based mentors when they do HC-level mentoring

Step 5: hospital-based mentors continue provision of the mentorship with progressively declining support from the temporary mentor

Step 6: temporary mentor leaves but the hospitals continue

The best practices were identified through a document review (reports from the facilities), qualitative exploration through site visit and by posting call for best practices.

Observations, submissions and qualitative data were analyzed and synthesis was done by a team to get a collective interpretation.

The following activities and approaches were found to be the key components of the best practices:

The following were found to be the components of the implementation which played pivotal role in having a successful program:

1. Identification and Selection of priority contributors to maternal and child health: consensus on the main contributors to the high maternal and child mortality and morbidity was done first. This allowed the program managers to target the main contributors and the reason behind.
2. Understanding the starting point: conducting baseline assessment that created clarity on the baseline status was pivotal. The baseline findings were used to do thorough planning and also as reference to measure change.

3. Engaging the RHB: a meaningful engagement of the regional health bureaus makes implementation of the programs a lot easier and improves the likelihood of sustainability.
4. Co-planning, customized schedules and optimal use of local resources: starting from sharing of the key findings of the baseline assessment with the facility staff, co-planning and preparation of customized schedules and goals and working towards the goals by employing local resources are critical.

What were the main outcomes?

1. Cost-effectiveness: the cost of implementation of this program which has a very good reach (at least 3 sessions per participant) is just \$16.94 per participant
2. Improvement in Knowledge: with objective measurements, there was an average increase in knowledge score by 21%.
3. Removal of service interruptions: because of the on-site trainings/mentoring HC staff remained in their facilities which allowed them to provide services while attending the trainings.
4. Reduction in unnecessary referrals: unnecessary referrals were cut significantly. Use of standard forms and completeness also showed significant improvement.
5. Improvement in linkage between hospitals and HC: this mentorship program boosted the relationship between HC and hospitals which made patient referral convenient both for providers and patients.
6. Accuracy of diagnosis: has shown significant improvement. This in turn has improved the quality of care provided.
7. Availability of resources: because of baseline assessments, the facilities worked to address resource related challenges which in turn improved availability of consumables and other key inputs including water and power.

The key challenges identified includes:

Difficulty of selecting mentors for the program, shortage of resources both for the trainings and actual provision of mentoring visits, lack of Commitment by staff and leadership, resistance to

change especially from offsite to onsite mentoring and short presentations were found to be major challenges. Poor exit strategy where integration is considered, unsuitability of real patients for mentoring or training paired with lack of skill labs and high staff turnover were additional challenges. Financial constraints remain to be a key challenge.

Conclusions and Recommendations:

Catchment-based mentorship that is carried out with the 6 steps can improve quality of care, reduce unnecessary referrals and also reduce service interruptions. Thus, lower level HC should consider this program seriously. Understanding the baseline is pivotal for reference and planning purposes. Engaging the key stakeholders from the inception improves the likelihood for success and sustainability. Catchment-based mentorship is cost effective and can help address the gaps in skills and knowledge.

Introduction:

Context: Ethiopia is the 2nd most populous country in Africa and 13th in the world. Ethiopia provides a three-tiered health care (See Fig 2 below) with public health facilities being the mainstay. The three-tier health care delivery system is characterized by a first level of a Woreda/District health system comprising a primary hospital (with population coverage of 60,000-100,000 people), health centers (1/15,000-25,000 population) and their satellite

Tier	Healthcare facility	Population served
1	Specialised hospitals	3.5 - 5 million
2	General referral hospitals	1 – 1.5 million
3	Woreda health system	
	Primary hospital	60,000 - 100,000
	HC	15,000 - 25,000 each HC
	HP	3,000 - 5,000 each HP

Health Posts (1/3,000-5,000 population) that are connected to each other by a referral system. A Primary Hospital, Health center and health posts form a Primary health care unit (PHCU) with each health center having five satellite health posts. The second level in the tier is a General Hospital with population coverage of 1-1.5 million people; and the third a Specialized Hospital that covers population of 3.5-5 million. The primary health care unit

Figure 1: The Ethiopian Health System

being the closest to the population, has health posts, health centers and primary hospitals¹. Currently the country has 16,447 health posts, 3586 health centers and 234 hospitals².

Status of Maternal and Child Health

According to estimates from the 2015 United Nations Maternal Mortality Estimation Inter-Agency Group, maternal mortality has fallen by 43.9% between 1990 and 2015. Although various factors including improvements in the economic status, change in primary education coverage and Sub-Saharan Africa alone accounting for maternal deaths roughly 201,000 followed by 66,000 deaths in Southern Asia. At the country level, Nigeria and India account for over one third of all maternal deaths with approximate 58,000 & 45,000 maternal deaths respectively³.

¹ HSTP

² Health EFMo. Annual Performance Report. Report. 2019

³ Group WB. Trends in Maternal Mortality: 1990 to 2015. 2015

Direct obstetric complications account for 85% of maternal deaths as well as many acute and chronic illnesses. The distribution of maternal deaths due to all causes in health facilities showed that the most important causes of death include: obstructed labour (13%), ruptured uterus (12%) severe preeclampsia/ eclampsia (11%), severe complications of abortion (6%), post- partum haemorrhage /retained placenta (7%), postpartum sepsis (5%), ante-partum haemorrhage (5%) and direct complications from other causes (9%). Indirect causes such as HIV/AIDS (4%), anaemia (4%), malaria (9%), and complications from other causes (9%) contribute to about 21% of the maternal deaths⁴.

The 2016 EDHS report, showed the proportion of deliveries attended in a health facility was 19.7% among women from rural areas compared to 79.2% among women from urban areas. In the same survey long distance to health facility was mentioned to be a serious problem in accessing health facility by 59.8% of women from rural areas⁵. In addition, the 2017 MDSR report showed, home deaths accounted for 17 % of reported cases while 12 % of deaths occurred in transit. Haemorrhage remains the major cause of death with 42% of the women dying of Obstetric Haemorrhage. The majority (61%) of these deaths occur in the post-partum period and 20% during intrapartum period. The main contributing factors for this maternal death were Delays in seeking which accounts 65%, delay in reaching care 39.8% and delay in receiving care accounts for 34.8% of maternal mortalities. Regionally, 46% of maternal death in Amhara region was reported due to Haemorrhage, 21% due to hypertensive disorder of pregnancy and 7% is as a result of obstructed labour⁶.

Similarly, some 120,000 new-borns die of preventable causes annually, making Ethiopia one of the ten countries with the highest number of neonatal deaths per year globally⁷. Currently new-born deaths contribute to more than half of infant deaths and over 40% of the 260,000 under-5 children dying each year. The unacceptably high neonatal mortality rate in the country is attributable to various factors: low coverage of maternal and child health care services, high levels of unskilled home delivery, little postnatal care follow-up, and lack of recognition of

⁴ HSDP IV 2009/10-2014/15

⁵ Agency CS. Ethiopian Demographic and Health Survey. 2016

⁶ EPHI. National Maternal Death Surveillance and Response (MDSR) report. 2008 EFY

⁷ National Baseline Assessment for Emergency Obstetric and Newborn Care

maternal and new-born danger signs (11). The major direct causes of new-born deaths are infection 36%, intrapartum related complication (birth asphyxia) 25%, and prematurity 17% (12). The major contributors of under-five mortality are pneumonia, diarrhoea, malaria with malnutrition as underlining cause. These are either preventable or treatable ones.

Although there are various factors which determine the availability, accessibility and quality of services which are provided to rural communities, the role health care providers' play is critical and comes first. The WHO guide for Human Resources for Health, states that "The ability of a country to meet its health goals depends largely on the knowledge, skills, motivation and deployment of the people responsible for organizing and delivering health services."

Various studies and programmatic reports show that one of the main reasons for the low quality of the RMNCH services provided to the rural residents of Ethiopia (close to 80%) is lower levels of competency exhibited by providers at lower level.

Interventions which can improve the competency of the providers at lower level in a sustainable way were being introduced. Although the main solution is to ensure that new graduates from the colleges are competent enough, those who are already deployed should be reached and their capacity must be built in order to address the challenges.

Catchment Based Clinical Mentoring:

In 2016 the proportion of functioning EmONC Facilities nationally was only 40%. The met-need for EmONC was also only 18% in all facilities and only fourteen percent of expected deliveries took place in functioning EmONC facilities, which means most birth sites were not ready to adequately treat obstetric emergencies. Evidence has shown that poor quality of care is one of the major contributing factors to elevated rates of morbidity and mortality. It is apparent that weak health facilities will not avert the unacceptably high number of morbidity and mortality.

Although, there are significant developments in improving access, the quality of care at the facility level is not where it needs to be. The availability of competent health care providers is critical for delivery of quality RMNCH care. However, improving competencies of GP's, ESO's, HO's, midwives or nurses at health facilities remain as a big challenge in Ethiopia. There is still

significant gap in knowledge and skill among health care providers joining the workforce. The national EmONC (2016) assessment findings showed that there is low levels of knowledge in key maternal and newborn care areas among midwives and nurses. Although several in-service trainings are widely instituted with the goal of upgrading the knowledge and skill of health care providers, those were not being translated into high quality care for each mother and newborn. One of the ways to do that is by implementing catchment based clinical mentoring and coaching using senior mentors.

In addition to in-service trainings that are offered at various levels, a number of clinical mentorship initiatives have been implemented with the goal of improving the skill and knowledge of health care providers. One of the most successful mentorship programs implemented in Ethiopia, as well as in other countries, is for the integration of HIV/AIDS care into routine services. In the area of reproductive, maternal and newborn health, the government as well as a number of partner organizations have introduced mentorship programs with the aim of primarily supporting health centers which lacks uniformity and not an integral part of the system, issues of standardizations, cost and sustainability have always been at stake.

As part of the effort to improve the quality of RMNCH services provided at health center level, the Ministry of Health has introduced catchment-based clinical mentorship program as a more sustainable strategy in which the hospital support their catchment health center- with the intention of improving quality of RMNCH services.

In catchment-based mentorship, the mentors are selected from within the existing health care system and are given the responsibility of mentoring the facilities within their catchment. In the long-term, the goal is, through strong catchment-based mentorship, each facility will have adequate number of competent staff that will take up the mentoring role for any novice staff joining the facility, thus avoiding the need to rely even on mentors from the catchment itself.

The guideline defines **CATCHMENT BASED CLINICAL MENTORING** as “a clinical mentoring strategy where both mentors and mentees work in health facilities that have direct referral linkage within a catchment. In the context of Ethiopian health care system structure, catchment based Clinical mentoring is believed to be effective and sustainable approach, given that it is tailored to needs of individual mentees. In addition, it is also more likely to be relevant

and acceptable compared to other forms of clinical mentoring such as external mentoring.”

The guidelines continue to explain “It differs from other clinical mentoring approaches, which were implemented under various initiatives, in Ethiopia in three aspects

- a. Clinical mentorship is aimed at improving skills and knowledge of health care providers, as opposed to collaborative learning approach that focuses on improving performance of health facilities through experience sharing between facilities, which has been implemented in EHAQ initiative since 2006 E.C.
- b. It acknowledges clinical expertise that existed within the network of health facilities in a catchment, as opposed to external clinical mentoring that relies on external mentors.
- c. It targets health care providers` of RMNCH services along the continuum of care across the three tiers of health care delivery”

Catchment Based Mentorship Implemented by Ethiopian Midwives Association in Partnership with UNFPA

The catchment-based mentoring is an approach that was proposed after the 2016 EMONC assessment found that remotely located health facilities are providing poor quality care and the main gaps are skill and knowledge related. Thus, EMWA collaborated with UNFPA has implemented catchment based mentorship in four (4) hospitals and 32 catchment health centers in SNNP and Tigray region (see Fig 2) with the intention of improving the knowledge, skill and attitude of Midwives, and standardizing approaches of clinical mentoring for providers of reproductive, maternal, newborn and child health (RMNCH) services, providing clear guidance in planning, implementation and evaluation of clinical mentoring for RMNCH care providers. EMWA has recruited four external mentors at four hospitals to mentor Midwives working in the respective hospitals. Those external mentors provided different on-job training and demonstrating hand on skills on clients to the hospital Midwives. After graduation, the hospital mentor took Basic Mentoring and Respectful Maternity Care training organized by EMWA in collaboration with UNFPA. Since then, the hospital Mentors supported Midwives in their catchment health centers by stating in the health center for one week every month for six total months. Even though the mentors usually travel to health centers, mentees from health centers

has moved to the primary hospitals to share experiences and practice on more cases if the case flow in the health center was very low. Mentors at all health facilities have conducted baseline, midterm and end-line assessment on the mentees and facilities performance.

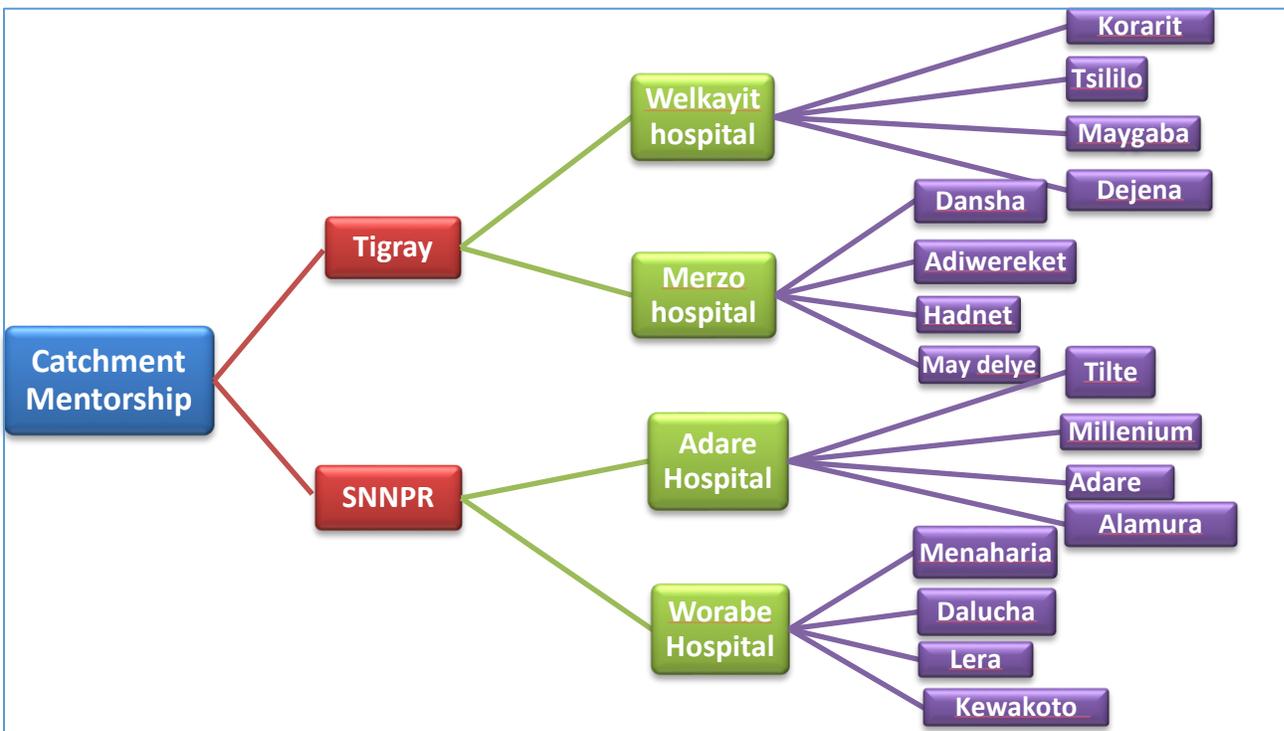


Figure 2: The currently active facilities in Tigray and SNNPR and the catchment structure

Need for documenting Best practice on Catchment Based Mentorship

A preliminary review of the catchment-based mentorship program has shown that the intervention is ethically sound and politically acceptable strategy that can be replicated. It has benefited the patients, facilities and providers alike. This best practice documentation systematically identified and described important features, key success factors and lessons from eight better performing health centers and four hospitals.

Objectives

General Objectives:

This best practice documentation was conducted with the objective of facilitating learning from the design, implementation, and results of catchment-based mentorship implementation

Specific Objectives:

- To identify best practices and lessons learnt on catchment-based mentorship
- To document evidence of positive change on the knowledge and skill of midwives
- To document outcome/impact of catchment-based mentorship
- To identify gaps and make recommendations

Methods for Identification and Documentation of Best Practices

This innovative approach has been highly acclaimed, and the implementation practices were found to meet the standards of best practices. In this document, the definition that WHO employs to explain best practices is adopted.

Best practice in health is defined by the WHO as “knowledge about what works in specific situations and contexts, without using inordinate resources to achieve the desired results, and which can be used to develop and implement solutions adapted to similar health problems in other situations and contexts” The same document continues to say: The use of the word “best” should not be considered in the superlative sense. In other words, the term “Best Practice” is not about “perfection”, the “gold standard” or only elements that have been shown to contribute towards making interventions work or success- full.

Results can be partial and may be related to only one or more components of the practice being considered. Indeed, documenting and applying lessons learned on what does not work and why it does not work is an integral part of “Best Practice” so that the same types of mistakes can be avoided by other programs and projects.

Selection of sites

Based on the above criteria, the following facilities were visited in the documentation process.

Table 1: facilities visited for documentation of the best practices

Lead Hospitals	Region	Catchment HC
Merzu Primary Hospital	Tigray	Dansha Health Center
Welqayt Primary Hospital		Korarit Health Center

		Maygaba Health Center
Enticho Primary Hospital		Dibdibo HC
Worabe Comprehensive Specialized Hospital	SNNPR	Dalucha Health Center
		Kewakoto Health Center
Adare General Hospital		Adare Health Center
		Alamura Health center

Identification of Best practices

A classic case study design which employs mixed methods – including review of records, review of publications as well as qualitative interviews were used to comprehensively understand the design, implementation, and results of catchment-based mentorship in selected health facilities.

Documenting best practices require identification of the practices which are believed to be best based on a set of criteria. Therefore, this best practice identification was guided by a set of criteria adapted from the World Health Organization’s guide on best practice documentation in Health Programs⁸. In this document, the implementation process, some causal relationship between the program and the observed outcomes and replicable lessons are documented.

As a preliminary for identification of the potential best practices, relevance of the program, ethical soundness, relative advantage of the program, political acceptability (compliance with country’s policy), timeliness, efficiency, sustainability, possibility for replication as well as ease for implementation were used as step-1 criteria. Upon ensuring the fulfillment of the above criteria, facilities were selected for visit, where direct observations, interviews and review of documents was done.

⁸ World Health Organization Regional Office for Africa. Guide for Documenting and Sharing Best Practices in Health Programs. 2008

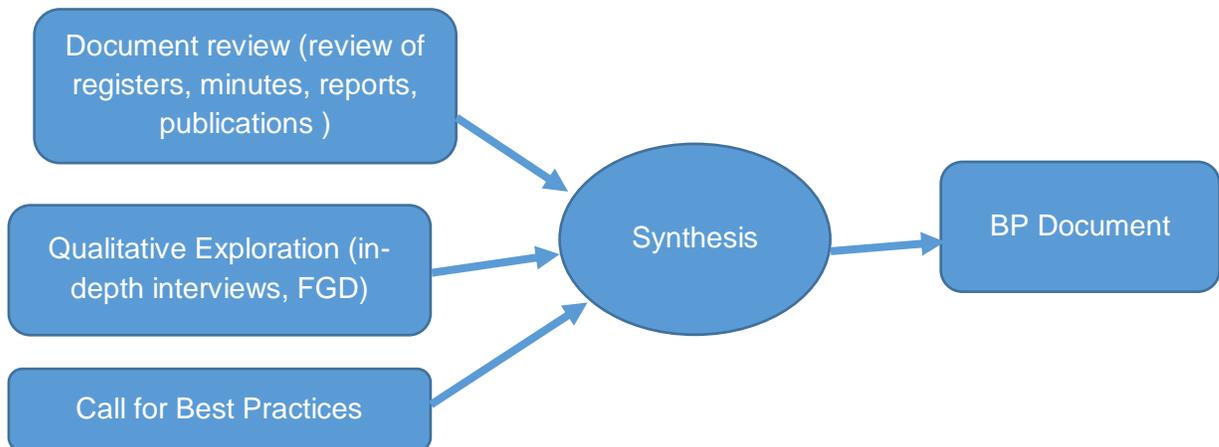


Figure 3: overall process for documentation

The following key methods were employed to document the best practices:

1. **Document review** – project documents including the project proposal, the associated guidelines and the reports from the facilities were reviewed. The mid-term evaluation report as well as supervision visit reports were also reviewed.
2. **Identification of the best practices:** the best practices were identified using the following methods:

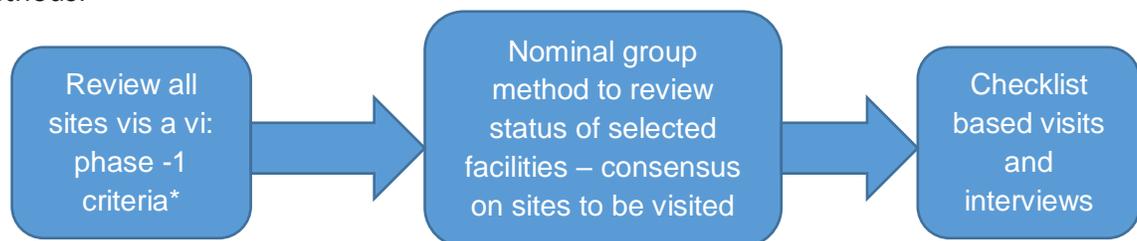


Figure 4: identification of best practices

- a. **Site visit** – using the checklist (annex II) – a team of experts visited the facilities and identified the best practices related to implementation of the catchment-based mentorship. During the site visit, the following were carried out:
 - i. **Case study** – examined the facility in terms of the status of implementation of the program, the changes that have taken place (examined available documents including registers and patient records, explored staff satisfaction, interviewed users whenever there were users at the facility during the visit)

- ii. Reviewed quality of care: made clinical reviews to determine number and appropriateness of referrals, decisions of care, results of exams and also reports from this particular program.
- b. **Call for best practices** – although there were no structured submissions, the mentors were asked to reflect on the main changes that they have brought and those were captured.
- c. **In-depth interviews** – with potential users, mentees and mentors with the intention of documenting the implementation process and the unique deeds which have contributed to the successful implementation of the program.
- d. **Focus group discussions** were held with program people to identify practices which could be considered as best practices.
- e. **Direct Observation** - where current status of the programs was captured. Pictures were also taken from consenting participants, to document evidences of best practices.

Selection of the best practices

Selection of the best practices – with some level of subjectivity, the 7 criteria were used to select the main exemplars from the sites visited. The main criteria used were:

- **Effectiveness:** The practice must work and achieve positive results that are measurable.
- **Efficiency:** The practice must produce results with a reasonable level of resources and time.
- **Relevance:** the practice must address the priority health problems
- **Ethical soundness:** The practice must respect the current rules of ethics for dealing with human populations.
 - ✓ **Sustainability:** The practice must be implementable over a long period of time without any massive injection of additional resources.
 - ✓ **Possibility of duplication:** The proposed practice, as carried out, must be replicable by other health facilities, woredas, regions, and countries.

Although uniform application of the criteria for all the practices was not easy, efforts have been exerted to adhere to use of all the criteria.

Synthesis and Analysis:

Qualitative data analysis – all interviews were transcribed; thematic content analysis was done manually. All interviews were transcribed, and stepwise exploration of the main findings were done by a team of two experts. For immersion in the data (familiarization with data), the interview transcriptions and generated reports were reviewed repeatedly. Then coding, searching the themes, reviewing the themes, defining and naming of themes and, identifying the best practice cases and worst cases for case study, and finally writing up will be carried out. Extracts of the interviews which describe a theme were translated into English. Transcribed interviews, generated reports and discussion notes were summarized, and coded according to the relevance of the issues for the study.

Quantitative descriptive analysis:

Descriptive quantitative analysis of checklist reports was used. The checklist reports were the baseline, midline and end line checklist reports collected by the EMWA's mentors. The important variables with their result were extracted from the checklist and exported to Microsoft excel for descriptive analysis. Frequency distribution, and summary statistics were used to describe major changes of the program using graphs to present the results. Change in improvement in knowledge, management and referral of health facilities were presented in graphs. Knowledge assessment of professionals was aggregated at the facility level. Thus, the baseline and midline knowledge assessment results were reported using mean scores at the health facility level.

Systematic review of the documents (reports, publications) – to identify changes over time. We systematically reviewed the baseline assessments, midline assessments and end line evaluation reports. Moreover, we have reviewed the initial checklist reports submitted by the mentors.

This document was prepared by doing a combined interpretation of the findings from the observation, qualitative interviews, and documents reviewed.

Permissions:

Prior to actual data collection, permission was taken from respective regional health bureaus, zonal health departments where it was applicable. In addition, permission was sought from lead hospitals to the catchment health centers, health center heads and MCH process owners. Then, the documentation participants were informed about the purpose, significance and

risks/discomforts of this study and requested to cooperate for an interview/observation through verbal consent. The respondents were given an opportunity to consent or refuse to take part in the study.

The contents of this document are presented with part -I showing the basics and part-II showing special lessons.

Best Practices – Part I:

This section summarizes the practices of the facilities which are actually involved in the implementation of the program and which we believe are best practices.

Engaging the Regional Health Bureaus

All health-related services in a given region in Ethiopia are either owned or regulated by the RHB. When there are new initiatives like the catchment-based mentorship, making sure the RHB are adequately informed and have given approval is critical. In this process, three key steps were followed to meaningfully engage the regional health bureaus.

Step – I: Identification of the problem: although identification of the problem was done through assessments which were carried out previously, verification and joint exploration through visits to the facilities was done.

Step -II: Facility selection and program initiation: the regional health bureaus were involved in the selection of the facilities and also in the design of the implementation strategies and follow up mechanisms.

As one of the regional health bureau representatives presented: *“the RHB was asked to assign one contact person for initiation and follow up of the program...we selected the sites for the initial phase and we agreed on what needs to be done. We also agreed on how the program will be followed”*

Step -III: Follow up mechanisms: the regional health bureaus were involved in conducting regular supportive supervision. This also included the ZHD and WoHO. The RHB were also involved in the development of the checklists which included process and outcome indicators.

The stepwise and meaningful engagement of the RHB have resulted in the following:

Ownership: a lot of programs are implemented in the regions and one of the key factors for success is the sense of ownership that is created at the RHB-level.

“some programs which are started by partners without adequate engagement of the RHB are destined to fail...we have seen that in many cases. But with the EMwA program, since we were involved from the very beginning, we know it is our program” Representative from RHB.

Sustainability: the RHB have been trying to maintain the program through various strategies after the support was discontinued.

Understanding the starting point:

All catchment-based mentorship program activities were started by doing baseline assessment – knowledge, skills and status of the facilities. Availability of resources including skill labs, mentors, infra-structure and other key inputs were determined.

The findings were shared within facilities and facility-specific plans were developed based on the findings. Many of the gaps including gaps which could only be addressed by the facility-level and/or region level decisions makers were made visible.

These basic functions including availability of water, power source and other key inputs were made priority areas of intervention because of the initiation of the mentorship program.

Implementation Strategies:

A baseline assessment was done to assess the readiness of the facilities for and also to identify providers’ knowledge and skill gap at the start of implementation of the program. The following BEmONC Signal Functions were not given before the mentorship program:

1. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (e.g. magnesium sulphate)
2. Manual removal of placenta
3. Removal of retained products (e.g. manual vacuum aspiration,)

The main reasons cited for not performing the signal functions were lack of training, HR and supply constraints. Moreover, the catchment health centers have the following gaps

- ✓ Poor infection prevention practice
- ✓ Inadequate and poor new born care

- ✓ Poor utilization of partograph
- ✓ Drugs and equipment shortages
- ✓ Inability to provide full BEmONC signal functions
- ✓ Poor documentation
- ✓ Poor knowledge and skill of the professional's

To address the main gaps different intervention was done using the mentorship program. The problems were intervened based on the baseline assessment result. From the interventions the following are the best results of the program.

Guided by the findings of the baseline assessment, the following key steps were taken to implement the program.

Step 1: Identification of a temporary mentor who will mentor hospital level staff is identified and trained

Step 2: the hospital level mentors are trained on selected contents and on how to do mentoring

Step 3: hospital level mentors are closely followed by the temporary mentor, which culminates with an assessment

Step 4: shadowing of the hospital-based mentors when they do HC-level mentoring

Step 5: hospital-based mentors continue provision of the mentorship with progressively declining support from the temporary mentor

Step 6: temporary mentor leaves but the hospitals continue

All the changes in program are documented through routine documentation. Knowledge and skill assessments are documented.

Best Practices

Implementaion of catchment-based Mentorship at Lead Hospitals

Practice I: Improving the knowledge and skills of providers at Hospital levels:

The implementation of the program started by targeting on the providers at hospital level. The external Mentors has conducted baseline, Midterm and end-line assessment of the local mentors and also hospital readiness and performance assessment. The hospital midwives were trained and mentored on the basic skills in RMNCH service provisions. Multiple short-term onsite

trainings were organized by the mentors who were hired by EMwA in collaboration with UNFPA. Standard training materials which were prepared by MOH were used. The training sessions had knowledge and skill assessment drills where the hospital mentors are given knowledge and skill assessment questions and their response are scored. The hospital level mentors, were also trained on how to conduct mentoring at health center level. After graduation, the hospital mentor took Basic Mentoring and Respectful Maternity Care training organized by EMwA in collaboration with UNFPA.

Use of available resources including skill labs within each hospital was given emphasis. As witnessed by one of the interviewees who is working as CEO of a hospital:

“Based on the gap identified during the baseline assessment, we trained our professionals using our skill lab.”

The skill lab we have was not being used optimally, but because of the mentorship program, the skill lab is being used optimally.



Figure 5: Skill lab demonstration

Use of the existing skill lab enabled the facilities to conduct the trainings resourcefully. *“The skill lab available in hospital created a conducive environment for the external mentor in provide on-job training. The knowledge, skill and attitude of hospital midwives became improved and also their confidence on managing obstetric complications were improved which made them a competent mentor.”* Zonal MCH coordinator

Implementation of catchment-based Mentorship at Catchment Health Centers

The local Mentors have traveled to the health center and contacted with health center head, MCH case team leader and the mentees. The mentor has given orientation on catchment-based mentorship to then and made baseline assessment of the mentee’s performance and also, he/she assess the health centers readiness. Gaps of the health center and Knowledge, skill and attitude gap of the midwives were identified and action plan was developed. Based on the

identified gaps, the hospital level mentors would then give on-job mentoring and trainings to Health Center staff at different locations, followed by their deployment to the health centers to provide targeted mentoring, by staying at each HC for up to 5 days in a row.

The mentors employed three major strategies:

1. Presentations on key areas paired with optimal use of skill labs
2. Clinical case review and discussions
3. Hands on mentoring on one-to-one bases.

Some of the major topics covered in this mentorship program include:

- ✓ Labour and delivery including use of partograph
- ✓ Active management of third stage of labour (AMTSL)
- ✓ Hypertension disorder of pregnancy
- ✓ Manual removal of placenta,
- ✓ Obstetric hemorrhage (APH and PPH)
- ✓ Immediate newborn care and newborn resuscitation
- ✓ Unsafe abortion and post abortion care

Practice II: Improved Availability and Arrangement of Drugs, Supplies and Equipment

The availability of essential drugs, equipment, and supplies like parenteral antibiotics, anticonvulsants, antihypertensive, uterotonic, and emergency drugs has a major role in delivering high-quality MNH services. During the baseline facility readiness assessment, some of the essential drugs, supplies and equipment's were not available. Based on the action plan developed, all the required equipment's and drugs and supplies to provide full signal functions were fulfilled. In addition to availing essential drugs, supplies, and equipment's, their arrangement has become improved.

“The mentor conducted baseline assessment for the providers and facilities readiness. We made discussion on the identified gaps with the health centers and mentor and action plan was developed. Based on the action plan, the woreda health office availed equipment's and supplies to the health center. In addition, we closely worked with the mentor and monitor the progress of the implementations”. Woreda MCH expert



Figure 6: Before and After Mentorship



Figure 7: Arrangement of delivery room before and after Mentorship

A mentee from a health center said, "I learnt most from my mentor is that providing the best care that the women deserve with the available resource that we have at hand improves the likelihood of a favorable outcome"



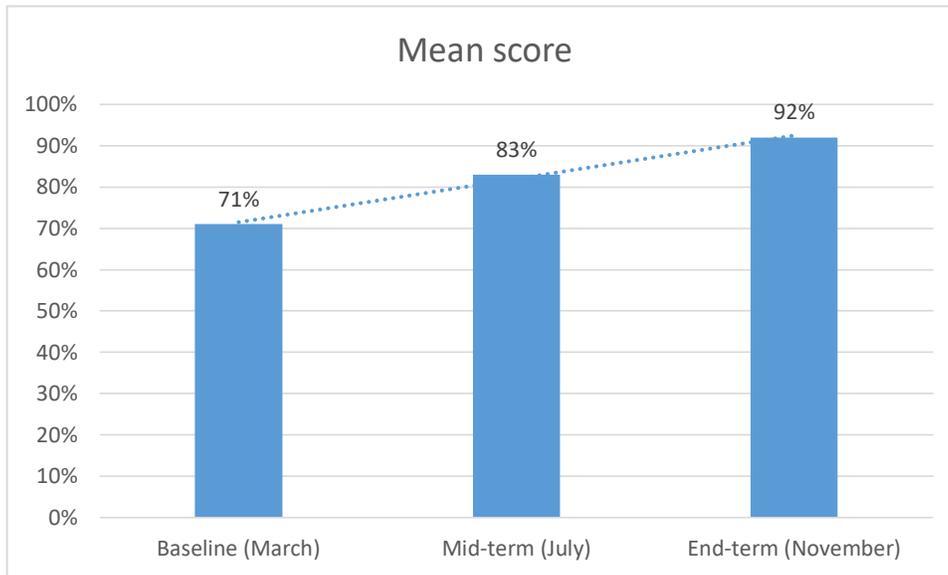
Figure 8: Danger sign of the mother & newborn posted in labor and postnatal ward which is made with spatula

Practice III: Improving the knowledge and skills of providers at health center levels

Following the full implementation of the program for 6 months, major changes in the knowledge and skills of health center staff as well as the general conditions of the health centers were observed. The highest improvement of knowledge was observed among health professionals in Dalucha health center in SNNPR. The improvement was from 66.3% baseline average to 100% at the end of the mentorship program. In SNNP the highest improvement is found among health professionals in the catchment of Werabe specialized hospital with improvement of 18.4% (75.7% to 94.1%). Even though there is a 10% improvement after the program, the lowest point was recorded in Adare health center before and after the mentorship program.

“... huge gaps in knowledge, skill and Attitude among providers who are working in MCH unit was identified by zone and woreda health office. Different trainings and supportive supervision were done in our zone but we didn’t get what we were expected but now the Catchment based clinical mentorship brought many changes like: it plays a pivotal role in Improved the knowledge, skill and Attitude of providers, strengthened service delivery, improve providers confidence in managing complications and decrease un-necessary referrals” Zonal MCH Coordinator.

The following figure shows change in knowledge from the baseline.



According to the report of the mentors from the hospital sent to the catchment health center, there were gaps in knowledge and skills that the health center staff exhibited prior to initiation of the program. Knowledge was assessed using

standard knowledge assessment questionnaire on the key areas which play significant role in maternal and child mortality and morbidity. The knowledge assessments were done at three observation points – baseline, mid-term and end-term over a period of 9-months. The average change in knowledge is 21% from baseline to endline, with the highest change being 56%.

During the assessments, in addition to the key gaps in knowledge which were addressed, other gaps were identified and addressed. Some of the gaps identified and addressed includes:

Instrumental Delivery: most of the midwives did not know how to use instrumental delivery. For instance, in one health center, there where about of the vacuum was not known, let alone to use the instrument. Due to the close follow up from the mentor deployed by the catchment hospital, the health center found the instrument from the store and the mentor used it to demonstrate vacuum delivery for the HC staff, because there was a laboring mother who needed vacuum delivery.

Another mentor who was deployed by this program also said:



“Let me add also one thing about instrumental delivery. Some of the health centers did not know how to use vacuum delivery. I trained them how and when to use it and now they are using it.”

The mentorship program has therefore enabled health centers to practice instrumental delivery more successfully.

This was found to be one of the reasons for the decline in the referrals from health center to the hospitals. For instance, most of the professionals from the catchment health centers were not able to do instrumental delivery. The CEO of one of the hospitals said: *“although we have the instruments, the hospital had very low practice of vacuum delivery before the mentorship program”*.

One of the respondents from the hospital also reflected: *“With fully effaced and dilated cervix with high stations in the second stage of labor you can easily use vacuum, and then within minutes she can deliver. For these kinds of case they were calling ambulances and referring women.”*

Currently because of the mentoring program, use of instruments to attend deliveries at health center level is increasing.

Episiotomy: The other midwife added that she learned a new way of doing episiotomy from the mentor.

Administration of parenteral Anti-convulsant: The other mentor from hospital said, *“In the health center even, they had limited knowledge on how to secure cannula and how to giving the loading dose of MgSO₄. ... I gave the chance to demonstrate how to load MgSo₄, secure cannula and other basic skills”*

In this program, the mentors were giving short presentations which were all accompanied by pre and post test questions. The mentor coached the HC staff, by observing the mentee performing a specific procedure on patients, and provided timely feedback as needed in a manner that

doesn't compromise patient care and safety. As a result of this mentoring and coaching activities, almost all of the mentee's skill were improved.

"Before the catchment based clinical mentorship program, most of the midwife refer the mothers with pre-eclampsia and eclampsia without giving the loading dose of Mgso4. Through thses mentorship program the midwives knowledge and skill were improved and they will refer pre-eclampsia cases after providing the loading doses". Woreda MCH expert

Decentralization of the trainings:

Albeit the traditional practice of providing trainings in central places by regional health bureaus, this approach where targeted trainings are given to smaller groups at the target health centers has enabled the mentors to reach more people and use HC level resources. This is believed to enhance the ability of the mentors to continue provision of support to HC staff with minimal resources.

The decentralization of the trainings has also eliminated service interruptions and long-term absenteeism. The latter is significant in facilities like rural health centers which are usually understaffed; where some key services tend to be put on hold when one or more staff members are invited to trainings which are organized at regional level, because they have to travel long distances and also stay in hotels attending the trainings.

Use of the closest skill labs (some in local colleges, some in hospitals that are equipped by EMwA and/or other partners) has also played a significant role in reducing the cost of trainings and has minimized the need to travel long distances.

Cost of implementation:

This program was implemented by employing 4 external mentors who were paid at \$900 per month each. In addition to the 5 intensive sessions, more than 43 participants were trained in multiple sessions which were held at the 16 health centers included in the catchment areas of the 4 hospitals.

With an average of 3 sessions per HC, the cost of each training goes down to \$728 and the cost per trainee goes down to \$16.94. This is extremely cost-effective.

Although the cost was found to be lower for the on-site training approach, some of the participants of the trainings expressed dissatisfaction with the exclusively onsite approach for the training. One of the respondents said *“offsite trainings are ways we get a break and some income in the form of a per diem...so removing the possibility for offsite training is not a good idea....it probably is better to mix the two models”*

Unnecessary referrals:

Health centers are the first point of contact for most RMNCH services. Before the mentorship program, they were sending most of their patients to the hospitals. Patients were not also receiving the proper care at arrival and they were just being referred without even receiving the immediate care they should receive before they are sent to hospitals.

Following the mentorship, there is a significant decline in unnecessary referrals. The deliveries that are attended at health center level has increased, as a result of which the hospitals are less busy. Patients who are being referred are being referred after receiving the immediate proper care.

“previously the health centers would send an eclamptic patient without giving loading dose of MgSO₄, but currently they would give her the first dose and refer her with a completed referral form” Midwife at a primary hospital.

“there was high unnecessary referral to the hospital and mothers were died while referred to the hospital. Currently the confidence of the providers in managing complication were improved through the catchment based clinical mentorship and the un-necessary referrals were decreased according to the hospital report” Zonal MCH coordinator

Two respondents from the RHBs also reflected that, one of the biggest achievements of the program are *“unnecessary referrals were affecting our resource allocation and service distribution...referring facilities were sitting idle, while the recipient primary hospitals were kept unfairly busy”* RHB representative from SNNPR.

“The program has slashed the number of unnecessary referrals and even when referred, the referrals are made with all necessary preparations” RHB representative from Tigray.

The ability of the providers to pick an emergency and act immediately has also shown significant improvements. The change in the completion and proper use of the referral forms has enabled

recipient hospitals to take quick action and has enabled them to have a better documentation of the care that the patient received at health center. This has been a major challenge previously, where mothers were sent from health centers without any information about the status of the patient, the care provided at the health center, the duration of care and course of the delivery at the health center. Reasons for referral were also not given.

After the mentorship, the Health Center staff have shown significant improvement that the recipient hospital is not only able to make quick decisions, they are also able to know the referring provider. Moreover, this practice of proper referral has made provision of feedback much easier. The feedback is given both in writing and through the mentorship program.

With regard to referral from the catchment health centers after the mentorship program as compared to the previous times it has very big difference. Not only before and after mentorship program among mentored health centers there is also a big difference between mentored and unmentored health centers. The referral that comes from mentored HCs after the mentorship program is highly reduced. In addition previously who sent patients without any primary treatment, but now they refer after giving primary treatment. They mentioned eclampsia cases as an example previously they refer without giving the loading dose of MgSO₄.

“Previously there were unnecessary referrals for instance referring laboring mother with rupture of membrane by saying PROM. Some cases referred from the health centers had many challenges for example incomplete abortion which can be easily treated at health center level but they refer to us without any primary level treatment. As result of this the mothers got complicated and infected. They reach in our hospital with shock. The diagnosis they put is also improved after the program. They are applying the skills and knowledge clearly. Even their contact with us is also improved.” A mentor from Catchment Hospital.

A very significant improvement in proper use of formats where all sections are completed has been observed.

Proper Diagnosis – identifying the problem more accurately:

Before initiation of the mentorship program. Patients were also not being diagnosed properly. Misdiagnosis was very common: *“Some health professionals send laboring mothers with rupture of membrane stating that they have PROM.”* A hospital mentor states.

experience; the internal referral slip helped as a checklist for the providers including the need for inclusion of maternal history.

The development process of the internal referral form also gave the health center staff to work in the form of a team where the mentor facilitated knowledge transfer within the team and make corrections and gave inputs in the process.

Postpartum family planning service integration and log sheet

It is reported that postpartum family planning service provision is one the very poor areas of achievement of most hospitals and health centers. In order to improve the performances in this regard with the help of the mentorship program the staff were motivated and refreshed on the

Postpartum Family Planning Log Sheet											
Region 11		Ward 11		Health Facility 11.1.11							
No.	Name	Date	Age	Sex	Parity	Gravida	Method	Duration	Cost	Remarks	Signature
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

importance of postpartum family planning. In addition they included training on counseling about Long Acting Reversible Contraception (LARC) during the last ANC visit for all pregnant women. After counseling the mothers

were assisted to make decisions on whether to use family planning and if they want to use on what kind of family planning methods they would like to use after delivery.

If she decided to take the family planning method immediately after delivery, the mother's name is transferred to postpartum family planning log sheet in PNC unit. The log sheet serves as the reminder that the mother has consented to take a particular family planning method.

Those mothers are asked for confirmation of their decision after delivery and before the family planning method is given to them. Mothers who confirm will then be given her choice of family planning methods. The best practices are:

1. The integration of postpartum family planning counseling service with ANC
2. They developed follow up log sheet dedicated for this services only.
3. Training of the health care providers on how to give LARC and the other family planning methods

These practices served the health professionals no to forget to give postpartum family planning services. As the respondents from the hospital said that these practices improved the demand of the community for family planning services.

After initiation of the program, mothers and other community members have started asking for the service. Pregnant women who were not counseled previously are currently asking for postpartum family planning, they are demanding for LARC and other family planning services. Even the other members of the community are also learning for the mothers who are receiving the family planning services and are demanding for Family planning.

With these strategies the postpartum family planning service provision achievement has shown improvements. The log sheet is developed by referring the national registries. And it serves us an additional follow up sheet but is not the replacement of the already available registries.

As seen on figure 2 below, we have observed more than four-fold improvement in the implant provision. The IUCD is also picking up.

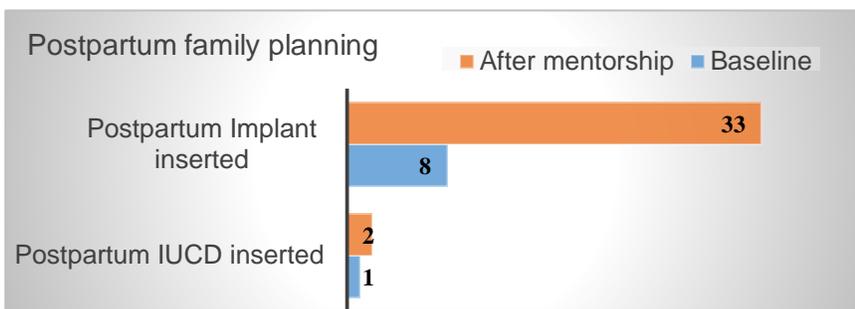


Figure 9: changes in FP use in mentorship facilities

ANC daily summary sheet

Although there were various options to use for tracking ANC performance, the mentorship program, came with a package where the summary sheet was introduced through the dedicated

Figure 10: ANC daily summary sheet

mentors. This sheet summarizes the total number of ANC conducted by each health professionals on daily bases. This helped them to exactly know how much ANC service is given by the hospital as well as the health center. Previously they only register the total number of ANC users in the reporting format weekly or monthly. The weekly reporting was

misleading and was also not giving the providers to have a real time status update on what is

happening on daily bases, as a result of which mistakes including double reporting were being made. Given the fact that over-reporting is a national-level data quality challenge, this intervention might help in addressing the larger scale challenge.

This newly developed format enables to easily avoid these kinds of mistakes and it improves their data quality. In addition it helped them to agregately observe the number of ANC drop outs. As a result the number of women who uses 4th ANC is increasing after the mentorship program as shown in the following figure ANC-4 utilization increased by more than two fold in August in Korarit HC. Moreover it increased by 29.6% in Maygaba HC.

In addition to ANC-4 increased service utilization, there is an increased maternal health service utilization as result of change in knowledge, skill and practices by the health professionals and health facility results.

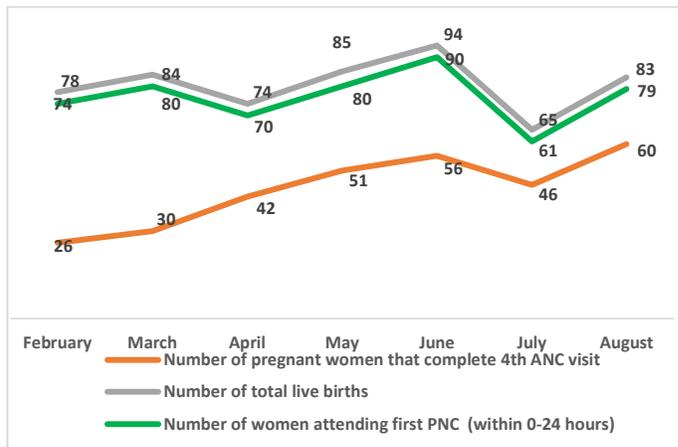


Figure 11: ANC-4 in Korarit Health Center, SNNPR

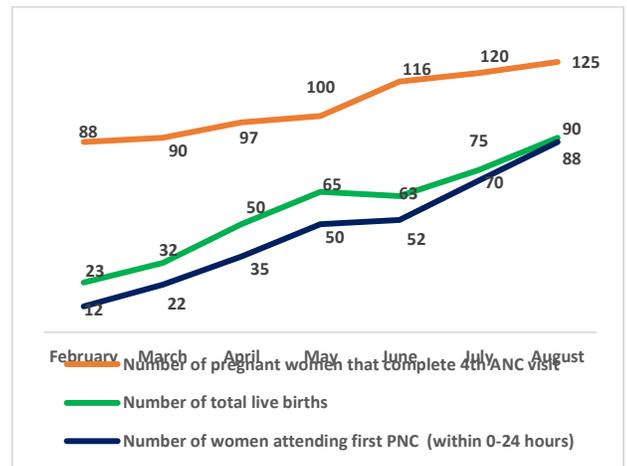


Figure 12: ANC-4 improvements in MayGaba Health Center, Tigray

Quality of service Improvement

Due to lack of appropriate skills the catchment health centers provide poor quality of service and imposes additionally delay which complicates the mother. The lack of skills paired with poor coordination puts the mother at risk. One of the respondents said that,

“The other problem is for some laboring mother they send to us but they can easily intervene by using vacuum but they refer to us. thus the mother become complicated. so there were unnecessary referral and adding problems on the mother. But know these kinds of unnecessary

referral is decreasing due to the mentorship program. Sometimes there were delayance due inability to diagnose correctly.”

The other staff from the hospital said the following:

“When we see cases referred from HCs previously there were unnecessary referral like they can easily do MVA for incomplete abortion they send them here. And they can reduce complications by doing simple procedures at the HCs.”

The respondents of the qualitative exploration reflected that lack of skill results in poor quality of care and it is improved by the the mentorship program.

“one of the challenges we were observing was inability to act in a timely fashion and skipping basic steps in diagnosis and treatment of mothers. These range from identification of mothers with change in blood pressure, diagnosis of anemia, provision of drugs, scheduling of ANC and the likes.”

The mentorship program has assisted the health centers to see their own gaps and act on those by their own. One of the respondents form a mentoring hospital said:

“With fully effaced and dilated cervix with high stations in the second stage of labor you can easily use vacuum and within a minute the mother can deliver. For these kinds of case they call ambulance and refer the laboring mothers.”

This mentorship program has boosted the confidence of the health center staff and they are taking measures. Because of the stronger relationship that is created between the health center and hospital, they will try while informing the hospital for any eventuality.

Currently the mentor demonstrated vacuum delivery in their mini-skill lab and in turn, the mentees re-demonstrate the procedures many times until he/she became competent. These create an opportunity for the mentee in developing his/her confidence to perform vacuum delivery.

With the help of this program hospital trained mentor tried to support the catchment health centers to raise the skills of the professional by spending time with them in their health facility.

“the strong bond between the health centers and the hospital will be a springboard for resolving a lot of challenges...and it will have an impact on all programs” health center staff stated during an interview.

Use of Maternity Waiting Homes – it is reported that the mentorship program has positively affected use of the maternity waiting homes because of the improvement in the ANC practices, mothers who may have difficulty accessing the health center for delivery are being identified and this in turn is enabling the health center to optimize use of the existing maternity waiting homes. One of the health center respondents said: *“the maternity waiting homes which were not busy for some time have shown an increase in number of users”*

Observed change in mortality

The over all improvement in knowledge, skill, management without referral, quality service and infection prevention may have contributed to the reduction in the occurrence of maternal death, neonatal death and stillbirth occurrence in Welqayit primary hospital. Particularly neonatal death occurrence showed a remarkable reduction (85.7%) after the commencement of the mentorship program as shown in the following figure.

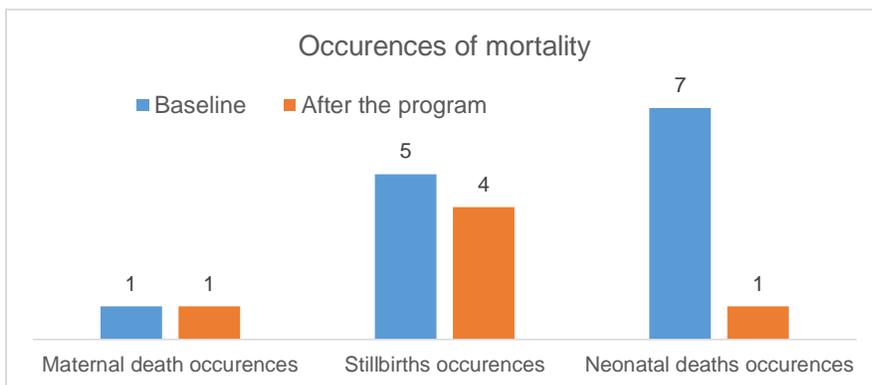


Figure 13: Occurrence of deaths at facilities

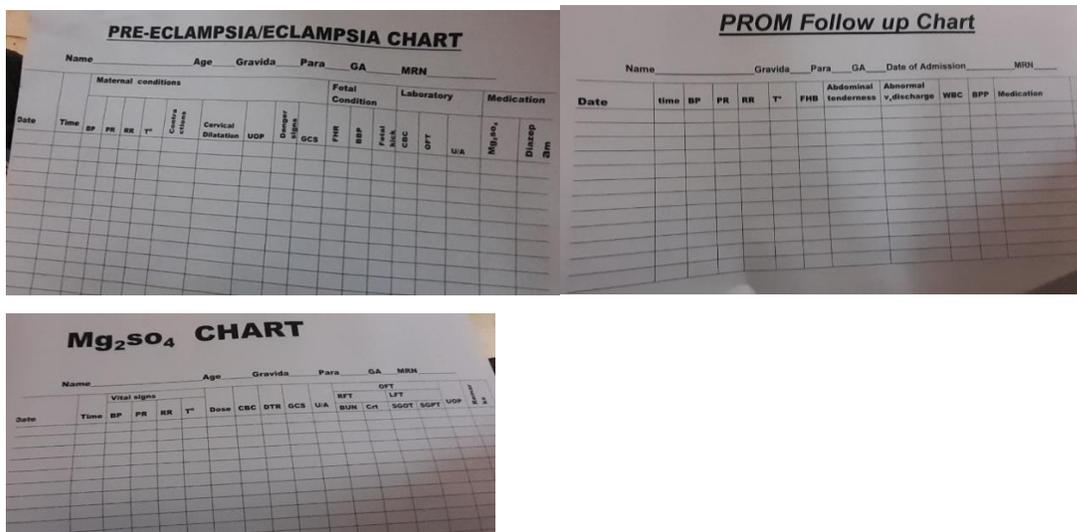
Although it is very difficult to attribute the changes to the mentorship program, but it is difficult to deny the potential contribution it might have. Longer time observation and use of more rigorous methods to determine its contributions is highly recommended.

The change is more prominent when it comes to a complete elimination of institutional deaths and near miss. There was only one maternal death in the 9 months of follow up reported from the 16 health centers. There was no near miss reported from the same health centers.

Improving data handling and other follow up charts

The other severe problem that the health centers were suffering from poor documentation. For instance, previously after resuscitation of the neonate, it is not documented or a mother with history of retained placenta may be discharged without proper registration. So, in general it was very difficult to assess the clinical conditions of our clients based on the history. Reporting and compilation of data was also very difficult. The health centers were having limitations in sending quality assured reports and verification of any reports by going back to the source was not possible.

As a key component of the mentorship program, health centers were given the chance to identify gaps in their documentation practice, following joint identification of the gaps, the health center staff were then exposed to the existing documentation tools and new tools/ log sheet were developed for the once where no documentation tools were found. By meaningfully engaging the health center staff, ownership was ensured, and significant improvement was observed.



The new forms were also integrated into the existing M&E structure, where the new forms were used as sources for reports; making long-term use of the forms highly likely.

Best Practice VI. Using Squatting position during second stage of labor

One of the improvements in maternal health service delivery that can be attributed to the mentorship program is introduction of management approaches which were uncommon the given facility.



A case at hand is use of squatting position during 2nd stage of labor.

Adare hospital in one of the hospital, before the introduction of the mentorship program, they used to practice only a lithotomic position in the second stage of labor to attend the delivery. They reported that the mentors introduced them with the squatting position by explaining its importance initially on an anatomical model followed by observations on actual patients. Currently they are practicing the newly introduced method and are experiencing the benefit. When they were asked what they have learnt about the importance of using squatting position, they responded that: *It is suitable for the mother during labor: it has reduced back pain, It can increase allows wider vaginal space by up to 2 cm and it shortens the second stage of labor and other advantages were also reported.*

During the qualitative exploration, health center staff expressed that the newly introduced squatting position for second stage can reduce fetal distress, maternal distress, and reduce instrumental delivery and episiotomy. Because of the lessons, this position is becoming common. But introducing this program did not come easily. Its introduction was faced with resistance. One of the mentors said: *“When we talked about this position with our colleagues at the health centers, at the initial phases, they refused, but when they saw us practice the squatting position and its outcome, they accepted it as an option.”* The transition to a wider scale use took additional time, but currently this position is a preferred option in the hospital.

Midwives are currently witnessing the benefits, which is contributing to its wider use.

A midwife reported that when she attends delivery using a squatting position, her colleagues used to discourage her from practicing the position let alone practice it themselves. But after seeing the outcome and its benefit, they developed an interest to follow the practice. According to her, this position is very helpful for the mother and newborn. The other midwives who have been against this have now accepted it as a preferred option

“...previously we used to prohibit laboring mother from squatting and we tell them to lay in lithotomic position. I am very impressed that this position has come to practice during labor in a modern way (I know it was being used in rural Ethiopia). We considered it as traditional and it was not being recommended.”

They are practicing this position after confirming that the mother can deliver through spontaneous vaginal delivery or by simple assistance.

One of the challenges that providers were presenting as a reason for their refusal to practice this position was the risk of falling for the baby. But after the trainings and mentoring, this fear has been overcome.

“We use it in the second stage of labor. The baby doesn’t drop; we are ready and will see it. Even there is no vaginal tear when we use this position; we observe and support the mothers up to delivery. While using this position when the child starts to come out of the uterus, I tell my assistant to let the laboring mother to lay in the lithotomy position.”

Health professionals from catchment Alamura health center also confirmed that they use a squatting position to shorten the second stage of labour. Moreover, they said that this position reduced neonatal referral cases due to asphyxia.

Although introduction of this approach had its own challenges, the mentors from the hospitals who were trained to do mentoring were capable of persuading the health center staff to start the new position. According to the respondents from health center, the knowledge and skills they acquired from the mentorship program particularly the use of squatting position has helped them in reducing cases referred to NICU due to the decreased number of asphyxiated neonates.

Effects on Quality of Care?

With the intention of identifying any improvements in quality of care and the processes which contributed to the improvement, HC staff were given specific questions on the role the mentorship has played. The quantitative finding also confirmed that there is a significant improvement in practice and knowledge. There was also an observable reduction in the occurrence of some birth complications. For instance, birth asphyxia was reduced by 27.3% after mentorship program as compared to before implementation of the program as seen on figure 8 below. The other improvement in Welqayit hospital is reduced referral and increased management of cases. The referral for obstetric hemorrhage reduced from 66.7% to 14%. Management of birth asphyxia also improved very much after the mentorship program as shown in the following figure.

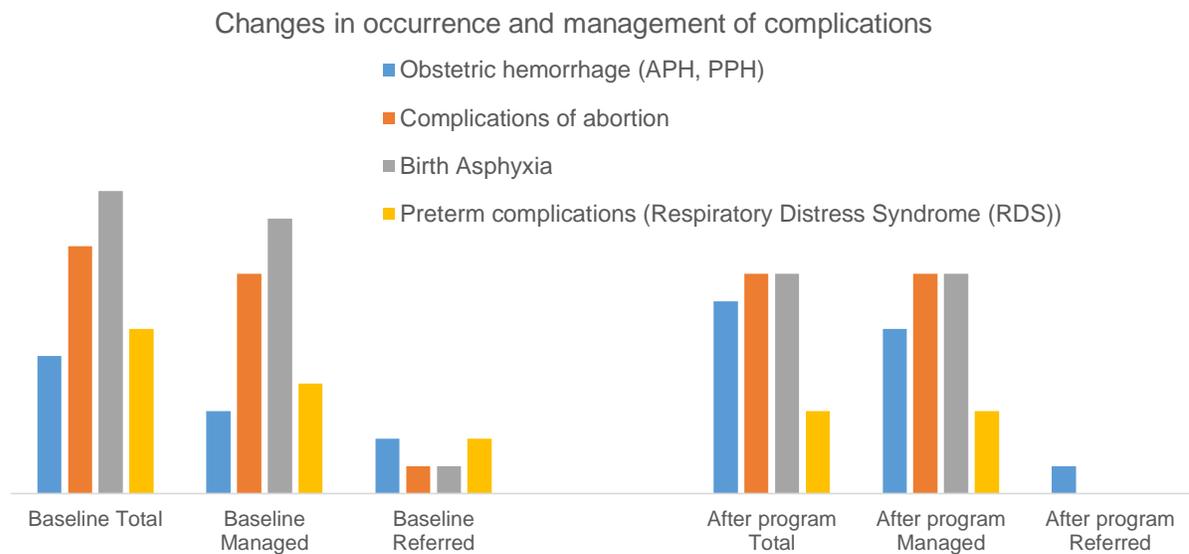


Figure 14: changes in occurrence of complications

Previously the midwives do resuscitation of neonates within as long as 20 minutes after delivery, but after the mentorship program that time was shortened to a maximum of 10 minutes. Currently they are practicing resuscitation of neonates within 10 minutes after delivery.

As seen on the reports from both hospital and catchment health centers, there were delays in decision making for referral and intervention before the mentorship program. The mentorship program enabled the facilities to make prompt decisions. They said that she (the mentor)

increased their alertness. She affirmed the need for alertness by creating the sense of urgency by transferring the knowledge about IUFD, using the following statement:

The behavior of responding to emergencies quickly could save lives. In this regard, the training has improved the alertness of the providers as described by One of health center staffs said *“The program shaped our behavior to be alert.”*

Moreover, the respondents said that they acquired improved skills on managing different problems like avoiding unnecessary delays to prevent further complications.



Figure 15: Use of anatomical models for demonstration by mentors

According to the respondents, the knowledge and skills they acquired from the mentorship program have helped them reduce cases referred to NICU due to the decreased number of asphyxiated neonates.

Improvement in knowledge and skills of health professionals were translated to practice in provision of service. Particularly the referral for some complications were very high before the mentorship program. For instance, referral for obstetric hemorrhage and hypertensive disorder of pregnancy was 100% before mentorship, however after the program referral for hemorrhage and hypertensive disorders were reduced to 0% and 50% respectively. There was good improvement in management of complications (neonatal as well as maternal) and reduced unnecessary referral. Figure 9 below shows improvement in management of complications.

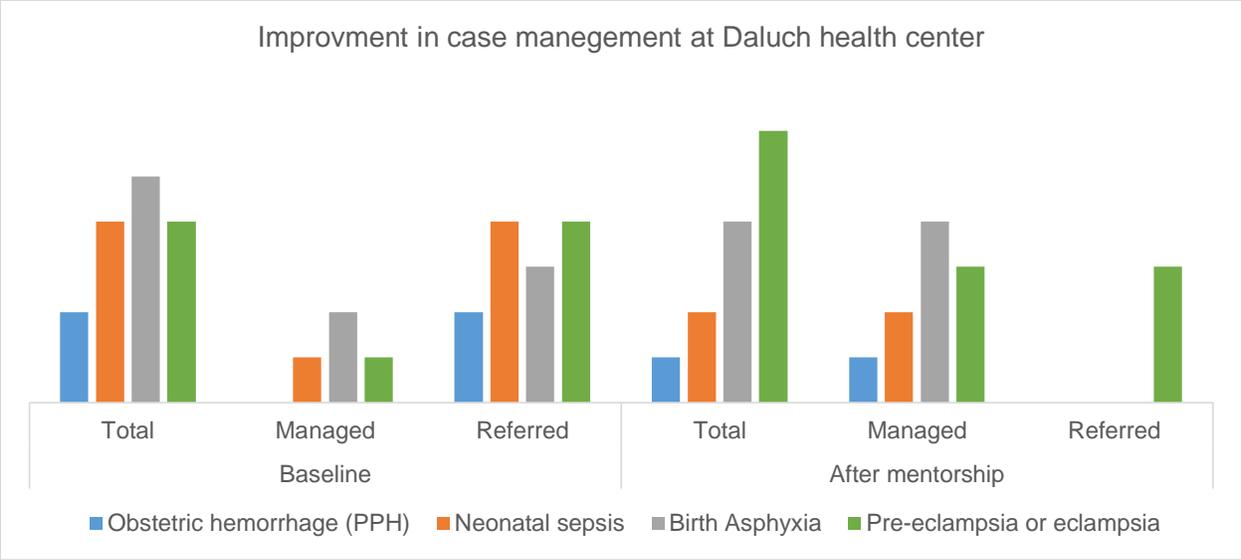


Figure 16: improvements in management of complications

There has been some efforts to determine which out of the mentoring or the knowledge transfer has made the difference. The RHB respondents suggested that *“a combination of both...knowledge transfer followed by actual mentoring and demonstration using skill lab have played a critical role”*

A program manager at the EMwA level, expressed the synergy the three components have played. *“knowledge transfer, paired with skill building using anatomical models followed by mentoring”* makes the difference and makes the mentorship program a success.

Improved Infection prevention practice

Regarding infection prevention, they previously use only three buckets to clean equipment. Currently, because of the input from the mentorship program, two additional buckets called normal saline and high-level bucket are added for equipment cleaning.



Figure 17: Infection Prevention from 3 bucket to 5 bucket



As the report of midwives from the hospital and catchment health centers, they used to conduct PV examination without cleaning the vulva before the mentorship program but now they conduct PV after properly cleaning the vulva.

Sterilization of equipment was also a problem but currently it is solved. They used to sterilize equipment using gas which could result in uncertainty in terms of achieving complete sterilization of the equipment; but now they are currently applying the appropriate procedures.

As per the report of respondents in the hospital, they post a log sheet that shows the time of change for cleaning agents, who changed it, date of change and signature of a person who changed the cleaning agents from the bucket. This helped them to save resources and to follow the principles of decontamination and cleaning for better outcome, by linking accountability with the process. Figure 10 on the right side shows 5 buckets (including the newly added two) and the left side picture shows a reminding paper posted on the wall.

Instrumental delivery: According to the report of the mentor from the hospital sent to the catchment health center, most of the midwives did not know how to use instrumental delivery. For instance, in one health center, the where about of the vacuum was not known let alone toknow and use the instrument. Due to the pressure from the mentor, the health center searched the instrument from the store and used it to mentor

Figure 18: 5 bucket decontamination

vacuum delivery for the center.

“Let me add also one thing about instrumental delivery. Some of the health centers did not know how to use vacuum delivery. I trained them how and when to use it and now they are using it.”

Management of preeclampsia: The other midwife added that she learned a new way of doing episiotomy from the mentor.

The other mentor from hospital said the following,

“In the health center even, they do not know how to secure cannula and loading of MgSO₄. ... I showed them how to load MgSo₄, secure cannula”

Most of the health centers used to send eclamptic mothers to hospital without loading MgSo₄ but now, after the mentorship program, they load before referring those mothers to hospital.

Furthermore, danger signs are posted on the walls using spatula for alert and easy reference.

Partograph Utilization – the qualitative exploration found that use of partograph has shown remarkable improvements, both in terms of its use with every patient and accurate use of the tool to make critical decisions.

In Adare hospital most of the BEmONC signal functions were performed by a team of health professionals. But one of the signal functions which should be done by the midwives is not done by some of them. They were not able to administer parenteral anticonvulsants for pre-eclampsia and eclampsia (e.g. magnesium sulphate). During the baseline assessment, performance of signal

functions was very low in all the catchment health centers. The main reasons cited for not performing the signal functions were lack of training, HR and supply constraints. Moreover, the catchment health centers have the following gaps

- ✓ Poor arrangement of drugs and equipment in delivery room
- ✓ No Vacuum extractor
- ✓ Poor utilization of partograph
- ✓ Drugs and equipment shortages
- ✓ Inability to provide full BEmONC signal functions
- ✓ Poor documentation
- ✓ Poor knowledge and skill of the professional's



To address the main gaps different interventions were done using the mentorship program. The problems were intervened based on the baseline assessment result.

Because the assessment for the mentorship, the key challenges were identified, and solutions were sought. Most of the challenges were addressed by the health center leadership, woreda Health Office and the Ethiopian Midwives Association.

Improvement in communication: The RHB perspectives with regard to the effectiveness of this program focuses on: reduction of unnecessary referrals, successful referrals and change in quality of services. One of the prominent reflections by the RHB respondents is that this program has improved communication between the hospitals and their catchment health centers. Because of the fact that mentors from the hospitals have been supporting them and because they were co-planning, the staff from both sides got the chance to communicate more regularly and this has improved the general communication.

“the primary hospitals and their catchment health centers are communicating better...they are giving feedback to each other and the hospital level mentors are serving as the vectors in this process” RHB representative.

Relevance of the Catchment based Mentorship Program

The Catchment based clinical mentorship implemented by EMwA in collaboration with UNFPA is aligned with the national Catchment based clinical mentorship guideline. The program was designed in such a way that junior health workers, are mentored on RMNCH, and provided on-job training.

“The catchment based clinical mentorship implemented by EMwA in collaboration with UNFPA was aligned with the interest of regional health bureau and Zonal health offices. In addition, the association implemented the mentorship program according to the Memorandum of understanding we signed. We observed the knowledge, skill and attitude gaps among junior midwives who have recently graduated and employed in different health facilities. After Implementation of the catchment-based mentorship program, the KSA of the midwives became improved”. **Zonal MCH Coordinator.**

Overall, MOH, UNFPA and Regional bureaus were the most commonly involved partners in designing the project. Sensitization workshops were organized for zonal and woreda MCH focal persons to have common understanding about what is catchment-based mentorship, what will be done, and what are the expected outcomes. The involvement of zonal, woreda health offices and health facility heads was significant in the project activities including selection of mentors and Mentees and conducting supportive supervision and review meetings. RHBs were heavily involved in the selection of intervention health facilities and also overseen project implementation and took part in supportive supervisions and review meeting.

“We are involved starting from the selection of health facilities in collaboration with regional health bureau to monitoring of the proper implementation of the mentorship activities, part of the supportive supervision team, and review meeting” **Zonal health office**

EMwA works closely with us. We facilitate selection of intervention facilities in collaboration with zonal health offices and they invite us to the mentoring training and integrated supportive

supervision and also during review meetings. **Regional Health Bureau Mentorship Program officer**

The end user beneficiaries of this program are mothers and neonates who obtain quality of MNH services from the health centers where the mentee work. The objective of the project was to improve the quality of care through improving knowledge and skills of health professionals and capacity of the health institutions. After the mentorship was initiated more mothers and newborns were seen and managed by the mentees and un-necessary referrals for several obstetric and newborn services have also decreased since the clinical mentoring initiated. All these are indications that mothers and newborns have benefited from the mentorship program. In addition, majority of the mentees brought changes in the improvement of knowledge and skill and also brought positive changes in their behavior and attitude and has helped them be a compassionate care provider.

“the mentorship program improved the KSA of the providers and which also improved the quality of MCH services. In addition, service utilization was increase because of the client’s satisfaction”
Woreda MCH expert

Is this program Sustainable?

This is a low cost intervention, with focus on improving the knowledge and skills of providers is expected to have a lasting effect on the providers practices. The program has also attracted the attention of the leadership of hospitals. One of the respondents from one of the hospitals said: *“since maternal health is a sensitive area I monitor every details. Everyday I start my job by visiting the MCH area and I ask the attendants on the service quality.”* The mentorship program has made my life easier because the skills that the team acquiring is enabled them to provide better services which is being documented in a better way.

A CEO of one hospital expressed his commitment to ensure sustainability:

“we have seen the difference between mentored and unmentoreed Health centers, so we should support the catchment HCs and we should support also each other among our staffs. We are

maintaining it even after the end of the program. We praised and awarded the mentor who supports the HCs even after the end of the program.”

All the hospital staff need is transportation support to go to the health centers to provide mentoring and some per diem for lodging and incidental expenses; HCs do not need any additional money. All the midwives at the primary hospitals are ready to provide support to the catchment HCs since 80-90% of the public uses the HCs. In an assertive expression, the other CEO said: *“We have seen the advantages, we strive to maintain the mentorship internally and externally.”*

Moreover the hospital has included the mentorship as well as key MCH skills in the supportive supervision checklist for use when the HCs are visited by the wereda and region.

“we believe the government should own the catchment based mentorship program because the program reduce un-necessary referral which lead to a decrease the extra cost the hospital expenced due to un-necessary refrral and also Improve ambulance services. Therefore, our zonal health department will include these mentorship activities in our annual plan to sustain the results” **Zonal MCH Coordinator**

“the woreda health office has owned the mentorship program and has initiatives to scale up to other health centers who are not mented before”. **Woreda MCH expert**

Key challenges:

Selection of mentors: given the fact that the hospital level mentors will be the main doers of the catchment based mentoring, identifying mentors with commitment was a challenge. In some of the facilities, there were few to choose from to begin with. This was resolved by working closely with the hospital leadership to identify the right candidates.

Shortage of Resources: catchment-based mentoring assumes the basic resources required to provide improved maternal care will be available, but in some facilities the basic supplies and equipment for care were not available.

Lack of Commitment: proactive engagement is the mainstay of such initiatives. Lack of commitment at both the hospital and health center level had a detrimental role in some of the facilities. The program used the providers who were engaging proactively to stimulate change and demonstrate the importance of changing practice.

Resistance to change: given the fact that the mentorship program reduces the need to refer, which inherently increase the number of cases to be care for at HC level, there was resistance noticed at HC level. This was resolved by focusing on the favorable outcomes on the mothers and newborns.

Poor exit strategy for external mentors – exit of the external mentors is done with limited attention to what the hospitals should do after the external mentors leave. This has started to cause challenges.

Unsuitability of real patients for mentoring or training – although use of real patients is part of the mentoring, it has its limitation for patient related factors and absence of patients at the time the mentor is at the facility. In the absence of skill labs, this becomes a major challenge. One of the mentors mentioned that:

“It is very difficult to teach neonatal resuscitation on asphyxiated neonate because the case is emergency. So, it very important to prepare skill lab before consideration of use on real patients.”

High Staff Turnover: In the hospital and the catchment health centers there is high turnover of trained professionals. High turnover of midwives is a universal challenge observed in all facilities. Identification and recruitment of new midwives is also a challenge by itself.

Financial constraints: this program was supported by EMwA with funding from UNFPA. The mentors were able to travel because their daily expenses were covered, but because of the limited resources including other relevant members was not possible. Sustaining the program after exit of the external support was also not possible. The regional health bureau respondents claimed that, although the cost-effectiveness of the program is unquestionable, the regional health bureaus reflected shortage of finances have limited their ability to supervise.

Conclusion and key lessons

The implementation of catchment-based mentorship program was successful with some challenges and limitations. The following table summarizes the key components of the mentorship program.

Taking the key parameters of best practices, it is easy to see that this is a best practice that is worth consideration for expansion.

Table 2: Key interventions vis a vi the parameters of best practices

Intervention	Parameter					Remarks
	Sustainability	Effectiveness	Relevance	Impact	Efficiency	
Hire and deploy external mentor	*	√	√	√	√	*although not expensive, it requires additional budget
Understanding the needs of the facility	√	√	√	√	√	Enables to identify gaps
Joint planning to resolve challenges	√	√	√	√	√	
Presentations – training by external mentor	*	√	√	√	√	*unless linked with local universities it will require additional cost
Hands of training – patients	√	√	√	√	*	*skill lab is more amenable
Skill building using skill lab	√	√	√	√	√	A central location which can be used by multiple facilities is a possibility

Hospital to HC mentoring	√	√	√	√	*	It requires cost
--------------------------	---	---	---	---	---	------------------

Lessons Learnt:

Orderly introduction: the catchment-based mentoring was introduced by starting from identifying external mentors with good knowledge and exposure to the primary hospitals. They were then given the opportunity to integrate themselves and to identify the key gaps in knowledge, skills and processes.

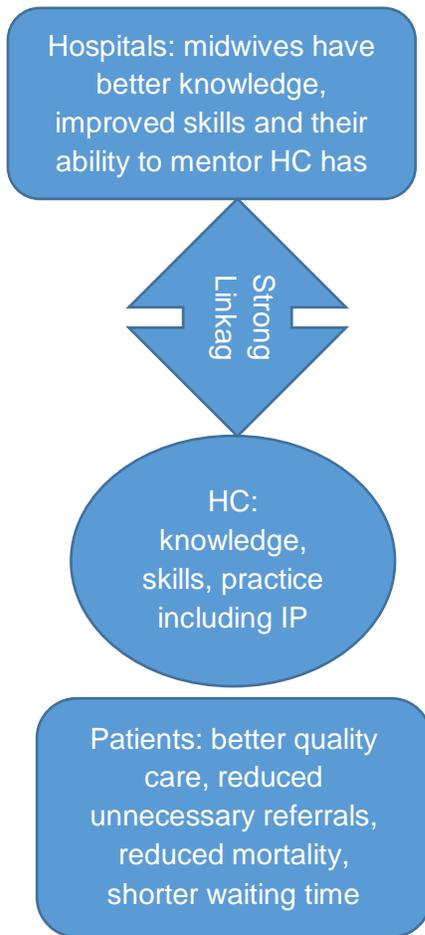
Preparation of site-specific plans targeting the identified gaps, which involved the hospital leadership and the HC when it was taken down to the HC made implementation easy.

Revitalizing the existing linkage: although the hospitals are theoretically supposed to work with their catchment health centers, there was no mechanism meaningful engagement. The mentorship program has served as platform which revitalized the linkage. This in turn has improved communication between the facilities, hence referrals are made with adequate preparation. The spillover effect of this approach is that the health centers and the hospitals have

Identification of gaps and preparing customized plan: the fact that the mentorship program started with identification of gaps has enabled the mentors to identify the aspects which can be addressed through trainings. Other aspects were also identified and the hospital leadership was assisted because the gaps which can't be fixed by providing trainings and mentoring were referred to them.

Focus on Trainings and capacity building: as a major gap that prevails across the health sector, focusing on improving knowledge and skill building proved to be a rationale decision. This is more justifiable when it comes to the lower level health facilities where providers have lower level of knowledge. The knowledge and skills of providers at health center level have improved significantly.

Innovations and new approaches: the providers have been given the chance to learn from others and to propose options to solve site-specific challenges and this has stimulated innovations/introduction of new approaches and ownership.



The catchment-based mentoring has brought significant changes at both the hospital and health center level. changes at the primary hospital and catchment health centers. The mentorship improved the knowledge and skill of the mentees (at Hospital as well as health center level) and a significant improvement in quality of service has been witnessed which in turn increased utilization of the service in the last six months. Moreover, the program contributed for the new initiatives of using and rearranging the existing skill labs and using simple mechanisms to boost maternal service utilization. It also gave new insight and integration of postpartum family planning service utilization. Occurrence of neonatal mortality and stillbirth have shown remarkable reduction.

Thus, strengthening this mentorship program in a more organized and scientific way will have a huge contribution to improve maternal and child health of our community.

The linkage between HC and Hospitals was strengthened to an extent that regular follow up to assess the status of patients referred was possible through telephone calls.

Key consideration in the implementation of the Catchment-based mentoring:

Ensure ownership at all levels: the FMOH, the regional health bureaus, Zonal health desks and WoHO should all be involved from the very beginning to ensure ownership. Without the complete buy-in from these key stakeholders' program success is remote. Their engagement should be as early as possible and should focus on creating clarity and should avoid imposition of choices by the partner.

Understanding the starting point: conducting the baseline assessment and using the findings as reference and also for planning where all concerned bodies are involved in pivotal.

Focus on HC level mentoring: this is cost effective and prevents unnecessary service interruptions. Unnecessary referrals are also prevented.

Selection of sites: although sticking to the notion of supporting the rural health centers should be maintained, it is recommended that focusing on those which are remote and relatively new is critical.

Preparation: preparation should include identification of external mentors, making sure all materials are ready and all linkages are made. The health centers should be notified in advance and their consent should be secured.

Baseline status should be determined as part of the preparation.

Implementation: the implementation of the program should start from a joint planning based on the baseline findings. A detailed action plan should be developed and should be executed. A communication mechanism between the hospital and the catchment health centers plays a pivotal role.

Objective documentation of what has been done should be integrated. Allowing innovative approaches should also be a mainstay, while making sure there are no deviations from the standard practice.

Exit Strategy: exit for both the external mentors as well as the program through graduation of the facilities should be considered.

Integration: since targeting separate programs separately is challenging; consideration of integration of the different programs is of paramount importance.

Use of local colleges/Universities for skill lab: although the best option for the facilities may be ensuring availability of skill labs, it is also critical to consider use of the skills labs in nearby universities/colleges.

Focus on refresher trainings and CME: currently providers have very limited opportunities to develop their professional skills. There are no structured CMEs that allow providers at HC and primary hospital level to grow their skills and to update their knowledge. It is highly recommended that platforms for CME for HC and primary hospital staff be started.