



**IMPROVING THE HEALTH AND NUTRITION QUALITY OF CARE  
FOR MOTHERS AND NEWBORNS THROUGH A COLLABORATIVE  
QUALITY IMPROVEMENT (CQI) APPROACH**

While Ethiopia has achieved significant reductions in both maternal and neonatal mortality, death rates remain high. The maternal mortality ratio fell from 871 to 412 deaths per 100,000 live births between 2000 and 2016, and the neonatal mortality rate dropped from 49 to 30 deaths per 1,000 live births between 2000 and 2019<sup>1</sup>. Each year, an estimated 12,360 women and 87,000 newborns die due to birth-related complications<sup>2</sup>.

Since 2011, Nutrition International, with support of Global Affairs Canada, has been working closely with the Government of Ethiopia to improve maternal and newborn health and nutrition (MNHN) programming. In 2016, Nutrition International initiated the Right Start program in Ethiopia with a focus on strengthening the quality of MNHN services through a Collaborative Quality Improvement (CQI) approach. Together with the Government of Ethiopia, Nutrition International identified and prioritized a package of MNHN care that included promotion of antenatal care (ANC) services, adherence to prenatal iron and folic acid supplementation (IFAS), delivery by skilled birth attendants, delayed cord clamping, early initiation of breastfeeding, use of the Safe Childbirth Checklist (SCC), and clean cord care practices. Over the last four years the project has provided support to a total of 871 Primary Health Care Units (PHCUs) in 185 woredas of the four agrarian regions of Ethiopia.

## COLLABORATIVE QUALITY IMPROVEMENT

**Collaborative Quality Improvement (CQI)** is a shared learning system that brings together a large number of teams (sites) to work together to rapidly achieve significant improvements in processes, quality and efficiency of a specific area of care, with the intention of spreading these methods to other sites. CQI was developed by the Institute for Healthcare Improvement in 1995 as a structured organizational process for improving the quality of health services.

## ESSENTIAL ELEMENTS OF A SUCCESSFUL CQI



<sup>1</sup> EDHS 2016

<sup>2</sup> FMOH 2010 Woreda based Health plan

## ESTABLISH QUALITY IMPROVEMENT TEAMS

All the PHCUs in the Nutrition International-supported project areas established quality improvement teams (QITs). Each QIT consisted of eight to 12 members representing different departments including the health center head, health information technology officer, and focal persons from Maternal and Child Health (MCH), pharmacy, laboratory, and outpatient departments and the health post. The role of each team was to guide the quality improvement (QI) process for that PHCU by conducting regular monthly meetings, maintaining records of the issues discussed, ideas developed and tested, and tracking the status of performance and plans.

## IDENTIFY AND INTRODUCE *IMPROVEMENT AREAS*

In this project a phased approach was used to identify and introduce the areas for improvement. This ensured that a few *change ideas* were tested and adopted before moving onto the next set. The first set of training sessions focused on IFAS for pregnant women, use of the SCC and chlorhexidine for clean cord care. The second phase focused on the importance of ANC attendance (four or more contacts), and delivery by skilled birth attendants. The final phase focused on postnatal care within two days of delivery.

## COACHING

The purpose of coaching in CQI is to provide technical and moral support to the QITs to improve their performance. During this project, PHCU QITs received regular coaching from trained zonal or woreda coaches. During the coaching visits, the team reviewed the meeting minutes, registration books, score cards and other documentation used by the QIT to assess functionality and performance of the team and progress in the selected improvement areas.

A five-day coaching training was provided for zonal and woreda coaches at the beginning of the project. Integrated joint coaching and mentoring by a team from Nutrition International's MNHN project and woreda experts was conducted quarterly. At the PHCU level, a joint coaching and mentoring visit used a check list to monitor and support the implementation of the CQI.

## LEARNING SESSIONS

A learning session is a meeting where multiple QITs participating in the CQI collectively share experiences and results. Learning sessions are organized every six months to bring representatives from all PHCU QITs together to engage in three main activities:

- Sharing changes and results (both good and bad)
- Identifying innovations and promising practices
- Strengthening their skills in the content areas and in QI (as needed)

Nutrition International supported the Zonal Health Department to organize three rounds of zonal level learning sessions from 2018-2019.

*“The facility staff do not usually accept the review process of looking only high and low performance, but in the learning sessions all are prepared and ready to present.” – Woreda Health Office, West Gojam*

## ACTION PERIOD

This is the period between learning sessions where QITs test, implement and collect data to measure the success of the change ideas. PHCU teams work out and test ways to operationalize the concepts included in the change package, and to overcome barriers to make them work in their local settings. The PHCU QITs used the Plan Do Study Act (PDSA) cycle as a framework.

**Plan** - identify specific improvement areas

**Do** - test and implement the changes

**Study** - ongoing monitoring of indicators to measure the impact of the changes

**Act** - address any areas that need attention

## SYNTHESIS AND SPREAD

Synthesizing and sharing the learnings from the testing of the *change package* and collating best practices is an important step in the CQI. This session provides a mechanism for developing service delivery models, organizational changes and best practices to implement a set of standards and then share this knowledge beyond individual sites.

The project has built the capacity to document and synthesize learning across project-supported facilities. The learning is facilitated during coaching visits and review sessions at each level throughout the course of the project, and a system is introduced to document and spread the *change ideas* that were found to be effective to large audiences through the collaborative sessions.

## CHANGE PACKAGE

During the learning session when all the *improvement areas* are presented and discussed, the participants work in a group to list, evaluate and describe details of effective *change ideas* for each *improvement area*. In each zonal level collaborative, the list of effective *change ideas* is extracted from the poster presentations and discussed within the group. The lists of *change ideas* are further evaluated using four criteria (evidence from pilot, relative importance, difficulty or complexity, and scalability) on a scale of 1 to 5. The participants describe in detail how each *change idea* will be implemented. The lists from each group are then compiled and a simple survey tool is used to measure the extent of *change ideas* used among PHCUs within the collaborative, and identify which sites used the *change ideas* and how useful they were.



## SELECTED FINDINGS BY IMPROVEMENT AREAS

The following two improvement areas show the improvement on provision and uptake of MNHN care packages among the collaboratives in different zones of the SNNPR and Amhara regions.

### IMPROVEMENT AREA 1: CHLORHEXIDINE FOR CLEAN CORD CARE

The most common problems identified relating to the use of chlorhexidine and addressed by the QIT include:

- Practice of hygienic cord care is minimal
- Proper and continuous application of chlorhexidine is low
- Chlorhexidine stock outs
- Limited access to chlorhexidine, especially for deliveries outside PHCUs

At the zonal level collaborative, seven effective *change ideas* were identified, described and evaluated. The most common effective ideas across the zonal collaborative were improving quality of counseling, ensuring availability of chlorhexidine gel, creating awareness and checking appropriate application. The usefulness of the ideas was graded as moderately to highly useful (3 out of 5), meaning that the proposed *change ideas* are important to address the common problems and improve utilization of chlorhexidine gel.

*Table 1: Percentage of health facilities using specific change ideas to improve the percentage of newborns having chlorhexidine gel applied to the cord within 24 hours of birth in West Gojam zone, Amhara Region.*

Change Ideas implemented by health facilities West Gojam Zone	n = 104
Proper/effective counseling about benefits, demonstration and application of chlorhexidine gel to postpartum mothers, including counseling on appropriate application of chlorhexidine gel <ul style="list-style-type: none"> <li>• Counseling mother and family on how to apply chlorhexidine gel and continuous use up to seven days</li> <li>• Use leaflets to explain instructions</li> </ul>	96.1
Regular availability of chlorhexidine gel in delivery/postnatal care room <ul style="list-style-type: none"> <li>• Ensuring availability of chlorhexidine gel and ensuring the stock through proper logistic management system, filling the right form in a timely manner</li> <li>• Ensuring constant availability of chlorhexidine gel at health center</li> </ul>	94.2
Orientation and on-job training of all staff/providers, including health extension workers (HEWs), on use and application of chlorhexidine gel	80.0
Creating community level awareness on use/benefit of chlorhexidine gel	56.4
Developing and strengthening mechanisms to trace home deliveries within 24 hours and provide services for those delivered at home <ul style="list-style-type: none"> <li>• Provide services, application of chlorhexidine gel, for those delivered at home, within 24 hours by HEWs</li> </ul>	39.4
Ensure availability of chlorhexidine gel at health post level	38.5
Check appropriate application <ul style="list-style-type: none"> <li>• Follow-up of chlorhexidine gel utilization through home to home visit by HEWs</li> </ul>	29.1

The introduction and use of chlorhexidine in the West Gojam zone has been successful. The performance data showed both an upward trend and a shift above the center line. The performance level is over 90% (Figure 1). All PHCUs in the project area effectively introduced application of 4% chlorhexidine gel for clean cord care.

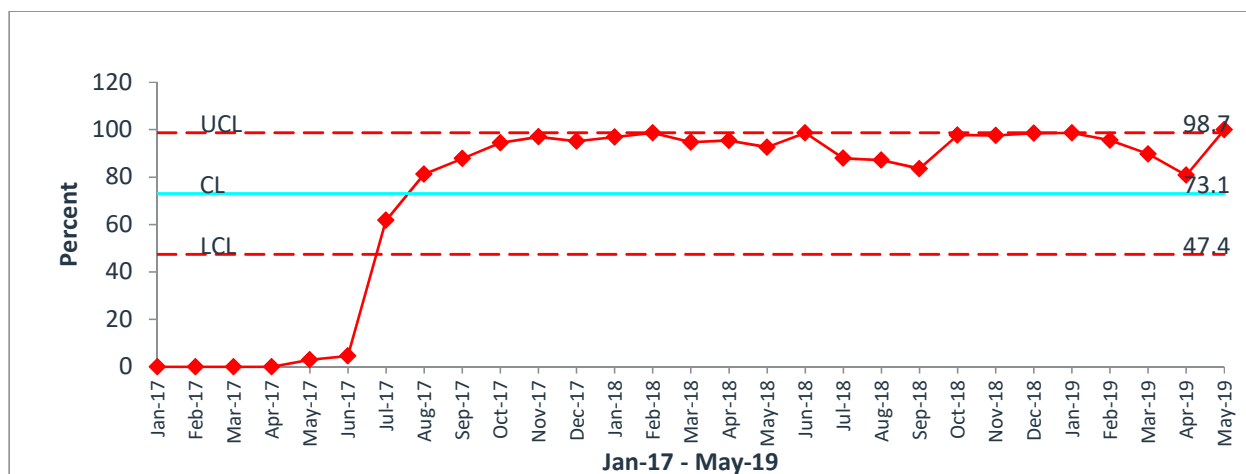


Figure 1: Percentage of newborns having chlorhexidine gel applied to the cord within 24 hours of birth, Jan 2017 to May 2019, West Gojam Zone, Amhara Region.

## IMPROVEMENT AREA 2: IFAS 90+

The collaborative team identified the following most common problems in the provision of IFAS for pregnant women:

- Low coverage of pregnant women receiving any IFAS
- Low coverage of pregnant women receiving 90+ IFAS
- Adherence to IFAS is minimal
- Recurrent stock-out of drugs in the PHCUs
- Poor access and quality of services
- Poor recording and reporting

*At the zonal level the collaborative identified and evaluated 11 effective ideas. The most common effective ideas across the zonal collaboratives were improving quality of counseling, early identification of pregnant women, ensuring availability of IFA tablets, creating awareness, and follow up of IFAS adherence (Table 3). The usefulness of the ideas was graded moderately to highly useful (3 out of 5), meaning that the proposed change ideas are considered important for addressing the identified problems and can be linked to improving consumption of 90+ IFAS during pregnancy.*

Table 2: Percentage of health facilities using specific change ideas to improve the proportion of pregnant mothers who received IFAS for at least 90 days in Hadiya zone, SNNP Region.

Change Ideas implemented by health facilities in Hadiya Zone	n = 60
Early identification of pregnant women, referral for ANC and initiation of IFAS <ul style="list-style-type: none"> <li>Working with health development armies (HDAs) and 1 to 5 network</li> <li>Following family planning defaulters</li> <li>Intra facility referral linkage</li> </ul>	100
Ensuring availability and dispensing IFA from ANC/MCH clinic	98.3
Strengthen pregnant women conference <ul style="list-style-type: none"> <li>Focused discussion about IFAS</li> <li>Proper and regular schedule</li> <li>Partner/family and other key stakeholders' involvement</li> <li>Recognition and experience-sharing by role model mothers</li> </ul>	98.3
Strengthen referral linkage between health posts and PHCUs	96.7
Proper and in-depth counseling during ANC visits about benefits, how to take IFAS, and prevent and manage side effects <ul style="list-style-type: none"> <li>Training/orientation of staff</li> <li>Using job aids and social and behaviour change communications materials</li> <li>Using self-assessment checklist</li> </ul>	96.7
Awareness creation for the community, pregnant women, HDAs and HEWs <ul style="list-style-type: none"> <li>Address some of the misconceptions/rumors on the benefit of IFAS</li> <li>Production and distribution of leaflets on IFAS for pregnant women</li> </ul>	93.3
Ensure continuous availability of IFAS <ul style="list-style-type: none"> <li>Improve supply management</li> <li>Strengthen implementation of Integrated Pharmaceutical and Logistic System</li> <li>Requesting IFAS when the balance is about 25%, filling and sending the right form in a timely manner</li> <li>Allocate budget from the health center to procure IFA tablets</li> <li>Shifting from high to low stock facilities</li> <li>Asking/borrowing IFA from neighbouring facilities to temporarily address stock-out</li> <li>Appropriate use of IFA supply</li> </ul>	93.3
Improve documentation and reporting <ul style="list-style-type: none"> <li>Properly recording and reporting IFA distribution and consumption</li> </ul>	93.3
Provide orientation to all staff, including HEWs, on providing IFA, counseling and monitoring adherence	86.7
Partner involvement <ul style="list-style-type: none"> <li>Partner counseling during ANC visit including informing on benefit of IFAS, encouraging family discussion and supporting wife to take IFAS</li> </ul>	76.7
Follow up on IFAS consumption for adherence and utilization <ul style="list-style-type: none"> <li>Home to home visit by HDA, HEW and QIT members</li> <li>Check the strip/strip return</li> <li>Checklist-based consumption assessment</li> </ul>	56.7

The proportion of pregnant women who received IFAS for at least 90 days increased from 50% in October 2017 to 90% by February 2019 in the Hadiya Zone. The improvement is significant, showing both an upward trend and a shift above the center line (Figure 2).

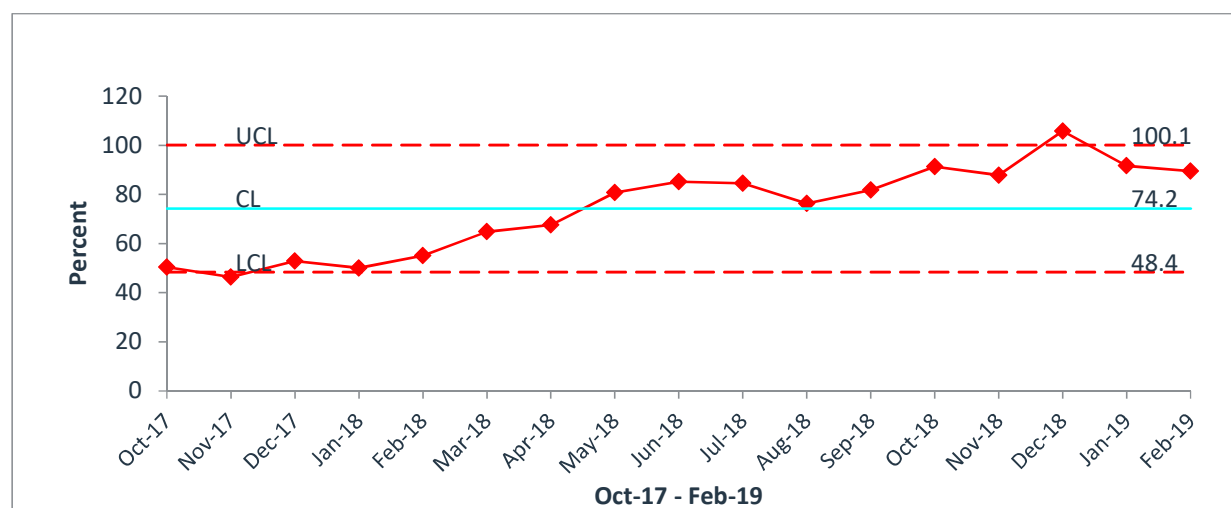


Figure 2: Proportion of pregnant mothers who received IFAS for at least 90 days, Jan 2017 to Feb 2019, Hadiya Zone, SNNPR.

## CONCLUSION

We demonstrated that:

- It is important that the MNHN intervention package implemented through the CQI approach is aligned with the priorities of the National Health Care Quality Strategy. We found that aligning the project with the local health system's priorities and existing structures builds will, enthusiasm and ownership of the work.
- CQI was found to be a good approach to introduce new evidence-based interventions and scale up best practices and lessons in a short period of time.



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