Quality, Equity, Dignity

A Network for Improving Quality of Care
for Maternal, Newborn and Child Health

Demonstrating accountability and learning from implementation

2nd Meeting of the Network for Improving Quality of Care for Maternal, Newborn and Child Health

12-14 March 2019, Addis Ababa

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Federal Democratic Republic of Ethiopia
Ministry of Health

unicef

World Health Organization

Acknowledgement:

The Federal ministry of health would like to acknowledge the crucial role of experts and technical assistants from the Health service quality directorates and MNHQOC TWG members in organizing the second meeting of the Network for improving quality of care for Maternal Newborn and Child Health (QoC Network) and finalizing this bulletin. Special thanks go to the core teams who have invested their full effort in guiding the team in achieving the goal.

The federal ministry of health would also extend special gratitude to the World Health Organization for their leading role in the initiation and coordination of the QoC Network envisioned with halving the preventable maternal and neonatal deaths and improving experience of care in ten pathfinder participating countries. Moreover, for the commitment and engagement showed to collaborative learning of the multi-diverse and scope experiences throughout the path in achieving the targets sets.

Lastly, the Federal Ministry of Health would like to express its appreciation to all partners involved and provide their invaluable support in strengthening the collaborative learning system.

Dr Hilina Tadesse Tiyo

Director, Health Service Quality Directorate
Federal Ministry of Health of Ethiopia

Message from the Director General:

In Ethiopia , Since the launch of the Health Sector Development Program (HSDP) in the 1990s, there have been significant achievements in improving health outcomes for the population, such as the reduction of child deaths by more than two-thirds over the past twenty years to meet Millennium Development Goal Four (MGD 4)

Despite all the achievements registered so far at all levels, there are persistent challenges hammering the health system such as shortage of skilled manpower, shortage of medical equipment and supplies inadequate utilization of health institutions for delivery attended by skilled personnel ; non-dignified maternity care; poor data quality including maternal health services; presence of regional disparities in the performance of maternal health care; poor quality of care along the continuum of care resulted in significant cascade loss of women attending maternity care.

In recognition of this, the National health sector transformation plan (HSTP) 2016-2020, in line with the country second growth and transformation plan (GTPII), has set ambitious goals to improve equity, coverage and utilization of essential health services; improve quality of health care; and enhance the implementation capacity of the health sector at all levels of the system.

Aligned with the National Health sector transformation plan and Ministry of Health's targets for equitable and quality health care service for all Ethiopians by the year 2020, the MOH has developed the health sector quality strategy (HSQS) for 2016-2020. The health sector quality strategy aims to consistently improve the outcomes of clinical care, patient safety, and patient-centeredness, while increasing access and equity for all segments of the Ethiopian population, by 2020.

Since 2012, learning collaborative has been the fundamental approach of Ethiopia's experience in implementing quality. This was materialized through the Ethiopian Hospital Alliance for Quality (EHAQ) platform. EHAQ is a model of quality collaborative where hospitals form a network for systematic sharing of information, actively support each other in the replication of best practices, learn from alliance successes and establish a system of accountability in hospital services. Strengthening collaborative learning system in the districts, replicating the best experiences, documenting the lessons learned for experience sharing, emphasizing for quality improvement project documentation and publication will be given due attentions in the years to come while capitalizing lessons from the past.

The Network to Improve Quality of Care for Mothers, Newborns and Children comes at a very important time in the country's effort to advance one of the health sector's transformation agendas, "transformation of quality and equity of health care" with the ambitious goal to **halve maternal and newborn deaths and stillbirths in health facilities by 2022.** Ethiopia is one of the ten countries leading the Quality of Care Network, launched in 2017, with the support from the World Health Organization (WHO), UNICEF and UNFPA, and other key partners. Using this opportunity, Ethiopia has developed the national Maternal and Newborn Health Quality of Care road map 2017/18-2019/20, to be implemented in selected 15 learning district. Taking collaborative learning system as at its center and contextualized it to district level. .

Hence, as a host country of 2nd Global meeting of Network for Improving Quality of Care for Maternal, Newborn and Child Health organized with a theme "*Demonstrating accountability and learning from implementation",* the Federal Ministry of Health has compiled few quality improvement practices as

part of the learning system and experience sharing on quality improvement in the area of maternal and newborn health.

I believe this global summit as well as this Bulletin will highlight the quality improvement activities being implemented throughout the countries under WHO-QED networks.

Yakob Seman Ahmed

Director General, Medical Services General Directorate
Federal Ministry of Health of Ethiopia

Message from the Secretariat of the Network to improve quality of care for maternal newborn and child health:

In February 2017, governments of ten pathfinder countries: Bangladesh, Ethiopia, Côte d'Ivoire, Ghana, India, Malawi, Nigeria, Tanzania, Uganda, and Sierra Leone, established the Network for improving quality of care for maternal, newborn and child health (the Network). Inspired by the joint values of quality, equity and dignity, and in accordance with the principles of coordination and harmonization, countries and partners in the Network committed to halving the number of maternal and newborn deaths and stillbirths in participating health facilities by 2022 and to improve the experience of care. Together, they agreed to achieve these goals by pursuing the four strategic objectives:

- **Leadership**: Build and strengthen national institutions and mechanisms for improving quality of care in the health sector.
- **Action**: Accelerate and sustain implementation of quality of care improvements for mothers and newborns.
- **Learning**: Facilitate learning, share knowledge and generate evidence on quality of care.
- **Accountability**: Develop, strengthen and sustain institutions and mechanisms for accountability for quality of care.

Under the leadership of Ministries of Health and with the support of a broad coalition of partners together with WHO, UNICEF and UNFPA, all countries in the Network have made important progress in their agenda to institutionalize quality of care in the health sector. Examples include enhancement of national policy and the strategic environment for quality of care, strengthening or establishment of structures and systems to facilitate implementation, and improvements in clinical practices and health outcomes.

A culture of continual learning is at the core of implementation, and Network is developing new ways of working that proactively use learning health systems to sharpen and contextualize responses to improve quality and health outcomes. This Bulletin witnesses the use of systems thinking and learning to support scaling up quality of care for maternal, newborn and child health programmes. It demonstrates how the Federal Ministry of Health, Ethiopia and its partners, have succeeded not only in developing policies and supporting structures for implementing quality of care at all levels, but also how they are building an enabling environment that uses learning health care system as a process for sustaining and scaling up improvements.

The Network is privileged to be part of this exciting journey and will continue to provide a platform to the pathfinder countries that are leading the implementation of high quality Universal Health Coverage towards achievement of the SDGs.

Dr Anshu Banerjee

Director
Department of Maternal Newborn Child and Adolescent Health
World Health Organization Geneva

Background and Introduction:

Demonstrating accountability and learning from implementation - 2nd meeting of the Quality of Care Network

When launching the Quality of Care Network in February 2017, the country's leading it - Bangladesh, Ethiopia, Côte d'Ivoire, Ghana, India, Malawi, Nigeria, Tanzania and Uganda, joined in 2018 by Sierra Leone - committed to halving the number of maternal and newborn deaths and stillbirths in participating health facilities by 2022 and to improve the experience of care. Under the leadership of their Ministries of Health, with the support of a broad coalition of partners and of WHO, UNICEF and UNFPA, the Quality of Care Network supports the implementation of national strategies for quality of care in the health sector by using maternal, newborn and child health as a pathfinder.

Two years on, these countries are coming together to take stock and discuss what it takes to implement quality of care improvement - what systems need to be in place to support this implementation, the challenges in improving quality of care for women and children at national, district, and facility levels and the lessons learnt from implementation in designated learning sites. One strong message that is emerging is that sustained quality of care requires changes at all level of the health system, facilitated by: on-site support for quality improvement in facilities, data system to report on process and patient outcomes, learning system for solution seeking, community engagement to respond to needs, and agile management system to respond to continuous changes to sustain improvements.

Each country in the Quality of Care Network will share their data and leaning from the first phase of implementation. Participants will attend skill-building labs on topics including, among others, community engagement, advocacy for quality of care, or the links between Water, Sanitation and Hygiene (WASH) and quality of care. Inovation labs, led by organizations that are developing and implementing innovative solutions to improve the quality of maternal and newborn health, will give participants the opportunity to discuss the relevance and feasibility of these solutions in their context.

As part of the learning and experience sharing, this bulletin is developed to highlight some of the activities being done on improving quality of care in Ethiopia. The quality directorate of the Federal Ministry of Health has gone multiple steps and come up with these selected abstracts of the quality improvement.

LIST OF ABSTRACTS:

ABSTRACTS:

1. Improving Early Antenatal Service in Teferi Kella Health Center, Dara Woreda, Sidama Zone, SNNP region

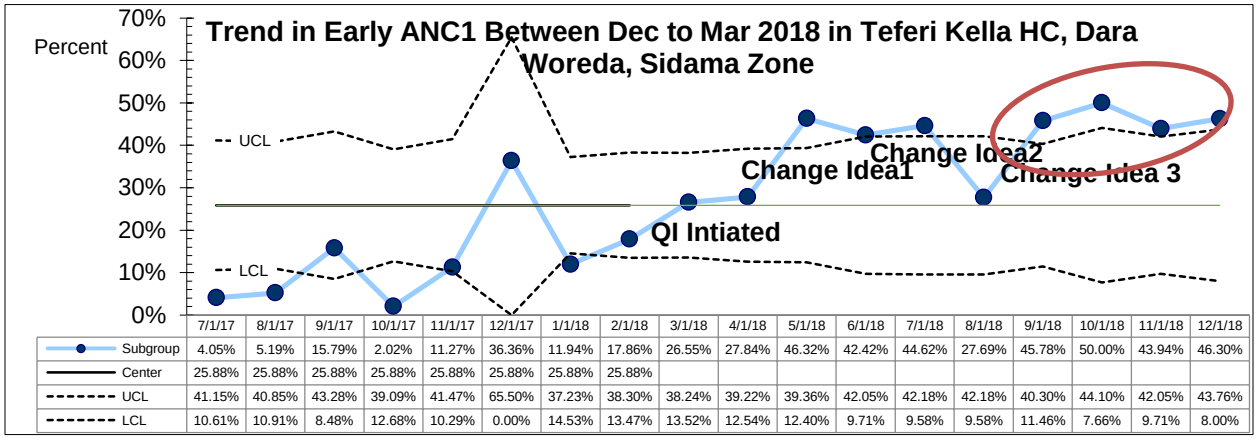
Authors: Birhanue Bekele, Mesfin Bonsa, Henok Shune
Authors Affiliation: USAID Transform: Primary Health Care Project, Teferi Kella Health center, SIdama Zone, SNNPR

Introduction: Dara District is one of QED (Quality, Equity and Dignity) maternal and newborn health (MNH) learning districts in Sidama Zone. With a population of 207393, the woreda has 1 primary hospital, 6 health centers (HCs) and 34 health posts (HPs). Teferi kela HC, a QED MNH learning HC in the woreda, has six satellite health posts serving 46,774 population. Annual pregnant mothers' population of the catchment area is estimated at 1,618.

Skilled care during pregnancy, childbirth, and the postpartum period are important interventions in reducing maternal and neonatal morbidity and mortality. According to 2016 Ethiopia Demographic and Health Survey, only 20% of women had their first ANC during the first trimester, 26% in their fourth to fifth month of pregnancy, 14% in sixth to seventh month of pregnancy and 2% of women did not receive any ANC until the eight month of pregnancy or later. Similarly, in Teferi Kella Health Center (HC) early first ANC (<16 weeks gestational age) in the last 8-months was only 27%. To address this challenge, the quality improvement (QI) team has developed a QI project to improve early first ANC.

Implementation of the QI project: USAID Transform: Primary Health Care project supported the HC on introduction of a quality improvement initiative. The project supported the HC to establish quality improvement team (QIT). The QIT identified this gap and developed an action plan. The project provided basic quality improvement training to the QIT during which the team developed QI project aiming to improving early ANC visit.

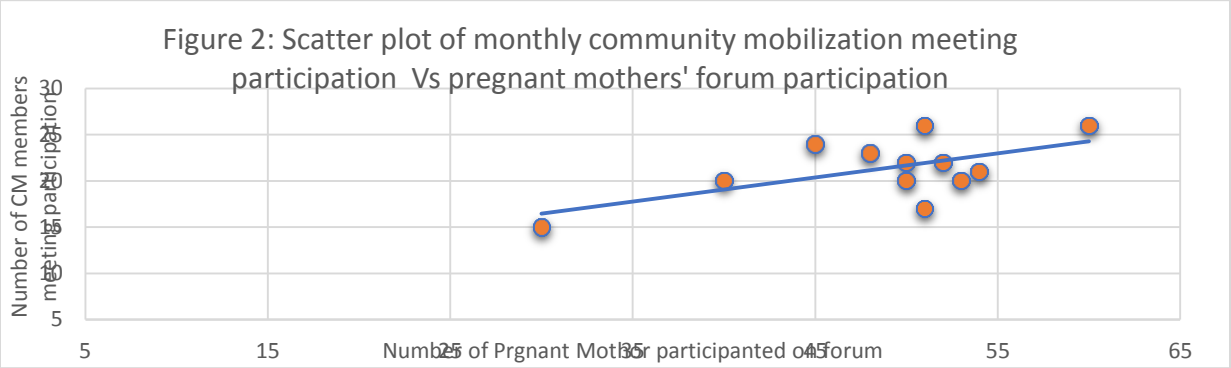
Community mobilization was one of the change ideas identified by the team. Accordingly, community mobilizers were selected, oriented and community mobilization committee was established in selected health posts. The team developed an action plan on how to identify pregnant mothers and link them to monthly pregnant mothers' forum thereby linking them to health facilities. The community mobilization team members were expected to attend monthly team meeting at the health post to improve early identification pregnant women and pregnant women forum attendance at their kebele.



	7/1/17	8/1/17	9/1/17	10/1/17	11/1/17	12/1/17	1/1/18	2/1/18	3/1/18	4/1/18	5/1/18	6/1/18	7/1/18	8/1/18	9/1/18	10/1/18	11/1/18	12/1/18
Subgroup	4.05%	5.19%	15.79%	2.02%	11.27%	36.36%	11.94%	17.86%	26.55%	27.84%	46.32%	42.42%	44.62%	27.69%	45.78%	50.00%	43.94%	46.30%
Center	25.88%	25.88%	25.88%	25.88%	25.88%	25.88%	25.88%	25.88%										
UCL	41.15%	40.85%	43.28%	39.09%	41.47%	65.50%	37.23%	38.30%	38.24%	39.22%	39.36%	42.05%	42.18%	42.18%	40.30%	44.10%	42.05%	43.76%
LCL	10.61%	10.91%	8.48%	12.68%	10.29%	0.00%	14.53%	13.47%	13.52%	12.54%	12.40%	9.71%	9.58%	9.58%	11.46%	7.66%	9.71%	8.00%

Fig. 1: chart indicating improvement in early initiation of ANC, following the introduction of the QI project from 27% to 59% between March – December 2018

In the above data over time, chart there is more than a single data points out side upper control limit which shows that the QI project has brought an improvement which is not happened due to by chance.



Lessons learnt: Community engagement in quality improvement activities is crucial for facility level QI intervention. Strong leadership at community level is a facilitating factor for community engagement for QI activities.

Conclusion: Engaging the community in facility level QI project design stage is highly recommended to insure community level intervention. Using community leaders as a member of health facility QIT activity has indispensable contribution for facility level QI intervention.

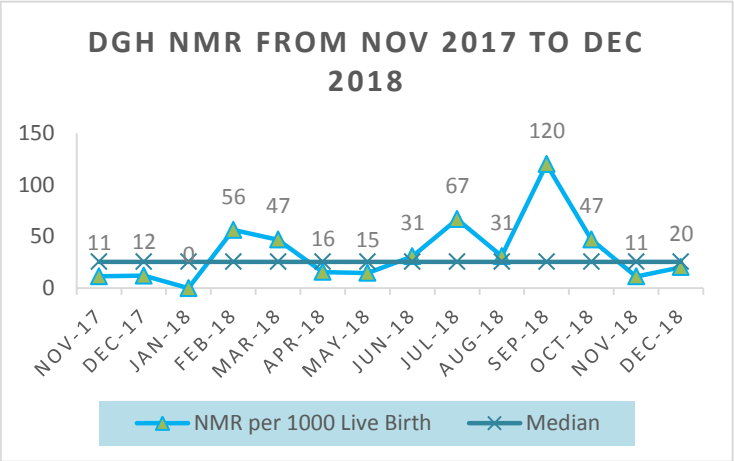
2. Reduction of neonatal death through quality improvement intervention in general hospitals of developing regions of Ethiopia

Author: Aklilu Yeshitila,
Authors Affiliation: USAID Transform: Health In developing Regions

Introduction: Despite the vast improvements in child health (especially under five children), the mortality rate in the first month of life remains unchanged.
USAID-supported Transform: Health in Developing Regions (T-HDR) project, led by AMREF, is working with the FMOH to drive large-scale improvements in MNCH/FP service. IntraHealth International, a T-HDR partner, led the overall quality improvement and assurance initiatives in the health care system. The project supported health providers in 58 public health facilities (delivering 20,880+ babies per year) across four developing regions to use quality improvement approaches to provide better care to babies in the continuum of care. Data collected from the ward's registration book of NICU at Dupty General Hospital (DGH) showed that NMR has increased to 120 per 1000 live birth in Sep 2018. By using pareto chart, the QIT identified neonatal sepsis, birth asphyxia and prematurity as leading causes of death in the hospitals. This evidence showed that the facility has low rates of asphyxia, neonatal sepsis and prematurity management which indicate the facility has poor quality of care. Therefore, QIT agreed to have urgent approaches which can support providers to deliver better care.

Objective: The QI project was aiming to reduce the neonatal death rate from 120 to 28 per 1000 live births by the end of Dec 2018 in DGH. Through root cause analysis, QIT develop a change idea of providing onsite coaching to health workers for standardizing the NICU.

Implementation of the project: USAID T-HDR project had given training to health workers on QI approach and NICU using standard guideline of FMOH/WHO. The hospital assigned these trained health workers (HWs) at NICU to overcome the shortage human power for neonatal care. Every two weeks, HWs of DGH recorded data related to routine care alongside data on neonatal death. For three consecutive months onsite coaching to HWs was given by assigned mentors and they spent in the facility for a week in each month. They focus on neonatal case management including Newborn resuscitation, respiratory care, nutrition care and early detection and treatment of common complication. A total of 595 babies were delivered in the hospital after the project started.



Result of the project: NICU was reestablished for giving standard care and competent health workers number increased through onsite mentoring. At NICU 196 sick neonates received care using the treatment protocol. As result, it was possible to reduce the neonatal death rate from 120 to 20 per 1000 total births from Oct to Dec 2018.

Lessons Learnt: Expense required for HWs training reduced due to onsite support given, and communication between care teams (perinatal, L&D and NICU) were facilitated the smooth hand-off of patients.
Conclusion: the QIT adopted the intervention to institutionalized, and the practices have since become standard of care in project facilities.

3. Quality Improvement Project to reduce stillbirth in Wacha Primary Hospital

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Authors Affiliation: [1]Wacha Melas Primery Hospital, [2]Institute for Health care improvement

Introduction: Wacha primary hospital is located in Southern Nation Nationalities and Peoples' Region (SNNPR), Keffa zone, Chena woreda about 513 km South of the capital, Addis Ababa. There are six health centers under the catchment of the hospital.

Perinatal death including still birth is a major challenge in Sub-Saharan African countries where a mother has a 24 times higher chance of having a stillbirth. i In Ethiopia, the rate of stillbirth is estimated as 30/1000 births in 2015 where 258 stillbirths occur each day.ii

Our hospital suffered from this problem, where we had 30 stillbirths in two years; out of these, 93% were referred cases from the health centers where only 10% had a positive fetal heart beat on arrival.

Designed Intervention: We designed a quality improvement (QI) project to decrease the stillbirth in our hospital by half by the end of January 2019.

For this, we tested a number of change ideas including:

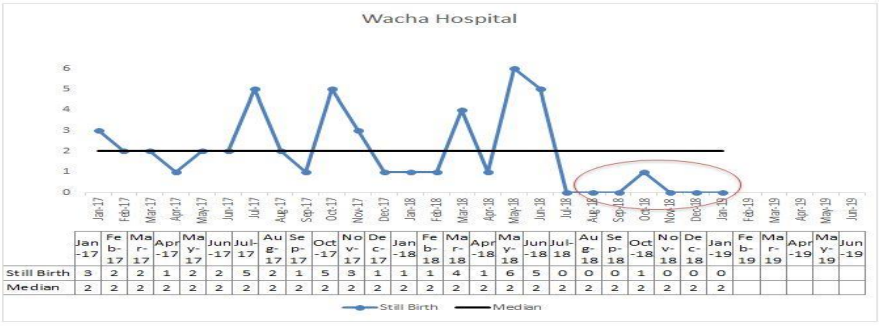
Clinical mentorship: As the root cause of the stillbirth is late referral, a multi-disciplinary team provided clinical mentorship to the catchment health centers. A three-person team was deployed to each health center consisting of Dr. Biniam (MD, QI head), Mr. Abate (Integrated Emergency Surgical Officer) and Eng. Wondwosen (Biomedical Engineer).

The mentorship visit started on Aug 18, 2018; the team stayed with the health center staff for a whole day and all the health centers were visited within the same week. Subsequent visits happened every three weeks. During the visit, we gave on-site refresher training on obstetrical emergencies such as PPH, on how to apply vacuum, importance of early referral, preparation and administration of drugs e.g. MGSO4.

Our BME did preventative and corrective maintenance for medical equipment. A total of 34 equipment were maintained in the health centers including blood pressure apparatus, fridge, suction machine, vacuum, patient bed, stoves and delivery lights.

Pantograph auditing: The other identified cause of the high stillbirth was poor monitoring of the progress of labor, which led to failure to detect fetal distress early. Using the WHO guideline, we audited our charts which showed the quality of partograph use in our hospital was at 70% and no record of stillbirth was found in the patient folders. Hence, we prepared a stillbirth checklist that will be attached to each patient folder with stillbirth.

Result: The QI project was implemented for the last five months. We only had a single stillbirth at our hospital during this time. The below Run chart shows a shift confirming the improvement.



	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
Still Birth	3	2	2	1	2	2	5	2	1	5	3	1	1	1	4	1	6	5	0	0	0	1	0	0	0					
Median	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					

Fig 2: run chart of still birth in WPH from Jan 17, 2018 –Jan 19 2019 GC

Lesson learnt: The identification of the root cause of the problem helped us in addressing the right challenge with the appropriate change ideas. By identifying the major gaps and developing appropriate change ideas or interventions, it is possible to improve healthcare even in settings with limited resource.

4. Improving the care provision before referral for emergency obstetric case by catchment Health Centers, Deder General Hospital, Oromia Region

Authors: Endalkachew M. [1] Fitsume K. 2 Omer H[4]. Eyob A[4], Azmach H.[3] Fitalew D. [2]
Authors Affiliation: [1] Deder General Hospital, Deder, Oromia, Ethiopia. [2] Federal Ministry of Health , Health Service Quality Directorate , Addis Ababa, Ethiopia. [3] Maternal Health Coordinator at World Health Organization, Addis Ababa Ethiopia, [4]World Health Organization Oromia Ethiopia.

Problem: In 2009 EFY, a women who delivered her 4th baby was referred from a health center to Deder General Hospital because of post partum hemorrhage (PPH). On arrival at the hospital she was unconscious with an unmeasurable blood pressure (BP). She had no intravenous (IV) access and was not escorted by health care provider. Resuscitation at the hospital was unsuccessful and she died within 30 minutes of arrival.

The Hospital Maternal Death Surveillance and Response review committee reviewed the case and identified a lack of basic emergency care before and during referral. To further understand the problem, the committee reviewed records of 85 women referred from 17 health centers from the previous five months. They found that only 25% were provided with basic care before and during referral. Common problems identified included: poor documentation of vital signs, failures to establish IV access, and a lack of drug treatment as indicated e.g. oxytocin for hemorrhage, antibiotic for sepsis. The committee therefore aimed to improve basic care service before referral for obstetric cases from catchment health centers.

Interventions:
Regular referral audits of obstetric cases made, Orientation to hospital maternity on obstetric referral system provided. A separate referral registration form developed to capture all information of the referred women and referring facility to be registered, telephone communication before referral, feedback after receiving the case. similarly the feedback form was adapted include those elements. Data entered on weekly bases on the selected measurement using the excel sheet that can be displayed on the run chart on monthly bases

Result: A quantitative data analysis of a total of 211 obstetric referrals was monitored over 12 months and the data were displayed on run chart on monthly bases for selected core outcome measurement. The proportion of obstetric cases given basic care (Properly managed before referral) at health centers before referral has increased from 25% to 74 %over 10 months (Fig 1.) Proportion of appropriate referral case has been improved form its baseline median 47% to 65 % (Fig 2.)

Figure 1: Proportion of Obstetric cases referred after basic emergency care given at Health Centers

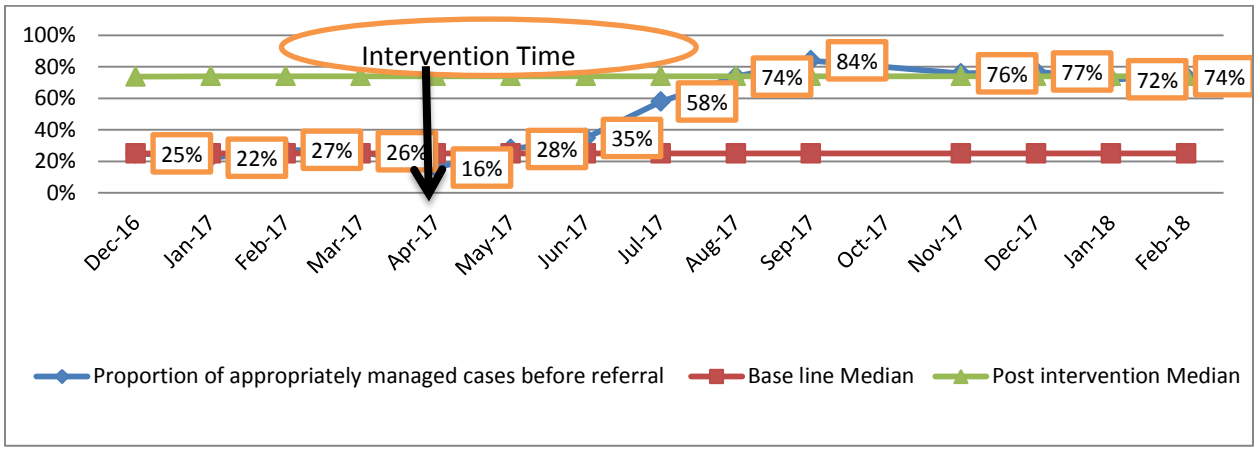
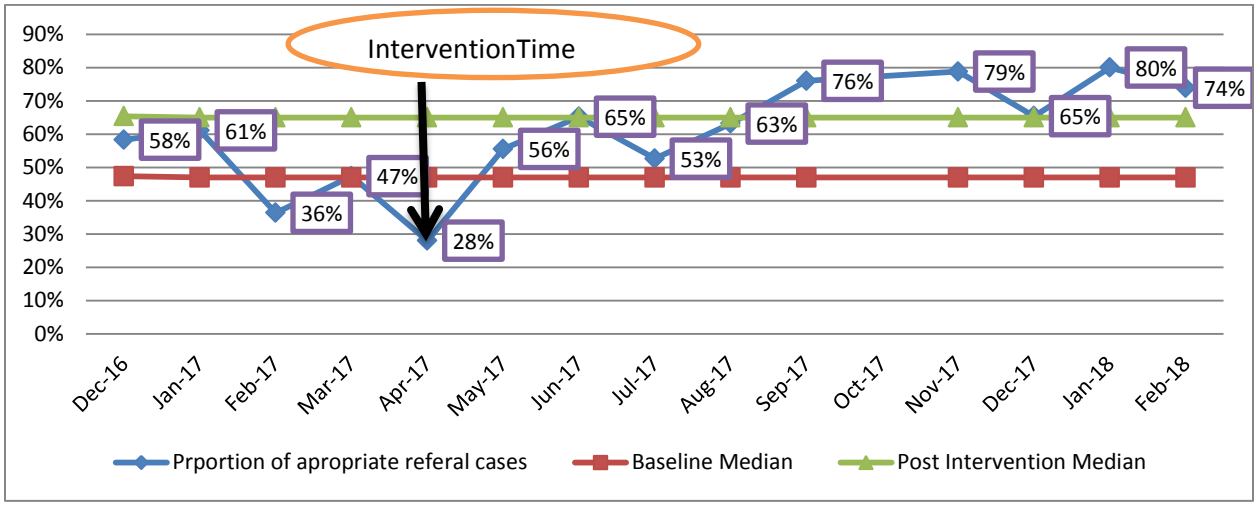


Figure 2. Run chart for proportion of appropriate referral cases



Lessons Learnt: Proper implementation of referral audits for obstetric referral system (proper management before referral of obstetric cases, referring cases that needs to be referred, and regular case based feedback mechanism, and communication before referral by the referring facilities) showed improvement with a simple, locally acceptable and efficient means. Strengthening the MDSR system not only helps in responding to the identified gaps found for a single maternal death but also help in identifying the system gap and respond accordingly. Working in collaboration with and providing support to the catchment health centers by primary Hospitals can improve effective communication which is one of the quality standards for a better outcome of maternal and newborn health.

Limitation: In implementing the project, the team at Hospital developed a separate registration where all obstetric referral registered. Having separate registration add additional burden on the health workers and filling this registration depend on the willingness of the staffs working the Hospital. Moreover, the registration template is modified to capture the name and telephone number of the referring health care provider. This might raise the issue of confidentiality by the referring providers.

Keywords: Appropriate referral, Basic emergency care

5. Increasing Antenatal care coverage through community engagement

Author: Befikadu B.[1] Geremew M.[2] and Eyob A. [2]
Authors Affiliation: 1 Institute for Healthcare Improvement, 2 Gumguma health center

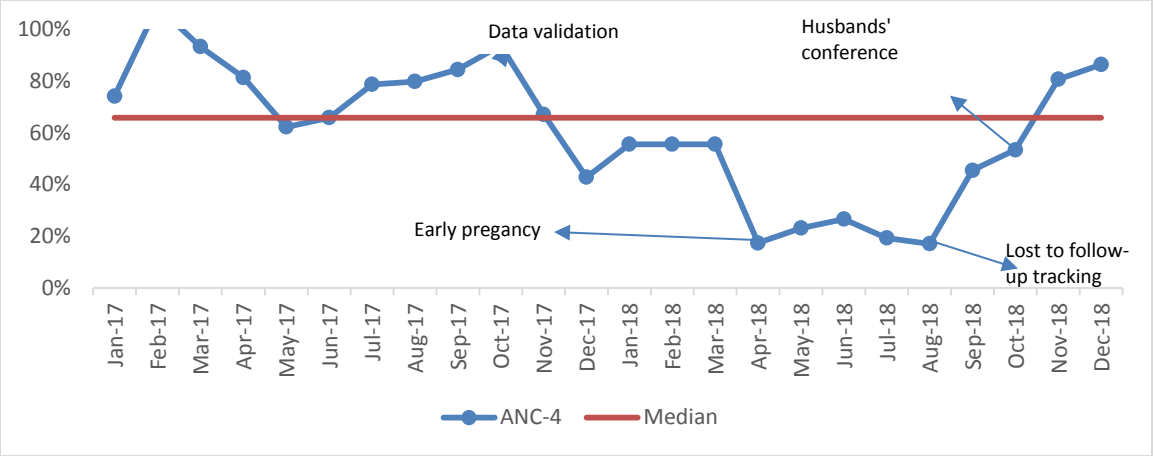
Introduction: Ethiopia has made great stride in increasing the first antenatal care (ANC) coverage to 62% while only half (32%) complete the recommended four or more visits. 1 Munessa district collaborative is one of the 26 district wide collaboratives, aiming to reduce maternal and newborn mortality by 30% over five years. The baseline assessment that was done in March 2018, as initial step for quality improvement (QI), showed lower coverage for the fourth ANC visits. This was especially true after data validation in one of the health facilities in the collaborative, Gumguma Health center. Munessa district is one of the districts in Arsi zone, Oromia region. It is located at the south eastern Ethiopia, 237 km far from the capital Addis, with a total population of 232,184.

Intervention: During the first learning session, in June 2018, the QI team of the health center prioritized to improve the uptake of four or more ANC visits, by December 2018. They used fishbone analysis to understand in-depth the reasons behind the low uptake. The team engaged community representatives during problem identification and analysis. This was supplemented by in-depth interview of ANC-attendees during facility visit and group discussion at pregnant women conference (PWC). The QI team proposed different change ideas to address the identified causes.

Root cause	Tested change ideas
Husbands' disapproval	Conducting husbands' conference
Lack of respectful service or attractive environment	Creating attractive environment at service points, Providing orientation and job aides on respectful communication to midwives
Inconsistency of PWC or unrefined content	Refining the content and communicating key messages using live testimonies by near miss mothers/family members.
Lost-to follow-up ANC attendants were not tracked timely	Use excel generated ANC-PNC monitoring tool
Pregnant women (PW) were not identified early hence, less time to complete the recommended visits	Engaging TBAs, community volunteers and influential community leaders to identify newly PW. Integration of services such as identifying PW during home visits, measles campaign, etc.
Long distance to receive the service on the appointment date	Providing ANC services on market days
No feedback mechanism from the community on the health service	Regular consultative feedback meetings between the facility and community leaders.

Result: As can be seen in the Run chart 1, the ANC 4 data is rising up as the different change ideas are introduced and tested.

[1] EDHS 2016



Run chart: ANC 4 coverage in Gumguma health center between Jan 2017 and Dec 2018

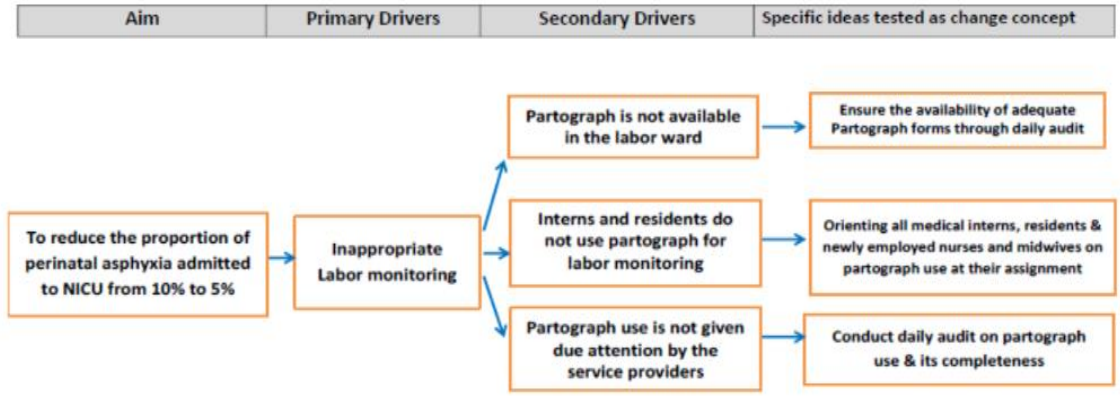
Lessons learnt: The case of Gumguma health center demonstrated importance of engaging community in understanding gaps in health service provision. Much like any other product in the market, demand should drive and inform the supply and quality of health services. If the clients are not satisfied with the services offered, it is them that could accurately describe what is lacking.

6. Reduction of perinatal asphyxia at Jimma Medical Center, Jimma University, Ethiopia

AUTHORS: Demisew Amenu, Gurmesa Tura, Melkamu Berhane, Esayas Kebede, Eyob G/Hawariat, Azmach Hadush, Haimanot A.

Background: Perinatal asphyxia is the major cause of perinatal mortality in Ethiopia and JMC. Appropriate labor monitoring with a standard tool, partograph is important to guide management of laboring mothers to avert this problem.

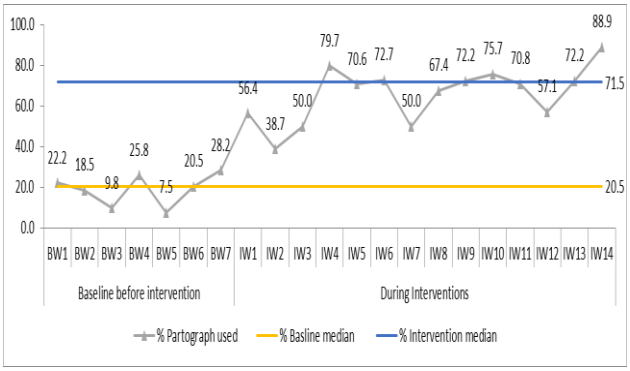
Method: Continuous quality improvement activity was implemented at JMC using model for improvement and PDSA on appropriate use of partograph from May to October 2018. Audit of appropriate use of partograph was made using the prepared checklist daily with feedback. Data on appropriate use of partograph and its effect on reduction of perinatal asphyxia were entered epi-data version 3.1 and exported SPSS for analysis to provide regular feedback. Run chart was used to see the progress of the QI activity.

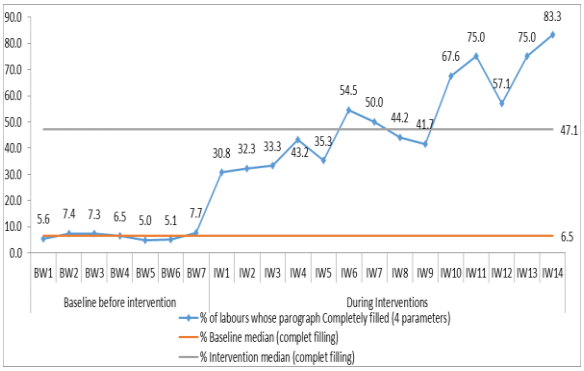


Outcome measure	Output Measurement		Input Measurement
Proportion of LBs with 5th Min APGAR score >7	Proportion of deliveries whose partograph are completely documented (FHR, Cervical dilatation, Uterine contraction & Fetal descent)		Proportion of days in a week with >30 copies of partograph available in labor wards at the beginning of each business day
			Proportion of medical interns and residents or newly employed oriented on the use of partograph at the beginning of their attachment to labor ward.

Interventions: Training was provided for project core team and labor ward staffs on general quality of health care over three days. Quality team was formed in the department and identified QoC gaps and prioritized using prioritization matrix. Aim statement was developed and change ideas were generated for each identified problem. Change ideas were tested, lesson learned were documented.

Result: The proportion of labor monitored by using partograph and the proportion of labors, whose pantographs were filled completely has increased significantly in average from 10.6% to 68.4% ($p<0.001$) and 6.3% to 49.8% ($p<0.001$), respectively. Thus, the outcome indicator, proportion of neonates with 5th Minute APGAR Score <7, had declined significantly from 10.1% to 2.9% in average ($P<0.001$).





Conclusion: Service providers' orientation, daily audit of partograph availability and its proper use, mid-term review meeting and refresher training had increased the proper utilization of partograph from 18.6% to 68.4% between July and Oct 2018. This had resulted in the reduction of birth asphyxia (as measured by 5th minute APGAR score of <7) from 10.1% to 2.9%. This had shown better achievement as compared to the targeted objective of reducing from 10% to 5%.

7. Proper use of partograph and assigning adequate midwives for monitoring and managing the progress of labor to reduce still birth rate: Lesson from the Quality improvement project in Debretabor Hospital

Authors: Amsalu B.1, Eyob G.1 , Yiglet A.2 , Belaynew A.2
Authors Affiliation: World Health Organiztion1, Debre Tabor General Hospital, Debretabor2

Background: This quality improvement project was conducted in Debre Tabor general hospital which is in Debre Tabor town, South Gondar Zone, 100 KM from Bahir Dar town. Debre Tabor general hospital was established in 1923 E.C. The hospital is the only zonal hospital in South Gondar and it is also the cluster leader of Nefas Mewcha, Mekane-eyesus, Dembia and Addis Zemen hospitals. Every year the hospital gives service on average for about 140,000 patients. The average monthly delivery of the hospital is 310 of which 58-60 are C-section.

Problem Statement: An-eight- week baseline data on the assessment of correct use of partograph had showed that 70 % of labor mothers were correctly followed and managed for the labor through proper use of partograph thus the institutional SBR 55 to 56 per 1000 birth attended.

AIM statement: The aim of the QI project was to increase coverage of correct use of Partograph for all eligible laboring mothers from 70 % in January 2018 (Tir 2010 E.C.) to 80 % by the end of March 2018 (Megabit, 2010 E.C.)

METHODS: The QI team selected the change ideas of Mentoring identified health facilities & the hospital for improving health professionals' commitment, Sensitization and awareness creation of HEWs and conducting Maternal Conference for improving awareness of the community, engaging stake holders to avail supplies and reagents, and discussing with stake holders to properly use ambulances for their specific purpose

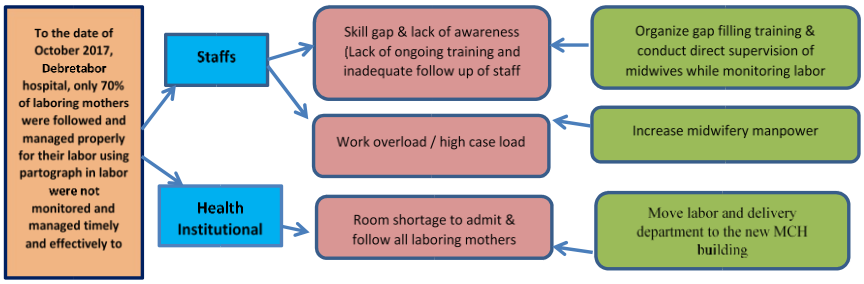
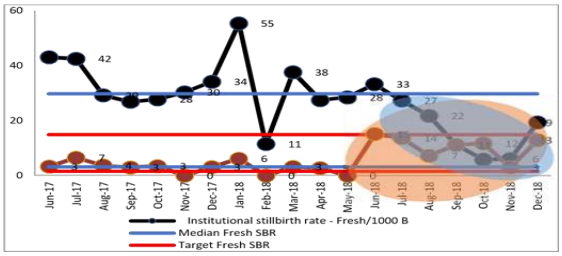


Figure 1: Drivers diagram for change idea/ intervention generation

Result: Coverage of correct use of partograph after the intervention increased from 70 % to 80 % that has been evidenced by six (6) data points above the baseline median. All the data were collected from individual patient charts.



Lesson Learnt: The intervention was found important to improve coverage of correct use of partograph and it was decided to continue it until quality was further maximized to reach at the goal of achieving and sustaining at or above 95 %.

8. Quality improvement initiative brings improvement to postnatal care within 24 hours

Authors: Wondwossen Tebeje, USAID Transform: Primary Health Care project
Authors Affiliation: USAID Transform: Primary Health Care project

Introduction: In Ethiopia, postnatal care is influenced by cultural and religious practices. According to Ethiopia Demographic and Health Survey 2016, 45 to 50 percent of maternal and neonatal deaths occur in the first 24 hours after delivery. A survey among women age 15 to 49 giving birth; only 17% had a postnatal check in the first 2 days after birth while 81 percent didn't receive postnatal care (EDHS 2016). At the start of the project, Sanja Primary Hospital which is found in north Gondar zone, women who delivered at the hospital were only checked for postnatal within six hours after delivery. To address this challenge, the hospital QIT with the support from the USAID Transform: Primary Health Care project have planned to improve postnatal care provision with in 24hours.
Implementation of the project

USAID Transform: Primary Health Care project came to consensus with the hospital QI team on introduction of quality improvement initiative. The project supported the hospital to establish QIT and oriented the team on clinical audit self-assessment tool. The QI team conducted maternal and newborn service standard assessment, identified gaps in MNH QOC in and developed an action plan.

Following gap identification, the project provided basic quality improvement training to the QI team. During the training the team developed QI project to apply continuous QI and address the gaps identified. The QI project aimed to improve postnatal care within 24 hours from 0 percent to 100 percent from December 2017 to June 2018.

Results of the project: Based on the root cause analysis, the team has developed and tested change ideas. The QIT has used repeated PDSA cycles to test the change ideas, during the process PDSA cycles the team has collected and monitored the data on daily and weekly. The result was remarkable and the team has managed to provide postnatal care service within 24 hours for all mothers delivered in the facility by making the service as part of the routine system in the hospital to reduce maternal and neonatal death. More importantly, the hospital was able to sustain the performance.

Lessons Learnt: Using the existing systems and processes; effective support from the hospital's top management; enhancing capacity of the service providers through trainings, coaching and mentoring; close monitoring of measurement were key factors for success.

The initiative helped to develop strong data use culture for continuous quality improvement. The intervention improved not only early postnatal coverage, but also provision of basic components of post-partum care and contributed to reduction of postpartum maternal and newborn complication and morbidity. The hospital was able to transform postnatal care within 24 hours after delivery from zero to hundred percent in four months.

Conclusion: The case of Sanja Primary Hospital is a good example of how the project is impacting quality of care provided by health facilities. The project will scale up of the improvement project in other intervention sites.

9. Bridging the gap through Community Engagement

Authors: Birikty M[1], Kidist M[1], Befikadu B[1], Dereje A[2], Hema M[1]
Authors Affiliation: Institute for Health Care Improvement[1], Oromia Regional Health Bureau, Addis Ababa[2]

Introduction: Understanding what the community wants and adjusting services to meet their needs is vital as we work towards institutionalizing a culture of continuous quality improvement (QI) in the healthcare services. The Institute for Healthcare Improvement (IHI) Ethiopia office collaborates with the Ministry of Health as of 2013 to demonstrate the application and incorporation of QI in the healthcare by focusing on maternal and newborn health as a learning platform. In this initiative, healthcare providers (HCP) are supported to implement locally designed QI projects using the model for improvement. This program began in prototype woredas which has now expanded to additional 21 Test of Scale (ToS) woredas. Given that skilled birth attendance and post-natal care is very low in Ethiopia (28% and 17% respectively[2)], understanding the community's perspective is important in attracting mothers towards facility-based birth.

Intervention: Community Engagement approach

During one of the learning sessions community members are invited to share their experience on facility-based childbirth. This provides a unique opportunity for HCP to receive direct feedback from those they serve. It provides a platform to appreciate and understand what matters most to the community.

Community engagement in Adama rural district

Adama rural woreda/district is one of the 26 districts supported for QI collaborative. It is located in East Shewa zone, Oromia region, having a total population of 194,789 out of which 6,759 are expectant mothers. During the first learning session (May 30th to June 1st, 2018), community engagement session was organized. Five mothers from the community were invited and asked to share their experience of healthcare during pregnancy and child birth. The mothers openly answered all the questions and provided useful feedback for healthcare workers which are being used in implementing informed quality improvement projects.

The feedback ranged from admiration and encouragement to calls for improvement. The women expressed their opinions openly giving examples to illustrate their points. The HCP listened attentively throughout the discussion.

Result: Based on the feedback, QI teams are designing and testing QI projects to address the communities' concern. One of the health center (HC), Sire Robi HC, assigned a maternity waiting home, where mothers living far from the facility can come and stay when their due date approaches. Community members took the lion's share in renovating the room. They contributed money and provided in kind support to ensure that mothers staying in the waiting home would have the necessary amenities. This includes cooking utensils along with stuffs needed to make cultural rituals for post-partum moms such as coffee ceremony and porridge.

Lessons learnt and conclusion The case of Adama illustrates the transformative power of community engagement in healthcare provision. Empowered community members are able to share what matters most to them and to collaborate with HCP in tailoring services to meet their needs.

[2] Central Statistical Agency - CSA/Ethiopia and ICF. 2017. Ethiopia Demographic and Health Survey 2016. Addis Ababa, Ethiopia: CSA and ICF. Available at http://dhsprogram.com/pubs/pdf/FR328/FR328.pdf

10. Linking health facilities and communities to improve the quality of newborn care in Ethiopia

Authors: Bizuhan G.[1], Julia B.[1], Yayeh N.[1], Endale E.[1] , Bogale W.[2] , Abebe G.[3] , Hajir M.[3]
Authors Affiliation: [1] UNICEF Ethiopia Country Office, Addis Ababa , [2] Ethiopian Pediatric Society, Addis Ababa, Ethiopia, [3]Emory University, Addis Ababa, Ethiopia

Introduction: The day of birth and the neonatal period are the most vulnerable times for a child's survival and health. Neonatal conditions in Ethiopia account for 44% of under-5 deaths,[3] with 28 neonatal deaths per 1,000 live births. The main causes of neonatal deaths in 2015 were related to birth asphyxia (31.6%), prematurity (21.8%) and sepsis (18.5%).[4] Improving quality of care (QoC) around the time of birth will save the most lives, but this requires educated and equipped health workers (HCWs) and Health extension Workers (HEWs) and the availability of essential commodities.[5] Despite existing efforts, there is no tested and validated quality improvement (QI) model that links hospitals, health centres (HCs), health posts (HPs) and communities. UNICEF with its implementing partners is currently working to test quality initiatives for scale up in all kebeles, HPs, HCs and hospitals in five woredas; one each in Amhara, Benishangul-Gumuz, Oromia, Tigray, and SNNP regions.

Implementation: The project has three implementation levels. Emory University is working in HPs (142) and communities (160 kebeles); EPS is working in 6 hospitals and 26 HCs; and RHBs are doing the coordination, monitoring and supervision. Implementation started with baseline assessment; followed by orientation for participants from RHB, ZHD, WorHOs, hospitals, HCs, HPs and kebeles. TOT and basic trainings on quality including data management and coaching skills provided to health managers, HCWs and HEWs. SBCC training was given to community influential people. Referral voucher is being designed and tested for effective two-way referral of sick newborns and children. Existing quality mentors are supporting implementation. Coaching visits, community dialogues and referral audits for health posts are conducted regularly.

Results: QI teams established in almost all health facilities and 160 kebeles. NICU and delivery staffs are now working in teams. Intra-facility meetings are conducted monthly to identify gaps and plan for corrective actions. HCWs and facility managers become more sensitive than ever for newborn complications and death. Staffs started provision of quality care. Common neonatal insults such as hypothermia are now prevented with simple procedures such as skin to skin contact with the mother. Health facilities have started analysis of their data to monitor activities. HEWs have got the knowledge and competency to lead quality improvement activities in their kebeles.

Lessons learnt : Multi-level QI model creates opportunities for full participation of various stakeholders including policy makers and service users apart from service providers. Implementation of QI in more than one region at a time facilitates experience sharing . Monitoring and supervision of implementation at each level is an important aspect of QI projects which needs financing.

Conclusion: This is a unique QI model operating at the level of decision makers, HCWs and communities to ensure QoC is becoming a culture at all points along the continuum of service delivery. Failure of one part of the system to deliver QoC impacts the overall morbidity and mortality status of newborns and mothers

[3] EDHS. 2016
[4] UNICEF Ethiopia. Maternal and newborn health disparities. 2015
[5] WHO. Every newborn: an action plan to end preventable deaths. 2014.

11. Improving quality of care for Every Newborn in Ethiopia

Authors: Bogale W.[1] , Azeb S.[1], Megersa K.[1], Mame A.[1], Belaynesh A.[1], Fikirte T.[1]
Authors Affiliation: Ethiopian Pediatric Society

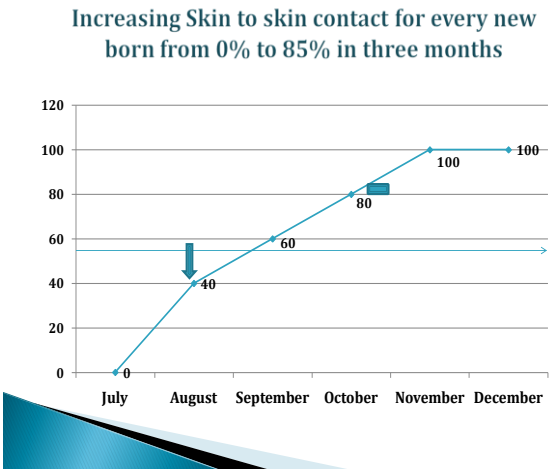
Introduction: Improving Quality of health care for every baby in five low performing woredas selected from five regional states was implemented by the Ethiopian Pediatrics Society in collaboration with FMOH , RHB and UNICEF. Six Hospitals and 26 Health centers were enrolled in to the intervention by this project . A guide of Improving Quality Health Care for new born and mothers was used to implement this project. Orientation and sensitization of RHB, ZHD & Woreda Health office staff was carried out from the start of the project. Training of trainers for doctors, health officers and nurses was done which was followed by trainings for providers on site for the five stated sites

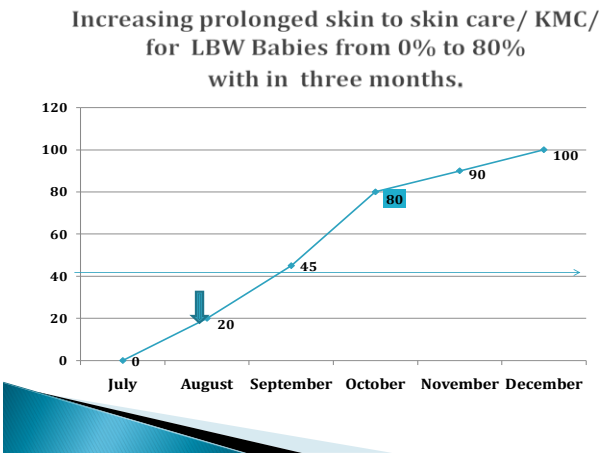
Implementation of QI Project: Based on the identified gaps and observed findings discussion were made with delivery and NICU case team at each facility involving health center and hospital head and MNCH focal persons from zonal, woreda and regional health officers. Head of the Quality team at delivery and NICU including the delivery and NICU heads were trained on helping babies survive and quality improvement using the HBS and quality improvement guide developed by the American Academic of Pediatrics. Mentors facilitated establishment of quality improvement teams in each facility and the quality improvement teams identified gaps and developed smart aim for the intervention. Mentors supported the team regularly in person and telephone calls.

Results : The best performing sites were selected from each site and their smart aim is listed below with their achievement . The arrow shows time of intervention .

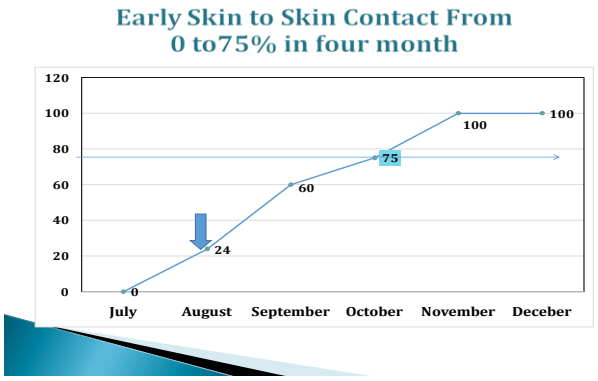
Tiya health center / SNNPR : Increasing Skin to Skin contact for every new born from 0% to 85% in three months

Asosa hospital NICU / Benshangul Gumuz : Increasing prolonged skin to skin care/ KMC for LBW babies from 0% to 80% within three months.

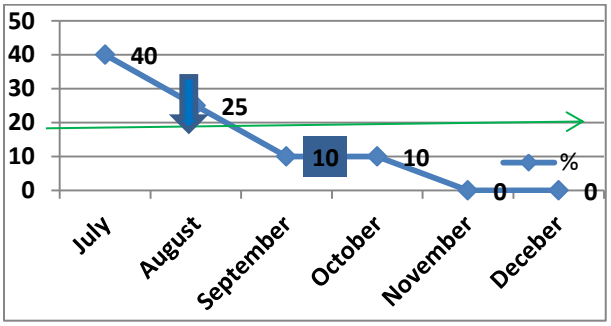




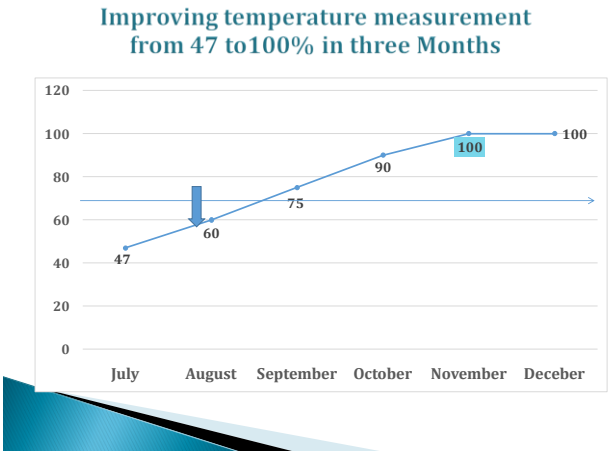
Legdiya /Amhara: Increasing Early Skin to Skin Contact from 0 to75% with in four month.



Kara health center / Oromiya : Reducing cases of Hypothermic newborns on admission from 40 to 10% in three month and achieved reduction to 0%



Koraro health center / Tigray : Increasing temperature measurement with in one hour of delivery from 47 to 100% in three Months.



Lesson Learned: QI team established at all health facilities and identified gaps and started working by developing run charts.Team works improved quality of health care without using more resources.Increased interest and participation of head of the facility in QI Implementation and document handling system. Typical run charts buy the QI team posted on the wall of their facility (Assosa health center)

Conclusion: Quality Improvement team improves newborn care based on identified gaps and immediate solution during process and changes occur. Health workers trained have shown more change and commitment by provide high quality of care with simple procedure without using additional resources. The implementation of Quality team improved communication between NICU and delivery ward staff. Early identification and treatment are now preventing new born death and related Complication

Acknowledgement:
We would like to thank UNICEF for the generously funding and supporting the project

12. Improving care for mothers using locally generated change ideas

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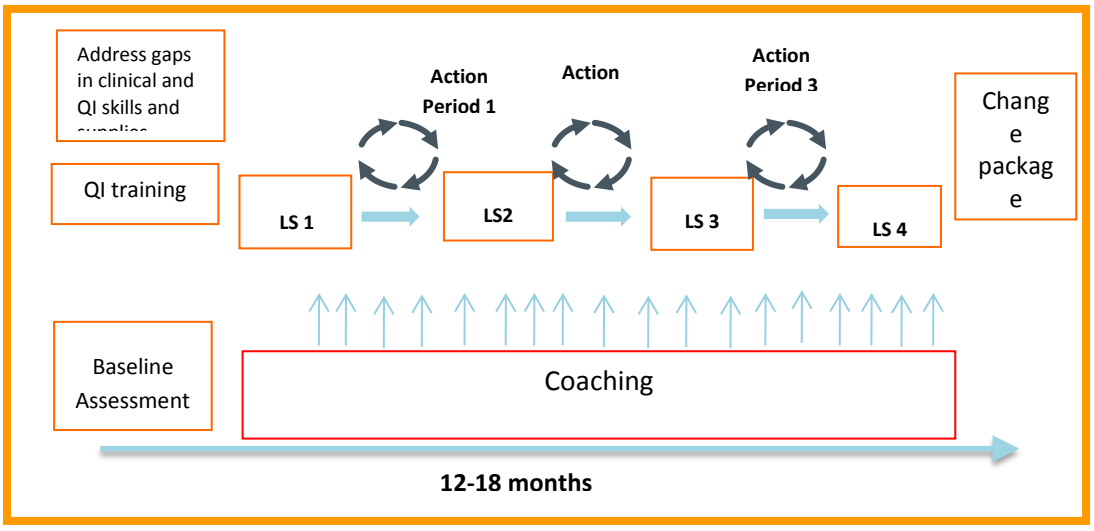
Authors Affiliation : Institute for Health Care Improvement[1], Federal Ministry of Health, Ethiopia, Addis Ababa[2],

Introduction: The Institute for Healthcare Improvement (IHI) has partnered with the Federal Ministry of Health of Ethiopia (FMOH) to move the quality agenda, since 2013. One of the three strategies of this partnership is **to create quality culture** through a woreda wide collaborative that brings together health care providers, leaders and clients for a common aim of closing the quality gap mainly in maternal and newborn health, a priority area for the country. During the prototype phase, four woredas in each of Amhara, Oromia, Tigray, Southern Nation Nationalities and Peoples' Regions were supported to test the collaborative design and develop regional change packages to catalyze maternal newborn health (MNH) improvement.

Implementation of the project

The collaborative work commences with a training on quality improvement (QI) followed by a baseline assessment that provides retrospective data on key MNH indicators. Consecutively, four learning sessions (LS) at the woreda level are held to plan, do, study and act (PDSA) on QI interventions. Intensive coaching visits happens during the three- to four-month action period between two LSs (Diagram 1).

Diagram 1: Design of the learning collaborative



Result: Change packages across the continuum of care

As part of the improvement process, facility teams are supported to generate and test 'change idea' that is aimed at addressing a certain gap in the care provision. Such change ideas are tested at smaller scale to see if they lead to measurable improvement. Change ideas that led to improvement are then compiled as change package for wider spread and scale-up.

Sample change ideas are discussed below:

- Task shifting for syphilis testing: Task shifting training to enable midwives do syphilis testing by themselves is one of the change ideas tested in Tanqua Abergele collaborative, Tigray. This change idea helped to ensure mothers are tested for syphilis during their first antenatal care (ANC) check-up, with no interruption, even in the absence of laboratory technicians.

- Facility tour for ANC 4 attendees: In Limo Bilbilo (Bekjoji) collaborative, Oromia, a change idea was generated that included visit to the labor and delivery (L&D) ward during the fourth ANC visit. This helps mothers to get used to the ward.
- Introduction of the WHO approved safe child birth checklist to improve the intrapartum care. This was tested in all the collaborative and helped to increase compliance to clinical bundles.

Lessons learnt and conclusion: Such locally generated change ideas tend to consider specific contexts and needs. They are also more likely to be owned and applied more often than tools and guidance that are forced down the system. As part of the testing, data use and data quality improved in the collaborative.

13. The Ethiopian Neonatal Network- Establishing Quality Improvement as a Strategy to Achieve the Sustainable Development Goal of Neonatal Mortality Reduction

Authors: Ehret DEY [1], Edwards EM[1], Tariku A[2], Worku B[3], Horbar JD[1]
Authors Affiliation: [1]Vermont Oxford Network, University of Vermont, Burlington, VT, United States., [2]Federal Ministry of health Addis Ababa Ethiopia, [2]Ethiopian Pediatric Society , Addis Ababa , Ethiopia

Background: The Sustainable Development Goal for 2030 is to reduce neonatal mortality to 12 per 1000 live births globally. As neonatal intensive care units (NICUs) emerge in low-income countries, facility-level tools are needed to identify gaps, test changes, and assess improvement over time to achieve this goal.
Objective: To establish the first low-income country neonatal network utilizing facility-level metrics and quality improvement coaching to address preventable causes of neonatal morbidity and mortality.
Methods: Together, Vermont Oxford Network (VON), a nonprofit voluntary collaboration of health care professionals at over 1200 centers in 34 countries, the Ethiopian Pediatric Society and the Ethiopian Federal Ministry of Health founded the Ethiopian Neonatal Network (ENN). A one-page data collection tool for the VON Global Neonatal Database was developed through international multi-disciplinary consensus and expert opinion. In February 2018, pediatric and nursing leaders from twenty NICUs in Ethiopia completed an introductory quality improvement workshop based on the Model for Improvement, data abstractor training, and Internet feasibility testing. All infants admitted to participating NICUs were eligible for inclusion and entered into a REDCap database. Following six months of data entry (March 1-Sept 30, 2018), quality gaps, defined as processes of careused inless than 100% of infants for whom the care is recommended, were identified.

Results: Twenty hospitals contributed 5703 neonatal records. Infants had a mean gestational age of 37.4 weeks, mean birth weight of 2649 grams with 38.4% of infants low birth weight (<2500 grams), 8.0% very low birth weight (<1500 grams), and 27.1% out born at other hospitals, health centers, or home. Multiple quality gaps were identified, including infant assessments on admission, Essential Newborn Care (ENC) practices, and care of high-risk infants, including preterm and those with HIV+ mothers (Figure 1). Quantification of quality gaps for ENC practices in out born infants informed feedback from referral hospitals to community sites (Figure2).
Conclusion: The VON Global Neonatal Database identified important quality gaps for participating ENN NICUs and their referring community sites. As ENN leaders utilize quality improvement to close these gaps and improve outcomes, they may serve as a model for other low-income countries aiming to reduce neonatal mortality to the Sustainable Development Goal target

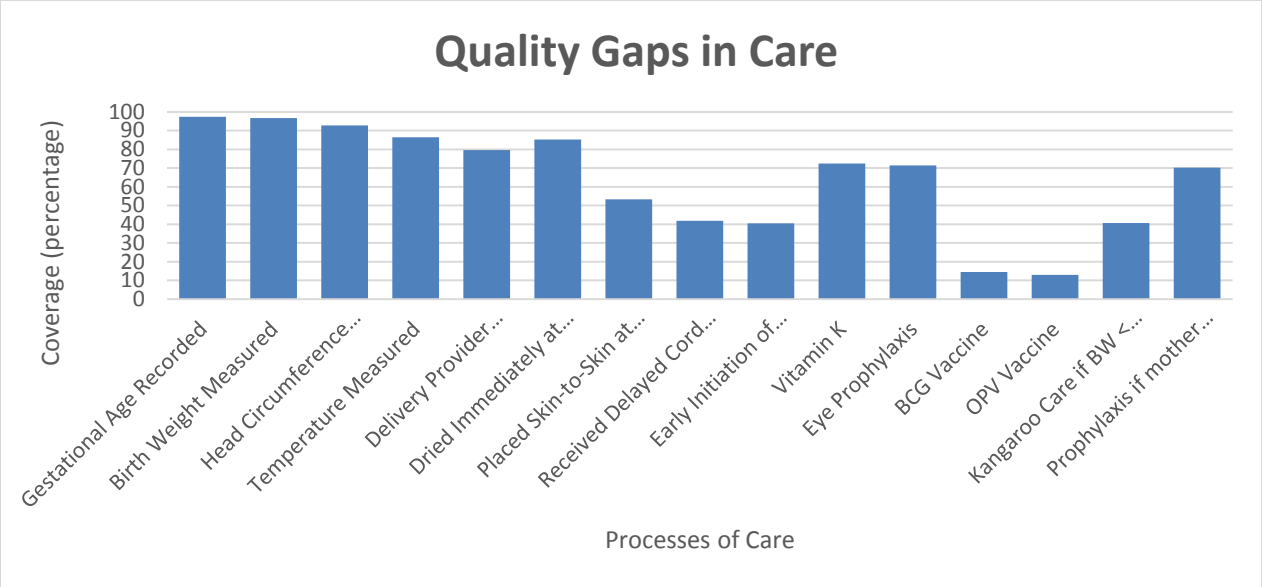


Fig 1.
Coverage of processes of care in VON Global Neonatal Database among participating centers in the Ethiopian Neonatal Network. Denominator for processes of care include all infants recommended to receive that process of care. The total cohort (n= 5703) is the denominator for all processes except for "Kangaroo Care if birthweight < 2 kg" and "Prophylaxis if mother HIV+" which denote the select population that this process of care is recommended. A quality gap reflects the difference between the reported coverage and 100%

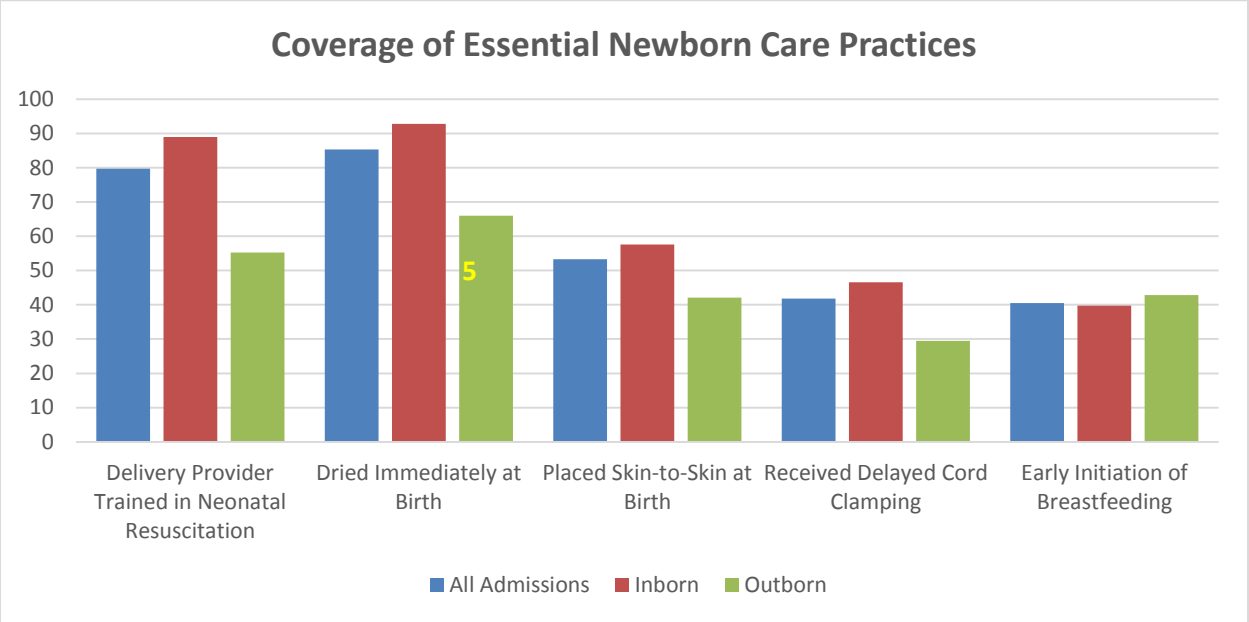


Figure 2. Coverage of Essential Newborn Care practices amongst all NICU admissions (blue), inborn admissions (orange) and outborn admissions (gray).

14. Midwife Mentoring (MM): An innovative approach to increase the knowledge and skills of health care workers to improve the quality of MNH services at the Primary health care units in Ethiopia. CHAI Ethiopia Pilot experience, 2012.

Authors: Zelalem Demeke, Mebratu Bejiga, Leulseged Ahmed, Salem Fisseha, Tinsae Mekonnen, Habtamu Tezera, Yigeremu Abebe, Team G/Tinsae, Adugna Tafa, Adamu Alebachew, Oumer Aweku

Introduction: In Ethiopia over 3 million births occur every year, with high maternal mortality ratio (MMR) of 353 per 100,000 live births) and neonatal mortality rate (NMR) of 28 per 1,000 live births indicating an unacceptable loss of life.The majority of maternal and neonatal deaths can be prevented with a comprehensive package of essential maternal and newborn care services through increasing skilled birth attendance and provision of emergency obstetric and newborn care during pregnancy, childbirth and in the first hours and days after birth. Shortage of and low skill set of midwives and health care workers managing maternal and neonatal health (MNH) are among critical factors responsible for the high maternal and neonatal mortality. Midwife Mentoring focusing on basic emergency obstetric and newborn care (BEmONC) package should be implemented in the rural and at primary health care (PHC) level addressing the skill gap of mid and low level health workers and to make the quality MNH services available where most of the population in need is residing.

Implementation of the Project: Clinton Health Access Initiative (CHAI) and the Federal Ministry of Health of Ethiopia (FMoH) have implemented a mentorship model for midwives in a pilot program from 2011 to 2012.

Aim/ Objective: To improve the quality of maternal and neonatal health services at health centers through improving the knowledge and skills of midwives on BEmONC and other MNH service areas.

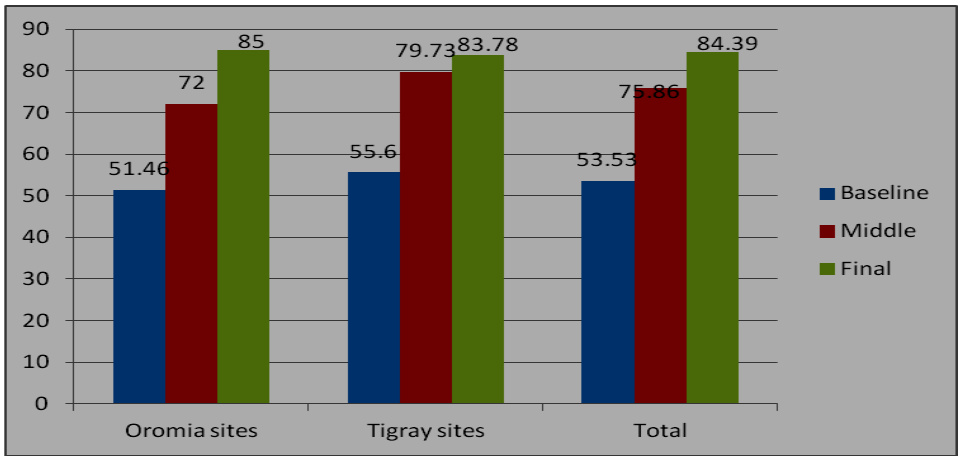
Methods: Midwife Mentoring (MM) model is practical mentoring on:

- BEmONC signal functions with special emphasis on quality delivery and immediate post delivery services
- Key MNH areas: Focused Antenatal care (FANC), Helping Babies Breath (HBB), and coaching of the health extension workers (HEWs) through outreach services.
- Essential MNCH services: Family planning, antenatal care and prevention of mother to child transmission of HIV (PMTCT) and under-5 child care

Results of the Project

- The MM model was implemented from August 2011 to June 2012 at 10 health centers in Tigray and Oromia regions.
- A total of 40 health professionals mainly midwife, and also nurses and health officers (3 per facility) were mentored for 12 months.
- Based on the knowledge and skill assessments conducted :
    1. Out of the 40 mentees, 32(80%) successfully graduated; 8 (20%) dropped out due to transfer to other facilities or to higher education.
    2. The average knowledge score for the 32 mentees was 86.31%; an increment in the knowledge level of mentees by 27.63% (from 67.6 to 86.3)
    3. The average baseline skill score of the mentees was 53.53% which increased to 75.86% after 6 months and to 84.4% after 12 months of mentorship showing over all increment of skill level by 57.7%.(Fig.1)

Fig 1: Skill assessment results



Overall changes

- A total of 1396 mothers gave birth at the health facilities compared to the planned 1959, making the achievement of delivery fast track (DFT) 71.3% (60% at Oromia and 80.4% at Tigray region)
- The skilled delivery coverage for the catchment population was: 36% for Oromia and 48.3% for Tigray region. (DHS 2011 showed 4% in the rural Ethiopia)
- Use of Partograph during labor management increased from 0% to 59.4% at the implementation sites during the reporting period.
- A total of 4317 mother–baby pairs were visited twice in a week after delivery by health extension workers coached by the Midwives.
- Misoprostol was provided to 611 mothers for the management of third stage of labor at the health post level.
- Reduction in the unnecessary referral was observed

Lesson Learnt: Mentoring can improve**:**

- Infection prevention activity of the health facilities,
- Room arrangement of health facilities for quality services,
- knowledge and skill of heath care providers
- Relationship of staffs in the facility,
- The confidence of the health workers in providing quality MNH services
- Equipment and supply availability
- Partograph use and proper documentation
- Commitment on health care providers,
- The client flow at the facility level ,

Conclusions

- The CHAI MM model was very successful in improving the knowledge and skill of the midwives and HEWs making them capable and confident to perform BEmONC signal functions and other essential MNH services.

- The mentees graduated to government mentors and have shown in practice that they have the confidence and capacity to pass their knowledge and skills to other existing and new staff.
- The MM interventions have proven effective in reducing the toll of unnecessary referrals from health centers to hospitals.
- MM mentoring approach has also created motivation and positive competition among facility staff
- The outreach coaching program to HEW has also made great contribution in improving MNH services at HP level.

Recommendations

CHAI Ethiopia recommends that the FMOH and regional health bureaus adopt the midwife mentoring and integrate in their MNH care delivery package to facilitate greater and sustained impact towards reduction of maternal and neonatal mortality.

15. Integrated quality improvement interventions for enhanced maternal healthcare

Author: Amref Health Africa in Ethiopia, Addis Ababa

Introduction: In Ethiopia, the status of maternal health still remains low evidenced by very high death record, 412 deaths per 1000,000 live births. It is mainly caused by immediate medical complications and triggered by underling determinant factors of three delays. According to Ethiopian Maternal death surveillance and response report (2010 EFY), of factors contributed for maternal death were delay one-delay in seeking health care was 66.8%; delay two-delay in reaching facility was 37.7% and delay three-delay in receiving care was 48.6%.

In Amref Health Africa project operation areas of rural communities in southern nation, nationalities and peoples region, baseline survey was conducted to know context specific delay factors and devise quality improvement intervention models. According to the assessment finding, poor socio-economic status, lack of awareness and knowledge of a woman affected seeking health care; ineffective referral and networking system affected reaching to health facility and inadequate clinical skill and poor decision and commitment of health workers, interruption of essential medical drugs, supplies and equipments affected clients to receive quality care at facility level. Due to this all interlinked factors, mothers were not utilizing health services from facilities and consequently there were a lot of home deliveries leading to negative maternal and newborn health outcomes that adversely affects socioeconomic wellbeing of the whole community.

To address these maternal health problems, the project designed and implemented comprehensive intervention that addresses all delay factors and as the result utilization and service coverage is incredibly increased.

Implementation of the project: The project implemented innovative and integrated strategies to address quality gaps that determined and contributed to poor obstetric and maternal health care.

The project conducted social-behavioral change and empowerment activities which include community radio awareness programs, maternal health outreach campaigns linked with service, advocacy and dialogue with local authorities, support of health development army and establishment of women self-help groups to enhance service seeking behaviors and opportunities. The project also strengthened referral system by installing very high frequency radio (VHF) to network remote heath facilities with one another and with referral points. The project also built the capacity of front line health extension workers to strength referral system and expanded quality BEmONC to most facilities ease service reaching by women living at hard to reach areas. To ensure women clients receive appropriate service once they reached facilities, capacity building training on BEmONC and partograph use were delivered to health workers and consistently availed lifesaving drugs, supplies and equipments. In addition, the project regularly made onsite mentorship, joint reviews and evaluations at health facility level to strength accountability, leadership and learning from success and failure of maternal health services.

Results of the project: The project achieved impactful result which improved service seeking behavior, referral and networking system, coverage of quality service at facility level. This is more supported by project specific evaluation findings where there is significant rise in women and community awareness, health professional skills and quality of BEmONC service coverage and women service acceptance and

satisfaction contributed to high institutional delivery service uptake (increased from 29.1 in base line to 81% during mid-term).

Lessons Learnt: Good results were achieved on strengthening referral system and improving quality of service provided at health facilities through use of appropriate technology (VHF), health worker skill competency and supply chain management, women engagement and evidenced based action are key factors for success and better outcomes.

Conclusion: Comprehensive and integrated interventions are a key for success of maternal health program including interventions that can mitigate all demand barriers and service improvement implementations through continuous learning and making evidence based decisions are instrumental for replicable and measurable outcomes

16. **Improving maternal health care quality through youth friendly service**: meeting current demand and mitigating future risk

Author: Amref Health Africa in Ethiopia, Addis Ababa

Introduction: Young adolescents' face a higher risk of pregnancy related complications and death as a result of lack of skilled care during pregnancy and delivery than other women. This is due to low access to adolescent and youth friendly services including family planning in this age group compared to older women. Baseline assessment conducted before project implementation, poor infrastructure of health facilities and service delivery system, social barriers and unfriendliness of service providers coupled with poor service process quality, inadequate capacity of health structure were found to be the major factors affecting quality and equity of utilizing services by these high risk population groups. This leads to lack of youth engagement, unacceptability of services and very low service utilization that result in poor maternal and child health outcomes in project at target facilities.

To mitigate such problem, the project designed and implemented comprehensive interventions to increase access and utilization of service by this group and achieved impactful result through improving service acceptability, satisfaction and utilization.

Implementation of the project: Amref Health Africa through ASURE-Health project adapted innovative Youth Friendly Service (YFS) approach to enhance the quality of sexual and reproductive health (SRH) information and service with the objective reducing of teenage pregnancy among young adolescent girls.

The project devised innovative youth friendly reproductive health intervention addressing structural, process and output components of quality of care. Redesigning youth friendly service system through renovation of separate service corners, equipping with essential tools, training of friendly service providers, ongoing supply and monitoring of medical supplies are made to improve the structural quality of service. Improving client-provider interaction and service provision modalities by availing private examination rooms, simple client flow system, comfortable waiting area, audio-visuals and IEC materials and mentorship follow-ups made young clients to improve process quality and enabled clients easily access and utilize maternal and other reproductive health services.

Results of the project: As result of project intervention, meaningful improvement is observed in the quality of reproductive health service, health facility performance, service integration and care seeking behavior of young girls. This is evidenced by positive changes in life of beneficiaries where service satisfaction by clients increased from 39% to 43%, service convenience and acceptability increased from 24% to 49% and teenage pregnancy decreased from 5.36% to 1.09%. This impact caused positive change in reduction of maternal complications, illness and death in the area.

Lessons Learnt: Youth friendly reproductive health service achieved best result due to the project exploited conducive policy and partnership opportunities and by engagement youth at all phases of innovative programs designed to improve their own health status.

Conclusion: It is recommendable others to design strong youth, health workers and local stakeholder engagement opportunities while implementing youth friendly health service. Moreover, amplifying creativity, service providers' attitude change and enhancing health worker-client relationship are key to avert reproductive health problems of young people's particularly adolescent girls.

17. Rapid baseline assessment on the quality of maternal and newborn health care at selected health facilities in Amhara region

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Introduction: The Amhara RHB in collaboration with its partners conducted a baseline assessment in July 2018 on MNCH QoC in selected health facilities and communities to identify factors contributing to high newborn mortality in the region. Eighty-seven and 93 % of the neonatal deaths reported in the region for 2016/2017 and last half of 2017 respectively were from hospitals. The broad objective of the assessment was to inform actions tailored to the realities of each facility and plan quality improvement (QI) activities in order to reduce this high neonatal mortality. Findings of the assessment were disseminated in the presence of delegates of FMOH, the Amhara regional, zonal and woreda officials, and quality focal persons of 89 hospitals. Following dissemination hospitals have already initiated their QI projects.

Implementation: The EWEN* standards for quality of MNCH that are aligned to WHO standards were adapted for assessment of quality of MNCH care in 18 hospitals and 10 health centres with the support of UNICEF and other partners. Abridged tool was used to assess quality of MNCH care in 10 health posts and qualitative FGDs were conducted in these 10 communities to get at perceptions of quality. Finally, quantitative interviews of 322 mothers of sick children admitted to hospitals were conducted. A mix of health professionals including pediatricians and gynecologists, logistics and public health specialists, M&E experts participated in data collection under the leadership of the MNCH regional TWG and RHB. Immediate feedbacks were provided on spot for quick QI actions.

Result: No facility was found to meet any of the standards except one facility which met only one standard for governance. Absence of adequate, competent, and compassionate staff was noted, including lack of appropriate counselling, along with scarcity of guidelines and protocols, drugs and supplies. Participants from FGD, for instance, mentioned that health care providers give no attention and recognition for laboring women. Similarly, in health posts policies and guidelines, medications and supplies; staff motivation and recognition scheme were found to be lacking. Amhara RHB acknowledged the findings and showed its commitment to improve quality of MNH care across the board but in phased manner; the first phase of training on QI was provided in 38 hospitals. QoC improvement plans were developed based on prioritized problems in the assessed hospitals.

Lessons learnt: Cross sectional assessment of quality of care across all tires of the health system through involving cadres of health from various disciplines and engaging multiple partners builds a common understanding of QoC and creates opportunity for coordinated planning of QI projects. Including the perspective of the community on facility-level quality of care provides a more complete picture and helps inform more inclusive QI initiatives.

Conclusion: Poor quality of MNCH services in Amhara region evidenced by facility and community assessments has contributed to the high neonatal mortality in the region; QI activities in the region therefore require comprehensive approach that takes advantage of the strengths of multiple partners. Quality data should be integrated into routine data collection to improve efficiency in monitoring.

*EWEN: Every Women Every Newborn

18. Causes and Contributing Factors for Maternal Death in Ethiopia: Evidence from MDSR Surveillance data analysis 2014 – 2018

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Background: Ethiopia is one of the countries with a high burden of maternal mortality with the 2016 EDHS estimate of 412/100,000 live births per year. Nationally, one of the challenges in eliminating preventable maternal death is absence of information that effectively shows the true magnitude, causes and contributing factors for the deaths. Therefore, this study aimed at generating information on the distribution and determinants of maternal death in the nation by using maternal death surveillance data.

Methods: A retrospective surveillance data analysis was done for Maternal death case-based reports received from 2014 to 2018. Descriptive analysis was done for socio-demographic characteristics, causes, contributing factors and preventability of deaths.

Results: A total of 3401 maternal death case-based reports were received at national level. Direct causes of maternal death account for 85% of maternal deaths. Most maternal deaths continue to occur in the post-partum period, with high parity women at highest risk. The leading direct causes of maternal death were haemorrhage, HDP, anemia, obstructed/ ruptured uterus and sepsis. Obstetric haemorrhage has persisted as the top cause of maternal death accounting for 41% to 51% of maternal death review reports. In similar reporting years, hypertensive disorders in pregnancy (HDP) has also persisted as the second leading cause of maternal death accounting for more than 18% of the deaths. Furthermore, sepsis and obstructed labour were among the major causes of maternal death in the last five years while anemia has continued as the third leading cause of death contributing to 18% to 20% of maternal deaths. Related to contributing factors, delay one to have been the top contributing factors, with 64% to 77% of maternal death review reports documenting delay one factors.

Conclusion and Recommendations: The figure underestimates the true magnitude of maternal deaths. Majority of deaths occurred during postpartum period and from direct causes. Improving levels of reporting and review by strengthening leadership and committing adequate resources within EPHI and the Technical Working Group; making antenatal care a national FMOH priority with intensive supervision to standardize services offered to pregnant women at community-level; Ensuring facility managers take responsibility for the availability and use of critical job aids and supplies in labour wards; increasing heath system capacity including functional facility-to-facility referral systems, establishment of mini blood banks and training staff in efficient use of blood, and introducing routine audit and quality improvement procedures, including QI staff representation on MDSR/ RRT review committees are recommended.

Keywords: Causes of deaths, contributing factors, maternal deaths, MDSR

UNICEF. Maternal and newborn health disparities in Ethiopia. 2015

[i] *World Health Organization. Managing Prolonged and Obstructed Labor. 2008*

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A. Background[1–6]

Core demographic data

Population size (thousands)	99,873
Total fertility rate (children per woman)	4.32
Maternal mortality ratio (MMR) (per 100,000 live births)	353
Neonatal mortality rate (NMR) (per 1,000 live births)	28.9
Child mortality rate (per 1,000 live births)	18.2
Stillbirth rate (per 1,000 live births)	29.7
Domestic general government health expenditure as percentage of gross domestic product (GDP) (%)	1.1
Domestic general government health expenditure per capita (in US$)	6.5

National coverage of key interventions

	%
Antenatal care (4 or more visits)	32
Skilled attendance during delivery	27.7
Institutional deliveries	26
Cesarean section rate	1.9
Initial breastfeeding (1 hour of birth)	73.3
Exclusive breastfeeding rate (of infants under age 6 months)	56.5
Postnatal visit for baby (within 2 days of birth, medically trained provider)	--
Postnatal care for mother (within 2 days of birth, medically trained provider)	17

B. Implementation milestones

completed · in progress · not started or incomplete · no data

National leadership for quality of care (QoC)	
Supportive governance policy and structures developed or established	completed
QoC for maternal and newborn health (MNH) roadmap developed and being implemented	completed
Learning districts and facilities selected and agreed upon	completed
QoC implementation package developed	completed
Adaptation of MNH QoC standards	completed
Action: Learning sites identified and prepared	
Orientation of learning districts and facilities	completed
District learning network established and functional (reports of visits)	in progress
QoC coaching manuals developed	completed
Quality improvement (QI) coaches trained	completed
On-site coaching visits occurring in learning districts	completed
Learning and accountability: QoC MNH measurement	
QoC for MNH baseline assessment completed	completed
Common set of MNH QoC indicators agreed upon for reporting from the learning districts	completed
Baseline data for MNH QoC common indicators collected	completed
Common indicator data collected, used in district learning meetings, and reported upwards	in progress
Identification and agreement with an academic or research Institution to facilitate documentation of lessons learned in the implementation of QoC activities	completed
Accountability and community engagement	
Mechanism for community participation integrated into QoC planning in learning districts	completed

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C. Progress at the national level (2017–2018)

National overview of QoC for MNH

National quality policy or strategy

- The Ethiopian National Health Care Quality Strategy (2016-2020) includes maternal, newborn and child health (MNCH) as a priority area.

National aims

–

National targets

- As reported in the Health Sector Transformation Plan (2016-2020) and the National Reproductive Health Strategy (2016-2020), national targets aim to:
  - Reduce the MMR from 420 to 199 per 100,000 live births by 2020
  - Reduce the NMR from 28 to 10 per 1,000 live births by 2020
  - Reduce stillbirth rate from 18 to 10 per 1000 births by 2020 include roadmap target

QoC technical working group (TWG)

- TWG membership includes the Health Service Quality Directorate, Maternal and Child Health (MCH) Directorate, Human Resource Directorate-CRC Initiative, Policy and Plan Directorate, Implementing partners (i.e. WHO, IHI, Transform Primary Health Care-USAID, Transform Developmental Regional State-USAID, Ethiopian Midwives Association, Ethiopian Pediatric Society, Ethiopian Society of Obstetrician and Gynecologists, Clinton Health Access Initiative, UNFPA, UNICEF, AMREF, and Help-age), and the Regional Health Bureau QI unit coordinators of Addis Ababa and Oromiya region.
- The TWG follows the roles and responsibilities outlined in its terms of reference and met 10 times in 2018.

Joint products and activities by the QoC TWG

- Prepared terms of reference for MNH QoC TWG establishment, formally established the TWG and conducted regular monthly meetings (January 2018)
- Provided lead technical support in developing the National MNH QoC road map that was published (Oct 2017)
- Participated in plan alignment of the national annual operational plan for MNH QoC (2017/18 and 2018/19)
- Technically supported organization of annual national quality summits (March 2017, June 2018)
- Adapted the MNH QoC standards and introduced them to stakeholders
- Provided orientations/trainings on quality improvement (QI) basics, the MNH QoC initiative, MNH standards, tools and indicators to respective learning districts
- Selected learning districts (February 2018)
- Prepared a learning district MNH QoC implementation package (draft) (April-May 2018)
- Provided national-level orientation to regions and learning districts on the MNH QoC initiative, the national MNH QoC roadmap, the implementation package and monitoring framework; started regional adaptation/operationalization of the roadmap
- Technically assisted with the inclusion of core indicators in the recent health management information system (HMIS) revision and inclusion of a module on MNH standards, quality statements and key performance indicators (KPIs) in District Health Information System 2 (DHIS2)
- Adapted a monitoring technical guide/protocol for MNH QoC (draft) (November 2018)
- Technically guided the collection of baseline data on common core indicators and quality gap assessments in learning districts
- Drafted feedback to facilities based on baseline common indicator data analysis to guide specific QI interventions in learning facilities (November-December 2018)

Learning districts and facilities

- 17 learning districts (currently there is agreement to consider three of the hospitals in Addis Ababa as one learning site which makes the number of learning sites 14)
- 2-5 learning facilities per learning district
- 48 total learning facilities
- 3 learning facilities per learning district
- 113 learning facilities

District aims towards national strategy

–

D. MNH QoC baseline data for learning facilities

Baseline common indicators

Challenges

- Delay in reporting and incompleteness of some indicators

Opportunities and progress made

- Common indicator data collection and use guidance was developed and orientation was given to reporting health facility staff members

Planned activities

- Regular feedback and improved data use

Clinical improvement aims

- Federal Ministry of Health selects aims by learning facility (3 aims per facility); these aims are selected based on data, but a commonality is prioritizing as much as possible care around the time of birth and immediate postpartum.
- National aims shared across facilities in certain districts

Quality interventions included in the national MNH QoC package*

Interventions to build a supportive environment

- Clinical in-service training (regional or district levels) based on gaps identified
- Modified approach to supervision to include QI in certain districts

Interventions to support change at facilities

- Training is now based on a more careful assessment of who needs it and when something is new. In-service trainings are provided on gaps identified (e.g. basic emergency obstetric and newborn care (BEmONC), IMNCI, SAM management, ETAT, NICU, newborn corner/ENC). There is integrated refresher training for health extension workers (HEWs).
- New focus on the safe childbirth checklist
- New self-assessment and improvement tool based on standards
- Increased focus on implementing maternal and perinatal death surveillance review; new annual plan identifies training needs, sees if committees are active and supports as necessary

*Interventions have started since the last update.

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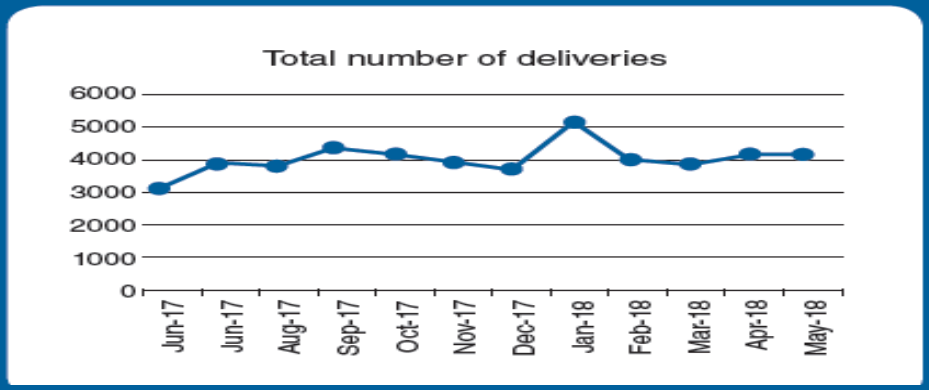
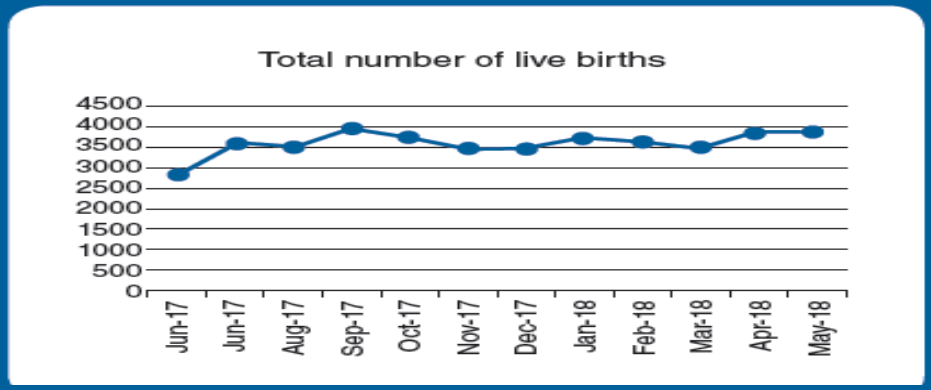
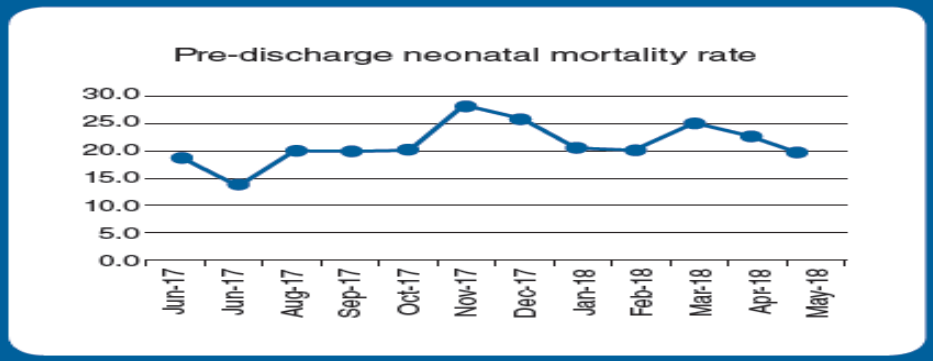
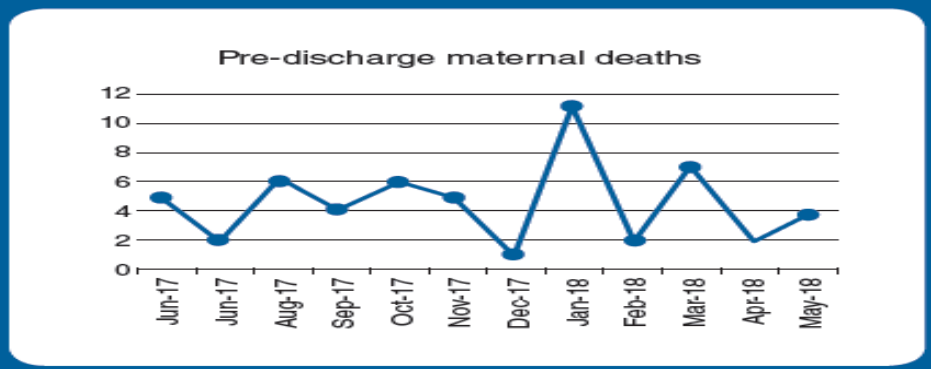
Baseline monthly trends in key indicators for the June 2017 – May 2018 reporting period (monthly data are shown as national averages of 48 learning facilities









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E. Implementation progress in learning districts

On-site support for clinical skills and QI

Support for clinical skills

Who provides on-site support for clinical skills	• Mentors hired and deployed at the facility level. These mentors are senior midwives who are experienced instructors and have many years of experience. Staff mentors from larger facilities mentor staff at smaller facilities. • Catchment-based mentorship uses woreda and zonal MCH officers, primary hospital midwives, and project cluster staff. • Catchment-based mentorship is the Ministry's flagship initiative, whereby BSc-level midwives from hospitals with good performance on BEmONC and who received training on mentoring are selected to mentor one health centre for 6 months. The mentoring happens for one week every month. • Mentorship offered by partners differs sometimes from the Ministry's guidance.
Challenges solved implementing on-site support for clinical skills	• There is family planning (FP) provider bias in some parts of the Amhara and SNNP regions. In Amhara region, health care providers didn't want to provide FP services due to misleading information. Continuous discussions with the health care providers improved this situation. • To solve high turnover of trained and mentored staff members, we tried to include more mentees in the mentoring program and trained more staff from each facility.
Unresolved challenges implementing on-site support for clinical skills	--

Support for QI

Who provides on-site QI coaching	• Joint on-site coaching by implementing partner staff (mostly midwives with MPH degrees) and the 3 district staff members (QI focal, MCH coordinator, and HMIS coordinator) • Officials from the regional health bureau, woreda health office, and health workers from hospitals trained on QI are also involved in some districts in developing regional states • At least once per month or every quarter (in districts with budget issues), coaches: – review facility level data and discuss with facility staff the progress of improvement projects – facilitate the use of QI tools – use this opportunity to retrieve data that are not part of the HMIS for the core indicators – support clinical duties as needed – visit the service units – discuss the arrangements and infection prevention procedures – support establishing QI teams and facilitate the initial QI team meetings – facilitate learning sessions at the woreda level • In one of the learning districts, the lead hospital (a university specialized hospital) gives QI coaching and clinical skill building support to the other facilities in the network
Challenges solved implementing QI coaching	--
Unresolved challenges implementing QI coaching	• Lack of clinical skill-building labs in hospitals • District staff members who provide coaching are based at the woreda/ district health office. It is not scalable for these 3 people to visit 11 sites every month, so this plan needs to be adapted.

Learning for QI

Tools for capturing learning from facilities	• We document change ideas that led to improvement as part of the change package for broader sharing and implementation. This information is captured using a QI project logbook.
Tools for sharing learning between facilities	• Learning sessions/review meetings are integrated into existing meetings for staff members, and this learning is recorded in the QI minute book/ template.
Challenges solved implementing a learning system	--
Unresolved challenges implementing a learning system	• Learning has not been synthesized systematically and integrated into the Ministry's annual plan for scale up and implementation at national level. The QoC TWG at the national level has yet to gather leanings from learning sites, identify effective and scalable interventions and come up

Measurement system for QI

Patient-level common indicator data	• Common indicators plus indicators based on the specific QI aims • All provision of care and water, sanitation and hygiene (WASH) core indicators are being reported from all learning sites to the national level. • Reporting on common indicators for experience of care has not been initiated yet, though there is agreement to do so.
Programme-functioning data	• All districts will use a milestone-monitoring checklist. • Implementing partners use specific checklists to monitor facility QI progress. • A comprehensive reproductive, MNCH tool used by respective cluster coordinator every quarter and reported to QI advisor in regular basis in some districts
Availability of data system for measuring QoC	• Four common indicators are directly taken from the HMIS report. During the recent HMIS revision, efforts were made to include some of the late common indicators, for example on postpartum haemorrhage (PPH). But then the common indicator on PPH was dropped, and an indicator on kangaroo mother care was added. The DHIS2 has integrated a module on MNH standards and quality statements, though it is not yet functional. • The following additional data sources are used: – HMIS registers – Interviews and observations (for experience of care and WASH) – Patient charts • In the future, efforts will be made to integrate the core indicators in the DHIS2 by demonstrating the use of indicators for improvement.
Challenges solved implementing a measurement system	• Data quality was poor. Registration and systems for reporting activities performed at the facility level were very weak in some health facilities. To solve this, we included data quality management in the provision of mentoring.
Unresolved challenges implementing a measurement system	--

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Community and stakeholder engagement

Approaches for community/ stakeholder engagement	• Community engagement approaches include the participant defined quality (PDQ) initiative that is linked with community action cycles, establishment of the client counsel, community score cards, town hall meetings, and community representatives on the health centre's governing board
Roles of community stakeholders or patient representatives	• Community stakeholders and patient representatives participate in the three phases of the PDQ process: 1. Quality exploration (community and providers explore quality issues on MNH care separately) 2. Bridging the gap (community and health care providers come together to discuss the gaps they identified, discuss the areas needing improvement, prioritize problems, and develop an action plan to work together) 3. Working together on areas needing improvement • Community representatives also participate in the quarterly review meeting.
Challenges solved engaging communities and stakeholders	–
Unresolved challenges engaging communities and stakeholders	–

Programme management

Programmatic responsibility	• Facility level: – Hospital: Quality Unit is responsible for QoC – Responsible for conducting quality audit – Gives feedback on the audit findings to the respective QI teams of the different unit/departments – Supports the QI teams to develop and implement QI plans – Monitors the implementation of the QI plans – Health Centre: Performance monitoring team on which the quality focal person is a member • District level: – Quality focal person – Provides clinical mentoring and QI coaching support to facility QI teams – Facilitates learning collaborative sessions at woreda/district level – Conducts integrated supportive supervision to facilities on priority programs such as MCH • Regional level: – Quality case team with 2-3 officers under the curative and rehabilitative core process – Operationalize national quality strategy and roadmap through regional adaptation – Coordinate and guide partners working on quality through regional steering committee and TWG – Build capacity and provide training on clinical and QI skills – Conduct SS and review meetings – Collect KPIs from facilities, give feedback and report to the national level • National level: – Health service quality directorate – Sets national standards – Develops policies, strategies, guidelines, protocols and manuals – Coordinates a countrywide QI program – Mobilizes resources for QI – Strengthens quality structures – Identifies and strengthens infrastructural gaps – Coordinates and guides partners working on quality through national quality steering committee and TWG – Conducts national quality summits, review meetings and SS – Establishes quality resource centre
Challenges solved implementing program management	• To address poor infrastructure affecting program implementation (e.g. shortage of rooms, lack of electricity and water), we communicated with all responsible bodies at each level to solve these problems.
Unresolved challenges implementing program management	• Inter-directorate (MNCH and Quality) collaboration is not as expected at all levels. There is a low commitment to quality at different structural levels of the health system. • Poor commitment of leadership and turnover at the facility and woreda levels are especially challenging. The government is changing regional leadership frequently and doesn't have a mechanism to hand over the activities being implemented at the zonal, woreda and health facility levels. This has directly hampered the programme's implementation.