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MCHIP Ethiopia End-of-Project Report

2010–2014



Submitted on:
September 2, 2014

Submitted to:
United States Agency for International Development
under Cooperative Agreement # GHS-A-00-08-00002-00

Submitted by:
MCHIP Ethiopia

The Maternal and Child Health Integrated Program (MCHIP) is the USAID Bureau for Global Health's flagship maternal, neonatal, and child health (MNCH) program. MCHIP supports programming in maternal, newborn, and child health, immunization, family planning, malaria, nutrition, and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening.

This report was made possible by the generous support of the American people through the United States Agency for International Development (USAID), under the terms of the Leader with Associates Cooperative Agreement GHS-A-00-08-00002-00. The contents are the responsibility of the Maternal and Child Health Integrated Program (MCHIP) and do not necessarily reflect the views of USAID or the United States Government.

Country Summary: Ethiopia



SELECTED HEALTH AND DEMOGRAPHIC DATA FOR ETHIOPIA	
Population (2013 ¹), third most populous in Africa	94.1 million
% living in rural areas	84
% of GDP accounted for by agriculture	54
Spoken languages	80
Administrations under a federal government	9 regions, 2 cities
Newborn mortality rate (per/1,000)	37
<1 Mortality rate (per/1,000)	59
<5 Mortality rate (per/1,000)	88
Maternal mortality ratio (per/100,000)	676
Total fertility rate	4.8
% Unmet family planning need	25
HIV prevalence	1.5
% ANC received from skilled provider	34
% Delivery care for a skilled provider	10
Source: EDHS 2011; World Bank ¹	

MAJOR ACTIVITIES BY PROGRAM

- SUPPORTED DEVELOPMENT OF CRITICAL NATIONAL MATERNAL, NEONATAL, AND CHILD HEALTH AND PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV POLICIES AND STRATEGIES AND LEAD THE ADVOCY OF RESPECTFUL MATERNITY CARE
- STRENGTHENED THE ETHIOPIAN MIDWIFERY ASSOCIATION FOR THE PROFESSIONALIZED MIDWIFERY
- IMPROVED QUALITY OF MATERNAL AND NEWBORN SERVICES THROUGH STANDARDS-BASED MANAGEMENT AND RECOGNITION
- INTEGRATED PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV SERVICES
- IMPROVED THE PRACTICE OF FACILITY-BASED NEWBORN SERVICES
- INCREASED POSTPARTUM FAMILY PLANNING AVAILABILITY AND INTRODUCED PP-IUCD SERVICES IN ETHIOPIA
- EVALUATED AND INCREASED EFFECTIVENESS OF COMMUNITY-BASED KANGAROO MOTHER CARE
- IMPLEMENTED INTEGRATED COMMUNITY CASE MANAGEMENT OF LIFE-SAVING CURATIVE INTERVENTIONS FOR CHILDHOOD ILLNESSES

Program Dates	October 1, 2010–June 30, 2014					
Total Mission Funding to Date by Area	\$12,184,000 MNH: \$7,284,000, POP/FP: \$2,000,000, PMTCT/PEPFAR: \$2,400,000 and Malaria/PMI: \$500,000					
Total Core Funding to Date by Area	\$12,150 for Active-Audit-Feedback intervention: use of magnesium sulfate (MgSO ₄) for management of severe pre-eclampsia and eclampsia					
Geographic Coverage	No. (%) of regions	10	No. of districts	72	No. of facilities	287 (54 Hospitals and 233 health centers)
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Acronyms and Abbreviations

ACCESS	Access to Maternal and Newborn Health Program
ANC	Antenatal Care
ARV	Antiretroviral
BEmONC	Basic Emergency Obstetric Newborn Care
CKMC	Community Kangaroo Mother Care
CQI	Continuous Quality Improvement
EDHS	Ethiopia Demographic and Health Survey
EMA	Ethiopian Midwives Association
EmONC	Emergency Obstetric Newborn Care
ENC	Essential Newborn Care
ETS	Effective Teaching Skills
FMOH	Federal Ministry of Health
FP	Family Planning
GoE	Government of Ethiopia
HC	Health Center
HDA	Health Development Army
HEI	HIV-Exposed Infants
HEW	Health Extension Worker
HBB	Helping Babies Breathe
HMIS	Health Management Information System
HP	Health Posts
iCCM	Integrated Community Case Management
IESO	Integrated Emergency Surgery and Obstetrics
IFHP	Integrated Family Health Project
IMNCI	Integrated Management of Newborn and Child Illnesses
IR	Intermediate Results
IUCD	Intrauterine Contraceptive Device
KMC	Kangaroo Mother Care
LBW	Low Birth Weight
MCHIP	Maternal and Child Health Integrated Program
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MNCH	Maternal, Neonatal, and Child Health

MNH	Maternal and Newborn Health
PEPFAR	President’s Emergency Plan for AIDS Relief
PFSA	Pharmaceutical Fund and Supply Agency
PHCU	Primary Health Care Unit
PMI	President’s Malaria Initiative
PMTCT	Prevention of Mother-to-Child Transmission
PPFP	Postpartum Family Planning
PPIUCD	Postpartum Intrauterine Contraceptive Device
PQI	Performance Quality Improvement
PRCMM	Performance Review and Clinical Mentoring Meeting
PSE	Pre-Service Education
RHB	Regional Health Bureau
RMC	Respectful Maternity Care
SBA	Skilled Birth Attendant
SBM-R	Standards-Based Management and Recognition
SMH	Safe Motherhood
SMS	Short Message Service
SNNPR	Southern Nations, Nationalities, and Peoples’ Region
TOT	Training of Trainers
TWG	Technical Working Group
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
USG	United States Government
WHO	World Health Organization

Acknowledgments

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MCHIP's partners in Ethiopia—Jhpiego, Save the Children International, and the Johns Hopkins University Institute for International Programs—would like to thank the United States government, the President's Emergency Plan for AIDS Relief (PEPFAR), and the President's Malaria Initiative (PMI), as well as the American people for providing the technical and financial assistance needed to implement this program. MCHIP's deepest gratitude goes to the Federal Ministry of Health (FMOH) of Ethiopia for allowing us to provide technical assistance in Ethiopia for the partnership and guidance in the successful implementation of this program.

MCHIP would also like to acknowledge the close collaboration and contributions of the Regional Health Bureaus of Afar, Amhara, Oromia, Southern Nations Nationalities and Peoples, and Tigray regions including supported Zonal Health Departments and Woreda Health Offices throughout the course of this project. MCHIP also acknowledges the will and commitment of supported health science colleges and health facilities and their staff in working with us to provide better health services to Ethiopian women, their newborns, and children.

Finally, we would also like to recognize and thank the following offices and organizations that were central to the realization of this project:

The FMOH Maternal and Child Health Directorate
The FMOH Public Relations Directorate
Ethiopian Midwives Association
Ethiopian Pediatric Society
UNICEF
UNFPA
World Health Organization

Executive Summary

Although Ethiopia has seen a decline in maternal mortality to the current maternal mortality ratio (MMR) of 676 per 100,000¹ live births in the last 20 years, the country is still a long way from reaching its Millennium Development Goal (MDG) for MMR (MDG 5) of 267 per 100,000 live births by 2015.² The reduction of maternal, newborn and child health is the priority of the Government of Ethiopia (GoE). Ethiopia recently met its MDG 4 target for reducing child mortality of 68 deaths per 1,000 live births ahead of schedule. The introduction of the outreach health extension program with service provision led primarily by health extension workers (HEWs) is believed to have contributed to the reduction of mortality in children and toward achieving MDG 4 targets for the country³. Even so, the utilization of proven high-impact interventions for the most common killers of infants and children under five is still very low. Obstructed labor, ruptured uterus, severe pre-eclampsia/eclampsia and postpartum hemorrhage account for most of the maternal death in the country.⁴

Other indicators for maternal health show a very low facility usage rate, with a skilled birth attendant delivery rate of 10%⁵, one of the lowest rates in Africa. Low facility usage rates undoubtedly also present as a barrier to Ethiopia's prevention of mother-to-child transmission of HIV (PMTCT) program services. Gains have been made in family planning (FP), with contraceptive usage increases from 14% to 27.3% (Ethiopia Demographic and Health Survey, 2005 and 2011); however, the unmet FP need remains high, particularly in the postpartum period. Additional key health indicators are shown in the Country Summary.

MCHIP's first activity in Ethiopia was to document the quality of care in selected hospitals in the Quality of Care for Prevention and Management of Common Maternal and Newborn Complications study. Conducted between 2009 and 2010 with core funding, MCHIP observed that the quality of care in the selected hospitals was often below internationally accepted standards for maternal and newborn health (MNH) care. MCHIP called for a concerted countrywide drive to improve the quality of care particularly focusing on the integration of evidence-based practices and quality assurance processes in health facilities.

Following this, in 2010 the United States Agency for International Development (USAID) asked MCHIP to assist the government's efforts to address MNH priorities. The goal of the MCHIP Ethiopia program was to contribute to reducing maternal and newborn morbidity and mortality in the country. The strategic objective was to increase use and coverage of high-impact maternal and newborn interventions including the reduction of mother-to-child transmission of HIV⁶. MCHIP used the findings of the quality of care study to inform design of the new project.

In collaboration with the Federal Ministry of Health (FMOH) and Regional Health Bureaus (RHBs) MCHIP was implemented in the four USAID priority regions: Amhara, Oromia, Southern Nations,

¹ Central Statistical Agency [Ethiopia] and ORC Macro. 2011. *Ethiopia Demographic and Health Survey 2011 – Preliminary Report*. Central Statistical Agency and ORC Macro: Addis Ababa, Ethiopia and Calverton, Maryland, USA. Other estimates include 590 per 100,000 (Hogan MC, Foreman KJ et al. Maternal Mortality for 181 countries, 1980-2008: A systematic analysis of progress towards Millennium Development Goal 5. *Lancet* Volume 375:1609 -1623.)

² Central Statistical Agency [Ethiopia] and ORC Macro. 2005. *Ethiopia Demographic and Health Survey 2005 – Preliminary Report*. Central Statistical Agency and ORC Macro: Addis Ababa, Ethiopia and Calverton, Maryland, USA.

³ Knippenberg R et al. 2005. Systematic scaling up of neonatal care in countries. *Lancet* 365: 1087-1098.

⁴ National Baseline Assessment for Emergency Obstetric and Newborn Care 2008.

⁵ Central Statistical Agency [Ethiopia] and ORC Macro. 2011. *Ethiopia Demographic and Health Survey 2011, Preliminary report*. Central Statistical Agency and ORC Macro: Addis Ababa, Ethiopia and Calverton, Maryland, USA.

⁶ MCHIP Core funds were provided in 2009-2010 to conduct a national Quality of Care study.

Nationalities, and Peoples' Region (SNNPR), and Tigray. Selection of sites was done with extensive consultation with USAID, RHBs, their zonal counterparts and partners, including the Integrated Family Health Project (IFHP) to ensure there was no site overlap or duplication of effort. MCHIP later added the Afar region for Integrated Community Case Management (iCCM) activities upon request from the Afar RHB and USAID to support the iCCM expansion to the region's pastoralist communities. Overall, in addition to national-level support to the FMOH, national partners, and regional health bureaus (RHBs), MCHIP supported 49 hospitals, 235 health centers, and 843 health posts in 12 zones and 72 woredas/districts, as well as 10 health science colleges (see program timeline in Figure 1), during which MCHIP received numerous requests from the GoE for expansion, in particular, increasing the number of health centers supported by the project.

MCHIP's implementation strategy emphasized strengthening the enabling environment for MNCH and PMTCT care (Intermediate Result [IR]1), improving access to quality, high-impact interventions in MNH and PMTCT care at the health facility level—hospitals and health centers (IR 2), and improving knowledge and behaviors on MNCH/postpartum FP/PMTCT at the household level (IR 3).

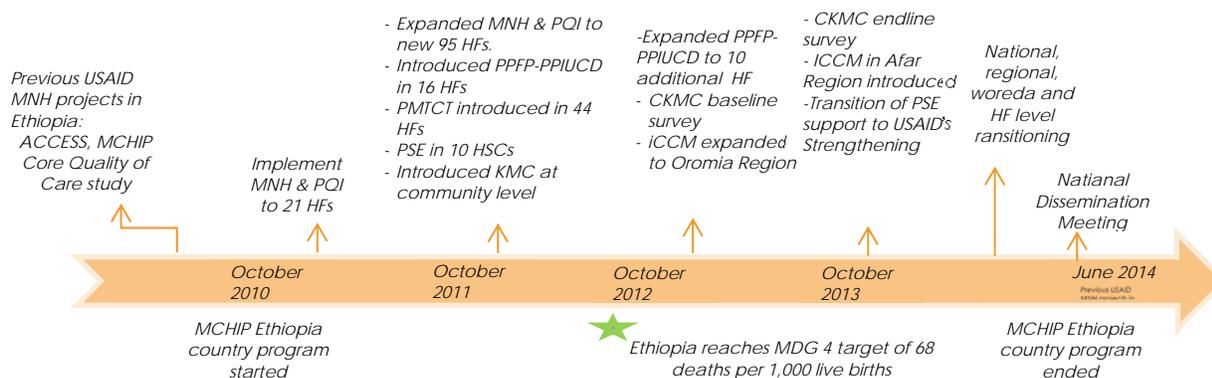
By health systems structure level, MCHIP's interventions included:

- **National and regional level:** strengthening MNH policies and initiatives, providing literature and evidence to improve MNH policies and scale-up, and building local capacity through the Ethiopian Midwives Association.
- **Facility level:** improving the quality of comprehensive MNH programs using a performance and quality improvement (PQI) approach with an integrated package of essential MNH care, including PMTCT and Kangaroo Mother Care (KMC), and introducing postpartum intrauterine contraceptive device (PPIUCD) insertion in selected facilities.
- **Community level:** implementing integrated community case management (iCCM) and implementing and evaluating the feasibility of Community KMC at the household level.
- **Education and training:** improving midwifery pre-service education (PSE) nationally and in selected regional midwifery colleges, and field-testing innovative approaches for in-service training in Basic Emergency Obstetrics and Newborn Care (BEMONC).

With support from MCHIP:

- 96,761 pregnant women were provided with quality ANC services
- 36,712 mothers who delivered in the facility received quality and respectful MNH care
- 42,540 pregnant women and mothers received HIV counseling and testing
- 20,000 pregnant women and mothers received PPFPP counseling and
- 1062 were provided with PPIUCD insertion
- 4,627 newborns born asphyxiated were successfully resuscitated.
- 24,245 newborns were kept in their mothers KMC at the facility and 5,022 at were kept in KMC at home
- 30,454 children under five years of age were registered and treated in iCCM

Figure 1. MCHIP Ethiopia Events



Key accomplishments are highlighted below by intermediate result.

IR 1: MNCH AND PMTCT SERVICES IMPROVED BY ENHANCING AND STRENGTHENING THE ENABLING ENVIRONMENT FOR MNH CARE

MCHIP actively participated in national MNH technical working groups (TWGs) and provided highly visible technical and financial support in the adaptation and standardization of MNH and quality improvement national policies, strategies, and training packages (See text box, right).

MCHIP conducted two reviews of key areas influencing MNH care, access and utilization: a literature review of cultural barriers for women seeking maternal health care and a documentation of nine existing promising MNH, FP and Reproductive Health practices in Ethiopia. Based on the findings, MCHIP actively advocated for the inclusion of respectful maternity care (RMC) in MNH care to be a national standard and introduced RMC to its supported facilities; a recommendation for the scale up of promising practices nationally was made to the FMOH.

National policies, strategies and guidelines MCHIP contributed to:

- MNCH Communication and Advocacy Plan
- Guidelines on Implementation of the Pregnant Women Forum
- Guidelines on Maternity Waiting Homes
- PMTCT Guidelines on Option B+ Treatment Protocols and National Roll-out
- Newborn Care Strategy
- Child Survival Strategy
- FP Training Strategy to include PFPF

National training packages that MCHIP contributed to:

- National BEmONC Training Package
- National FP Training Package inclusion of PFPF

MCHIP worked to strengthen the core capacity of the Ethiopian Midwives Association (EMA) to lead the professionalization of Ethiopia's midwives. EMA now has a stronger organizational capacity and stronger regional chapters and a wider reach with newly established regional chapters where previously they had little presence. The association is also providing substantial technical support to the FMOH and partners in key issues related to MNH and midwifery including the development of national guidelines on Codes of Conduct and Scope of Practice for midwives.

IR 2: AVAILABILITY, ACCESSIBILITY, AND QUALITY OF KEY MNH AND PMTCT SERVICES IMPROVED

Examples of MCHIP Scale-up in Ethiopia:

- Contracting out of quality improvement oversight
- Introduced and expanded facility-based KMC
- Introduced iCCM program in an emerging region
- Introduced and expanded PPIUCD services in Ethiopia
- Evaluated the feasibility of CKMC

MCHIP introduced the Standards Based Management and Recognition (SBM-R) approach as a performance and quality improvement (PQI) process to improve the quality of MNCH services in 116 supported facilities. Based on gaps identified during the SBM-R assessment, MCHIP provided need based BEmONC trainings to health providers in these facilities, donated essential equipment and supplies and ensured regular follow-up. As a result these health facilities were able to show marked increases in achieving MNH care standards from a baseline of 29% to 73% across three years. Improved

facility services from the introduction of SBM-R matched with simultaneous community demand generation by HEWs and the newly formed Health Development Army (HDA) volunteers, markedly increased institutional delivery from a baseline of 8.6% to 31% in MCHIP supported facilities. Similarly fourth antenatal care (ANC) visits increased from 5.9% to 21%. MCHIP also used a new "contracting-out of PQI" approach through direct financial assistance to

build local ownership of facilities and woredas/districts to independently lead the PQI process even beyond the program.

MCHIP began implementing PMTCT services with PEPFAR funding in FY12, supporting 44 facilities to integrate PMTCT in different MNCH service outlets to make services available in a one stop shop approach for mothers. The integration of PMTCT activities such as community outreach programs contributed to increased facility utilization. In two years' time, ANC coverage in PMTCT supported sites increased from the baseline 4.7 % (ANC) and 29.4% (PMTCT in labor and delivery) to 38.2% and 78% respectively. MCHIP documented the effects of integrated services as well as frequent and enhanced facility-level support on PMTCT as part of its program learning.

MCHIP's Gender Approach:

- Integrated culturally appropriate respectful maternity care in routine MNH services
- Improved male involvement in MNH care through PMTCT services; 14,950 (35.1%) of women were tested and received their results with their partners

MCHIP introduced Essential Newborn Care (ENC) services into 116 supported health facilities as part of comprehensive MNH care. MCHIP trained health workers in neonatal resuscitation for management of birth asphyxia, management of hypothermia in pre-term and low birth weight infants, and infection prevention and provided facilities with necessary equipment and materials, such as newborn suction and resuscitation devices. ENC services have visibly improved in all supported facilities⁷. From the total of 36,954 reported institutional deliveries, records indicated that 4,627 asphyxiated newborns were successfully resuscitated. Moreover, 24,245 mothers (65.5% of the total deliveries) practiced skin-to-skin contact as a component of KMC at supported health centers and hospitals. Nationally, MCHIP supported the FMOH and the Ethiopian Pediatric Society (EPS) to standardize newborn resuscitation (through the Helping Babies Breathe program) and ensure inclusion of KMC in the national ENC and BEmONC training packages.

In 2011-2012 MCHIP introduced and established postpartum family planning (PPFP) and provision of post-partum intrauterine contraceptive devices (PPIUCD) in 26 facilities. MCHIP trained providers counseled over 20,000 mothers on PPFP during ANC and performed 1,069 PPIUCD insertions for mothers who chose the method, representing 3% of mothers delivering in the facilities. MCHIP shared its PPFP/PPIUCD experiences in national and international forums, demonstrating MCHIP's technical leadership in this area and helping to convince the FMOH to incorporate MCHIP's PPIUCD training package (adapted from the Access to Maternal and Newborn Health Program (ACCESS)) into the national FP training package. MCHIP has created fertile ground for scale-up of quality PPFP/PPIUCD services in Ethiopia.

MCHIP was asked to support pre-service midwifery education nationally and in selected regional health science colleges. Nationally, MCHIP significantly contributed to the development of the curriculum for a new Accelerated Midwifery Education Program, a diploma-level program launched to address the national shortfall of midwives. MCHIP adapted the SBM-R approach to improve the quality of the education in 10 regional health science colleges and updated the existing educational standards for midwifery. MCHIP

In-service Training & mHealth:

- Provided various competency-based courses to a total of 5,207 health workers
- Piloted an innovative "blended learning" approach for in-service training for BEmONC to reduce time spent away from facilities.
- Tested the use of SMS technology for post training follow-up in BEmONC and PMTCT

⁷ Baseline data for ENC was not gathered; this is an observation from supportive supervision.

then built capacity of instructors to improve the quality of instruction with teaching skills and knowledge update courses. Skills labs were strengthened and equipped with anatomic simulation models and improving libraries with up to date national guidelines and resources. The overall support contributed to increasing the success rate of midwifery students in the national competency exam. The combined average exam pass of midwifery students from the supported schools increased from 40.3% (highest 56%; lowest 25%) in 2011 to an average exam pass of 54.6% (highest 67%; lowest 47.6%) at the end of 2012. In 2012-2013 MCHIP transferred its education efforts to the USAID funded Strengthening Human Resources for Health project that encompasses all midwifery schools in Ethiopia.

IR 3: CARETAKERS' KNOWLEDGE AND BEHAVIORS ON KEY MNH/POSTPARTUM/FP/PMTCT HOUSEHOLD AND CARE-SEEKING BEHAVIOR

Given that most deliveries take place at home in Ethiopia, MCHIP and the FMOH assessed the feasibility of introducing Community Kangaroo Mother Care (CKMC) to mothers to initiate CKMC in their homes using the HEW and HDA volunteers. MCHIP followed this with implementation in 2012 in communities surrounding 89 selected health posts in all four supported regions through 174 trained HEWs and more than 13,000 HDA volunteers. As a result 5,022 newborns were kept in KMC position (79% of the total deliveries reported by HEWs) over the life of MCHIP. A systematic evaluation of the program indicated that CKMC can be practiced by postpartum mothers at home with the support of HEWs and HDA volunteers.

MCHIP supported 29 woredas/districts in Oromia and later five woredas in Afar regions through trained HEWs and other health workers. To sustain the program, HEW supervisors, health workers and woreda health officers were trained as iCCM supervisors. In Oromia, the quality performance of HEWs in assessing, classifying, and treating significantly increased in the second round of the iCCM Performance Review and Clinical Mentoring Meeting (PRCMM), 80% compared to the first 64%. Similarly, in Afar, quality performance improved from 84% in the first round to 96% in the second round. MCHIP's iCCM program was the first iCCM intervention in the pastoralist region of Afar which initially presented a challenge in introducing the program. The service was gradually introduced through awareness creation events organized with the local authorities and community leaders.

KEY RECOMMENDATIONS

- Facilities' efforts to provide RMC are appreciated by women and are felt to contribute to the increases in facility births. At policy level the FMOH should incorporate RMC as standard in the MNH care and educate communities about the importance of and improvements to facility-based care using existing HEW and HDA networks.
- The FMOH should pursue the finalization of the National Comprehensive Health Service Quality Management Manual. A national tool will support the integration of quality in MNH, and will be applicable to both hospitals and health centers and owned in the health system.
- The EMA needs to continue strengthening its management capacity while maintaining appropriate representation in key stakeholder discussions to play a greater advisory role.
- The woreda-based blanket coverage of facility support initiated under MCHIP created more opportunities for cross-learning among facilities that were close to each other geographically, leveraged resources, and enhanced synergies. Coordination among partners is crucial to avoid duplication of efforts and where feasible, to work together in a harmonized effort.
- Health offices can improve outcomes of PMTCT services by using the "enhanced and integrated support" approach. Moreover for sustained results in PMTCT, MCHIP strongly

recommends better coordination mechanisms among the FMOH, RHB, and the pharmaceutical supplies agency (PFSA).

- From MCHIP's FP program experience, there is a demand for PPIUCD and the FMOH should consider expanding PFP and PPIUCD services using the platform created by MCHIP.
- Future newborn care programs must complement community-based newborn care. A recent government priority includes community-based newborn sepsis management, and use of chlorhexidine gel for cord care. These practices should be integrated with community-based newborn care programs, as well as the inclusion of the rotavirus vaccine and zinc tablets into infant and child survival strategies, and antenatal corticosteroids for preterm birth at facilities.
- Results of the CKMC evaluation of CKMC show that CKMC can be practiced by postpartum mothers at home with the help of HEWs and HDAs. MCHIP recommends scale-up by integrating CKMC in the counseling package of these cadres.

Introduction

Maternal, newborn, and child mortality in Ethiopia remains one of the highest in sub-Saharan Africa. Although there have been declines in maternal mortality during the last 20 years from maternal mortality ratios (MMR) of 871 per 100,000 in 1990⁸ to an estimated MMR of 673/100,000 in 2005 to the current figure of 676 per 100,000 live births (Ethiopia Demographic Health Survey [EDHS], 2005 and 2011, respectively), Ethiopia is still a long way from reaching its own Millennium Development Goal (MDG) for MMR (MDG 5) of 218 per 100,000 live births by 2015 (see Table 1). Infant mortality stands at 59/1000⁹, a 23% decrease from the 2005 EDHS, which was 77 deaths per 1,000 live births. Mortality for children under five has also shown a 28% decrease from 123 to 88 per 1,000 live births (EDHS 2005 and 2011 respectively), and Ethiopia recently met its MDG 4 target of 68 deaths per 1,000 live births.

The introduction of the outreach health extension program with service provision led primarily by HEWs is believed to have significantly contributed to the reduction of mortality in children toward achieving MDG 4 targets for the country¹⁰. However, utilization of proven high-impact interventions for the most common killers of infants and children under five is still very low. Only 27% of children with symptoms of acute respiratory infections and 31.4% with diarrhea (two weeks preceding the survey) were taken to a facility or provider. Similarly, only 6% of children under the age of five with fever in malaria endemic areas received anti-malarials; less than 2% of them within the first two days (2011 EDHS).

The 2011 EDHS estimates a national average HIV prevalence of 1.5%, with a higher prevalence seen among women (1.9%) than men (1.0%). Ethiopia's prevention of mother-to-child transmission of HIV (PMTCT) program has recently received considerable national attention with efforts to increase the number of HIV-positive pregnant women on treatment, and the recent adoption of the Option B+¹¹ treatment approach for positive mothers, essentially "treatment for life." Current data show of an estimated 43,731¹² HIV-infected pregnant women, less than 10% (3967)⁴ received antiretrovirals (ARVs) in 2011.

Additional indicators for maternal health show a very low facility usage rate, with a skilled birth attendant (SBA) delivery rate of 10% (EDHS 2011), one of the lowest rates in Africa. Low facility usage rates undoubtedly also present as a barrier to uptake of PMTCT services. It is believed that some of the factors contributing to the low institutional delivery rate are access to health services, cost of services, and perceptions about poor quality of care (including lack of qualified, skilled staff, lack of essential emergency services, and services that are not culturally sensitive or do not provide women-friendly care). Obstructed labor, ruptured uterus, severe pre-eclampsia/eclampsia and postpartum hemorrhage account for most maternal death in the country.¹³

⁸ MOFED. 2012. Assessing Progress towards the Millennium Development Goals. Addis Ababa, Ethiopia.

⁹ Central Statistical Agency [Ethiopia] and ORC Macro. 2011. *Ethiopia Demographic and Health Survey 2011 – Preliminary Report*. Central Statistical Agency and ORC Macro: Addis Ababa, Ethiopia and Calverton, Maryland, USA. Other estimates include 51/1000 (Countdown to 2015; 2008 Report).

¹⁰ Knippenberg R et al. 2005. Systematic scaling up of neonatal care in countries. *Lancet* 365: 1087-1098.

¹¹ Provide all HIV-positive pregnant or breastfeeding women with a course of antiretroviral drugs to prevent mother-to-child transmission. A triple-drug antiretroviral regimen should be taken throughout pregnancy, delivery, and breastfeeding - continuing for life, regardless of CD4 count or clinical stage. WHO Guidelines for PMTCT and Breastfeeding, July 2013.

¹² FMOH/FHAPCO 2011/2012.

¹³ National Baseline Assessment for Emergency Obstetric and Newborn Care 2008.

Gains have been made in FP with contraceptive usage increasing from 14% to 27.3% (EDHS 2005 and 2011). However, analysis of the 2011 EDHS reported an unmet need for postpartum FP of 81% within the first 12 months postpartum.

MCHIP initiated activities in Ethiopia in 2009. USAID for Ethiopia was already providing considerable support to the GoE to address its maternal, neonatal, and child mortality and morbidity priorities, mostly through award mechanisms, including ACCESS, to support midwifery education and develop a national program for HEWs in clean delivery. MCHIP core funds were provided in 2009–2010 to conduct a national quality of care study. In 2010 MCHIP was asked to expand upon these efforts and address gaps identified in country reviews and evaluations¹⁴.

KEY MCHIP PERFORMANCE AND MONITORING PLAN INDICATORS

INTERMEDIATE RESULT 1

- NUMBER OF STUDIES

INTERMEDIATE RESULT 2

- NUMBER OF DELIVERIES WITH AN SBA
- NUMBER OF FIRST ANTENATAL CARE VISITS BY SKILLED PROVIDERS
- NUMBER OF CLIENTS UNDERGOING POSTPARTUM INTRAUTERINE CONTRACEPTIVE DEVICE INSERTION
- NUMBER OF PREGNANT WOMEN WHO WERE TESTED FOR HIV AND KNOW THEIR RESULTS
- PERCENTAGE OF HIV-POSITIVE PREGNANT WOMEN WHO RECEIVED ARV TREATMENT TO REDUCE THE RISK OF MOTHER-TO-CHILD-TRANSMISSION
- PERCENTAGE OF MCHIP-SUPPORTED HEALTH FACILITIES DEMONSTRATING INCREASED COMPLIANCE WITH CLINICAL STANDARDS OVER BASELINE
- NUMBER OF HEALTH WORKERS TRAINED BY CADRE ON MATERNAL AND NEWBORN HEALTH AND FAMILY PLANNING SERVICES

INTERMEDIATE RESULT 3

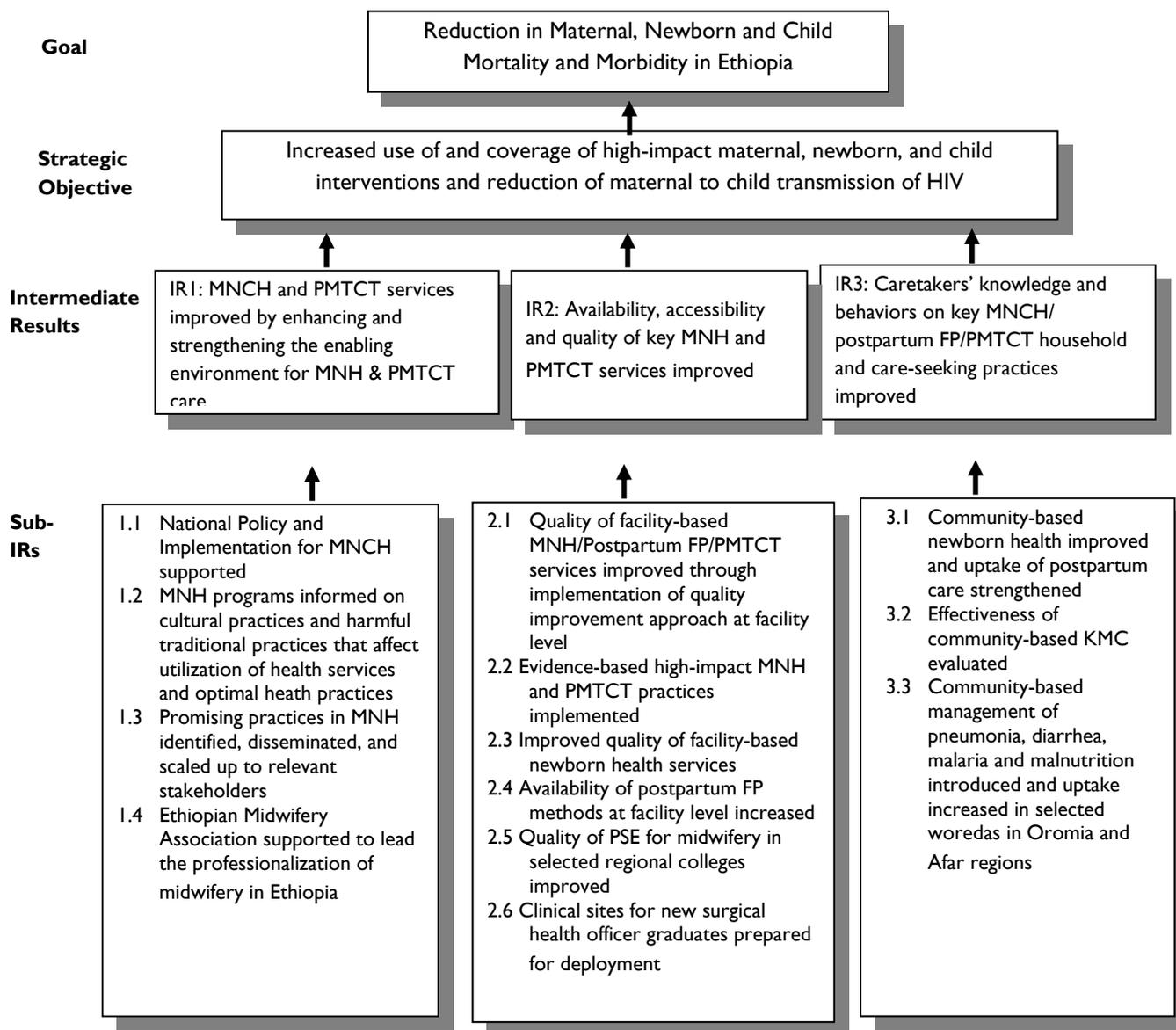
- RATIO OF TREATED PNEUMONIA CASES TO EXPECTED CASES BY INTEGRATED COMMUNITY CASE MANAGEMENT CONDITION IN A GIVEN CATCHMENT AREA
- RATIO OF TREATED DIARRHEA CASES TO EXPECTED CASES BY INTEGRATED COMMUNITY CASE MANAGEMENT CONDITION IN A GIVEN CATCHMENT AREA
- RATIO OF TREATED MALARIA CASES TO EXPECTED CASES BY INTEGRATED COMMUNITY CASE MANAGEMENT CONDITION IN A GIVEN CATCHMENT AREA

The goal of the MCHIP Ethiopia program was to reduce maternal and newborn morbidity and mortality in the country, with a strategic objective of increasing the use of and coverage of high-impact maternal and newborn interventions, including the reduction of mother-to-child transmission of HIV. MCHIP implementation regions were the four USAID priority regions: Amhara, Oromia, Tigray, and SNNPR; Afar region was added later to the program.

MCHIP Ethiopia's results framework has evolved over time in response to GoE priorities and emerging needs and changes in other USAID-funded programs. The results framework presented here is the most recent (2012-2013) and includes activities that were transitioned or modified (See Figure 2 below).

¹⁴ National Baseline Assessment for Emergency Obstetric and Newborn Care 2008; Health Sector Development Plan Mid-term evaluation: Joint Review Mission of 2009; Integrated Family Health Project Mid-term evaluation: Report of the Phase 1 review, 2010.

Figure 2. MCHIP Results Framework

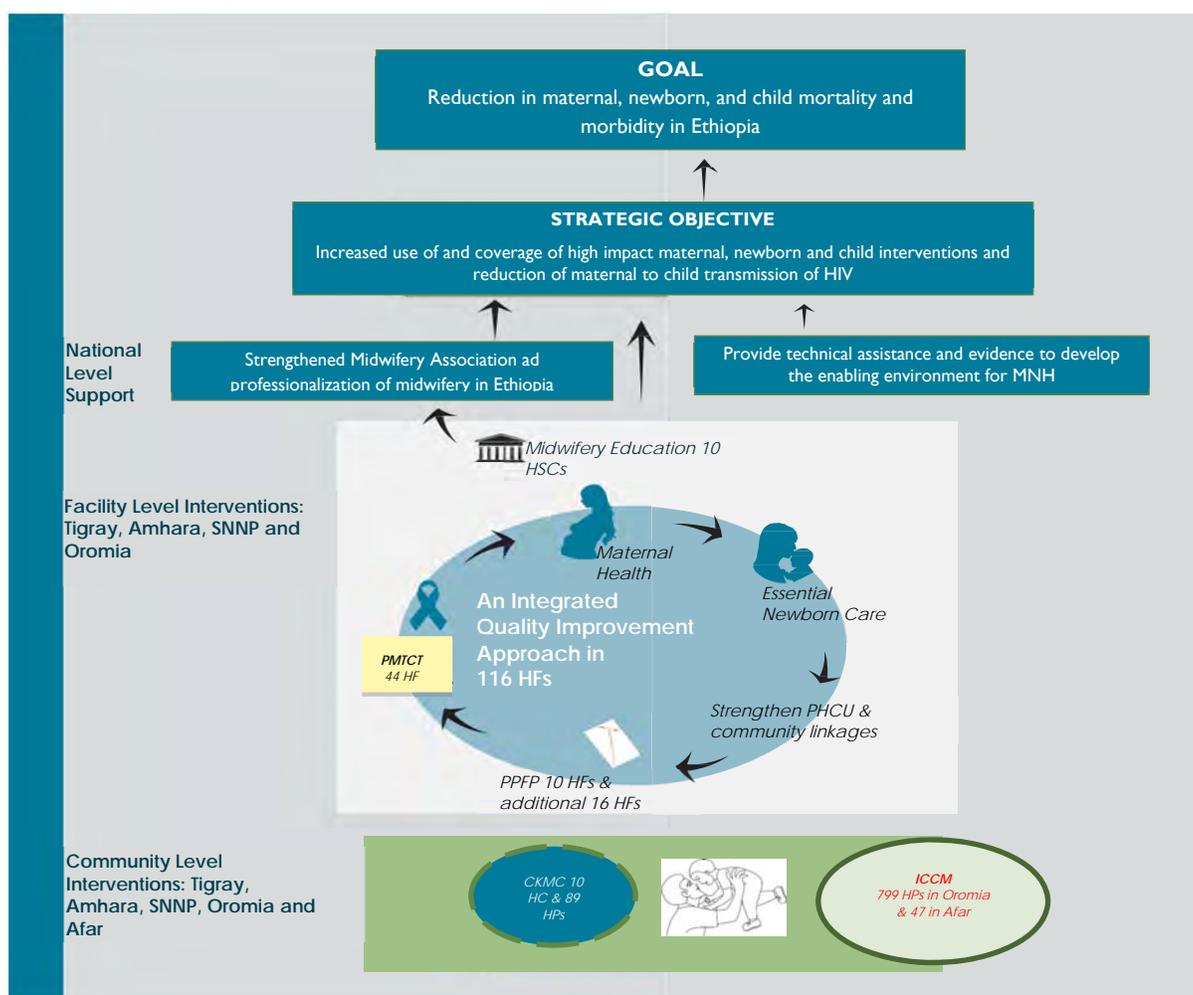


MCHIP’s facility-level support was directed at woredas in Amhara, Tigray, SNNP, and Oromia regions that were not receiving partner support for maternal, newborn or PMTCT. Selection of sites was done through extensive consultation with USAID, regional health bureaus (RHBs), their zonal counterparts, and partners including the Integrated Family Health Project (IFHP) to ensure there was no site overlap. Where feasible a “blanket woreda” coverage approach was taken to reach all woredas in a selected zone. Sites for iCCM and the integrated surgical health officers support were determined by the FMOH.

Table 1. Summary of MCHIP Intervention Sites by Intervention and Facility Type

REGION	MNH SERVICES & PERFORMANCE QUALITY IMPROVEMENT		PMTCT	POSTPARTUM FAMILY PLANNING-POSTPARTUM INTRAUTERINE CONTRACEPTIVE DEVICE		COMMUNITY KANGAROO MOTHER CARE	ICCM		PRE SERVICE EDUCATION
	Health Center	Hospital	Health Center	Health Center	Hospital	Health Post	Health Center	Health Post	Health Science Colleges
Tigray	16	3	-	2	3	1	-	-	
Amhara	23	4	24	4	2	3	-	-	5
Oromia	12	3	8	4	4	2	111	796	2
SNNPR	9	2	12	-	3	4	-	-	3
Afar	-	-	-	-	-	-	7	47	
Other Regions	-	-	-	3	1		-	-	
Total	60	12	44	13	13	10	118	843	10

Figure 3. Diagram of MCHIP's Program Implementation Approach in Ethiopia



Major Accomplishments

IR 1: MNCH AND PMTCT SERVICES IMPROVED BY ENHANCING AND STRENGTHENING THE ENABLING ENVIRONMENT FOR MNH CARE

1.1 Support National Policy and Implementation for MNCH

The reduction of maternal, newborn, and child deaths is a priority for the GoE. The Health Sector Development Program IV (HSDP IV) prioritizes increasing MNCH service coverage in ANC, PMTCT, skilled care at birth, postpartum care for mother and baby, and access to FP. With the support of local and international partners, the FMOH seeks to create an enabling policy environment to improve MNCH services in the country.

National policies, strategies and guidelines

MCHIP contributed to:

- MNCH Communication and Advocacy Plan
- Guidelines on Implementation of the Pregnant Women Forum
- Guidelines on Maternity Waiting Homes
- PMTCT Guidelines on Option B+ Treatment Protocols and National Roll-out
- Newborn Care Strategy
- Child Survival Strategy
- FP Training Strategy to include PPF

National training packages that MCHIP contributed to:

- National BEmONC Training Package
- National FP Training Package

Throughout the life of MCHIP, the project supported the GoE with advocacy and inputs into a number of GoE policies, guidelines, and strategies to improve the service delivery for women and children. In its first year of implementation, MCHIP explored the possibilities to revitalize the previously established, but no longer functional, White Ribbon Alliance (WRA) in Ethiopia to serve as an MNCH advocacy platform. However, the FMOH considered that advocacy for Safe Motherhood could be sufficiently addressed by the existing (draft) National MNCH Communication and Advocacy Plan of the FMOH. MCHIP worked to ensure that the core WRA principles were represented in the various TWGs that were engaged in the finalization and implementation of the National MNCH

Communication and Advocacy Plan, contributing to the review and finalization. The plan has been used as a guide to implement and coordinate the national and regional Safe Motherhood (SMH) Campaigns that have been held since 2012.

MCHIP supported the FMOH and the RHBs by actively participating in their TWGs for Safe Motherhood, child survival, PMTCT and other related TWGs. This support encompassed technical and financial aspects to enhance and strengthen the enabling environment for MNCH. MCHIP and the other TWG members played a significant role in developing and reviewing new guidelines and strategies or ensuring that existing documents were updated to reflect current evidence and policy changes in MNH. Some of the highlighted documents (see also the text box above) that MCHIP made a significant contribution at the national level were:

- Finalization and standardization of the national training packages for BEmONC. MCHIP was at the forefront of national ENC training efforts to integrate HBB into existing training packages rather than as a standalone initiative; subsequently the national ENC training package was standardized to ensure consistency with HBB training materials.
- Inclusion and standardization of community-based newborn care and newborn resuscitation into the revised child survival strategy.
- Updated the PMTCT guidelines to reflect the adoption of the Option B+ treatment protocols.
- Reviewed and updated the National FP Training Package to ensure postpartum FP is sufficiently addressed, and the inclusion of a new section on insertion of a postpartum intrauterine contraceptive device (PPIUCD).

- Development of the National Comprehensive Health Service Quality Management Manual. This was done by assessing and adapting key elements from existing quality improvement approaches used in the country by partners working in MNCH such as MCHIP's Standards-Based Management and Recognition (SBM-R).
- Supported the development of an assessment for human resource needs for the maternity workforce through the Global High Burden Countries Initiative. The multi-partner collaboration with in-country funding from MCHIP led to a final report outlining the need of an expanded maternity work force and presentation of potential "best gains for your investment" scenarios. The report is with the Minister for Health who is considering its application.

At the regional level, MCHIP provided technical assistance to the primary health care units (PHCUs) and the pregnant women fora to support government strategies to generate demand and promote institutional delivery by skilled providers. The newly formed PHCU structure consists of a health center closely linked to five satellite health posts and one district hospital. The monthly PHCU meetings were used as a regular platform for monthly updates on MNCH intervention implementation and challenges met by health center and health post staff. The monthly pregnant women's forum informs and educates communities on birth preparedness/complication readiness and the services provided by the health center and how these services are tailored to women and their families. The fora helped build trust with the community and health care providers and encourage women to seek skilled care.



A forum organized by health workers in the Homecho Health Center for pregnant women and recently delivered mothers

MCHIP also developed job aids and key messages on RMC for health care providers. RMC is integrated into MNH services and has been well implemented in MCHIP-supported facilities. Upon request from the FMOH, MCHIP and United Nations Population Fund (UNFPA) collaborated on the production of a video documentary on good practices in promoting facility-based birth in two selected woredas (districts); one of these woredas is supported by MCHIP. The FMOH intends to promote "home-delivery-free-kebeles" (neighborhoods) during future national Safe Motherhood campaigns and inspire other woredas to reduce the number of home deliveries in their catchment area by learning from the exemplary work of these two woredas.

1.2 Inform MNH Programs on Cultural and Harmful Practices That Affect Utilization of Health Services, as Well as Identify Optimal Health Practices

At the request of USAID, MCHIP conducted a literature review to better understand why institutional delivery still remains low in the country despite various progressive national strategies implemented. The literature review, completed in December 2012, identified cultural practices, perceptions, and beliefs that influence women's decisions to seek facility-based maternal health care in Ethiopia. The review also consisted of discussions with providers on their perceptions of cultural barriers that affect women and their families using facility-based MNH care.

MCHIP's literature review suggested that women's weak decision-making power in society can prevent them from attending routine visits in health facilities. Beliefs in some communities that pregnancy and childbirth are low risk or fear of exposure to the "evil eye" if mothers leave the house within 10 days after childbirth inhibit women from seeking maternal health care in a

timely manner. Health facilities themselves were found to be seen as barriers to maternal health care. Negative views of modern medicine, affordability, dissatisfaction with providers' medical advice or management, and absence of female care providers can limit mothers from going to the health facility.

MCHIP recommends that the GoE educate communities using the existing HEW and HDA networks and their leaders about the dangers associated with unassisted deliveries and the importance of facility-based care. Facilities must also strengthen women-friendly services by availing female midwives and incorporating known cultural preferences into facility-based deliveries. (For more detail, see full report on [Cultural Barriers](#)).

The report was disseminated to the FMOH, partners, and stakeholders for their reference for future MNH programming. MCHIP used the findings to modify its own implementation approach and integrated RMC into the MNH services in MCHIP-supported facilities. (This integration is more fully described in IR 2.)

1.3 Identify Promising Practices in MNH, Dissemination, and Scale-Up

Implementing and promoting promising MNH practices that are effective, efficient, and scalable is a priority for the GoE. MCHIP also took the lead in assessing and documenting existing MNH promising practices in the country. During 2012 and 2013, MCHIP collaborated with the FMOH to request implementing partners to submit their considered promising practices in MNH, reproductive health (RH), and FP (the latter two were added at the request of the FMOH). Short-listed practices were then physically verified and documented. Nine promising MNH practices were selected, and the report was shared with the FMOH for consideration for future scale-up. Among the promising approaches documented are MCHIP's performance quality improvement (PQI) approach and approach to ensuring competency-based BEmONC training. Other findings included Cervical cancer screening, FP and HIV integration, social change to obtain results in FP, and Sexual and RH in emergencies.

Other successful practices also exist and MCHIP recommended that documentation and dissemination of promising practices be a continuous process. The full detail of the report, "Promising Practices in Maternal and Newborn Health and Family Planning and Reproductive Health in Ethiopia" can be accessed at [\[Promising Practices\]](#)

1.4 Support the Ethiopian Midwife Association to Lead the Professionalization of Midwifery in Ethiopia

Throughout the project, MCHIP built on the efforts of the former ACCESS Program and collaborated with the EMA to further strengthen the EMA's ability to lead the midwifery's professionalization in Ethiopia. MCHIP signed a Memorandum of Understanding with the EMA and helped the association in various significant core capacity-building activities that enables it to play a significant role in closing gaps in midwifery-led care in Ethiopia.

The progress made by the EMA in leading the professionalization of midwifery in Ethiopia has been considerable over the last years. Although EMA has received support from other agencies, MCHIP has played a major role in strengthening the association's organizational capacity and raising its profile both in public and with policymakers. These efforts have resulted in an increasing contribution of the EMA in national and regional MNH care and the

'I learnt that when we respect women and approach them in a friendly way, they listen to our advice and follow it.'

-Zinabua Girmay, Midwife and member of EMA

maternal health workforce initiatives, strengthening midwifery competencies, and adherence to a newly developed code of practice.

MCHIP also supported the EMA secretariat and board members to develop their human resource and financial management through development of manuals in these two areas. This enhanced management capacity of the EMA has led to tangible results including the receipt of direct grants from international donors to further their work in strengthening the midwifery profession. Regionally, MCHIP supported the EMA to strengthen its chapters for Oromia and Amhara regions. This effort was done by organizing and facilitating consultative meetings with the regional chapters and identifying how to increase membership of the EMA in these regions.

With MCHIP support, the EMA led the development of the National Guidelines on the Code of Conduct and Scope of Practice for Midwives. These guidelines will eventually lead to establishing a system of midwifery regulation and licensure. The EMA was also an active participant in the review of the new Accelerated Midwifery Education curriculum. The development of the EMA's newsletter, as well as messages for the public to highlight the critical role midwives play in MNCH care, was also supported technically and financially by MCHIP.



EMA members practicing skills demonstration during MCHIP's knowledge update session

Since 2011, MCHIP has supported the EMA to celebrate the annual International Day of the Midwife to bring greater public attention to the valuable work midwives do. Similarly, EMA's Annual General Assemblies were also supported. The EMA used these large gathering of midwives as an opportunity to provide midwives with knowledge and skills updates. A total of 525 EMA members participated in three update sessions held during the life of MCHIP. The participant evaluations from the three successive updates revealed that participants found the updates beneficial to their practice. The EMA also initiated the annual Midwife of

the Year Award designed to recognize exemplary midwives and motivate members; to date 15 midwives were recognized at national and regionally for their significant contribution to the midwifery profession.

Through MCHIP, EMA was able to initiate networking among 31 health science colleges and universities to work on promoting the midwifery profession and improving the quality of midwifery education in Ethiopia. As a result, the colleges have started sharing human expertise and teaching materials among themselves. In addition, some of the schools have established midwifery student clubs that are actively promoting the midwifery profession by orientating new midwifery students.

To sustain the gains made by the MCHIP and EMA collaboration, the EMA needs to continue strengthening its existing management capacity. It also needs to ensure that it is maintaining technically appropriate representation in key stakeholder discussions and play a greater advisory role to the FMOH in midwifery workforce-related matters.

IR 2: AVAILABILITY, ACCESSIBILITY, AND QUALITY OF KEY MNH AND PMTCT SERVICES IMPROVED

2.1 Quality of Facility-Based MNCH/PP/FP/PMTCT Services Improved through Implementation of Quality Improvement

In April 2010 prior to the MCHIP Ethiopia field support program, MCHIP used core funds to conduct the Quality of Care study for Prevention and Management of Common Maternal and Newborn Complications in seven regions Ethiopia. This study was conducted in collaboration with USAID, FMOH and the Ethiopian Society of Obstetricians and Gynecologists and aimed to determine the frequency and quality of interventions that address direct causes of maternal and neonatal deaths. In 19 busy hospitals, MCHIP observed the knowledge and skill health care providers at managing postpartum hemorrhage, pre-eclampsia/eclampsia, obstructed labor, postpartum sepsis in mothers and newborns and provision of essential newborn care.

Findings revealed that the quality of care observed during the study was often below internationally accepted standards for ANC, labor and delivery practices, and ENC and called for a concerted countrywide drive to improve the quality of care. The study recommended the need to integrate evidence-based practices and quality assurance processes at all hospital levels that include supportive supervision, routine clinical and quality audits as well as making the FMOH's Management Protocol on Selected Obstetrics Topics widely available. Retention and capacity building of health workers focusing on the signal functions for basic and comprehensive emergency obstetric care were also recommended. The findings and recommendations of the Quality of Care study guided the need for and content of QOC improvement activities for maternal and newborn care at all hospital levels and further helped to design an appropriate strategy on improving MNH care. The MCHIP Ethiopia program work plan designed later that year used the findings of this study to inform the quality of MNH care component.

The full report, "Quality of Care study for Prevention and Management of Common Maternal and Newborn Complications" can be accessed at [\[https://www.k4health.org/sites/default/files/Ethiopia_QoC_formatted_final.pdf\]](https://www.k4health.org/sites/default/files/Ethiopia_QoC_formatted_final.pdf).

2.1.1 PQI

MCHIP introduced a PQI process, SBM-R, to improve the quality of facility-based MNCH services in the health facilities it supported. SBM-R uses detailed operational, observable performance standards for site assessment and problem-solving. Increasing compliance with these operational standards is also tied to recognition. In 2010-2011, SBM-R was introduced to 21 facilities in the four regions (15 health centers and six hospitals) followed by an expansion in 2011-2012 to an additional 95 health facilities. In consultation with the RHBs and USAID partners including the IFHP, a woreda (district) "blanket coverage" approach was used to select health facilities for expansion. To roll out use of SBM-R, MCHIP orientated woreda health officers and health facility staff in its use through three rounds of modular workshops. The first module workshop was an introduction to MNCH performance standards followed by a baseline assessment to identify gaps in provision of MNCH services in their respective facilities. In response to these identified performance gaps, MCHIP trained 177 skilled providers on BEmONC to improve their knowledge, skills, and attitude to provide quality essential MNH care. The training helped them to develop confidence in identifying and managing complications during pregnancy, labor, and the postpartum period. To supplement this training, MCHIP also donated and distributed essential medical supplies and equipment to all 116 sites identified as gaps during the baseline assessment. These included items such as newborn weighing scales,

autoclaves, examination beds, delivery beds, baby towels and hats, and infection prevention supplies.

By referring to the results from the SBM-R assessments to inform planning, facilities mobilized resources, either within their facility using the facility income from the health care financing scheme or by advocating with the woreda for additional resources such as staff. MCHIP provided routine follow-up to facilities to ensure proper implementation of SBM-R.

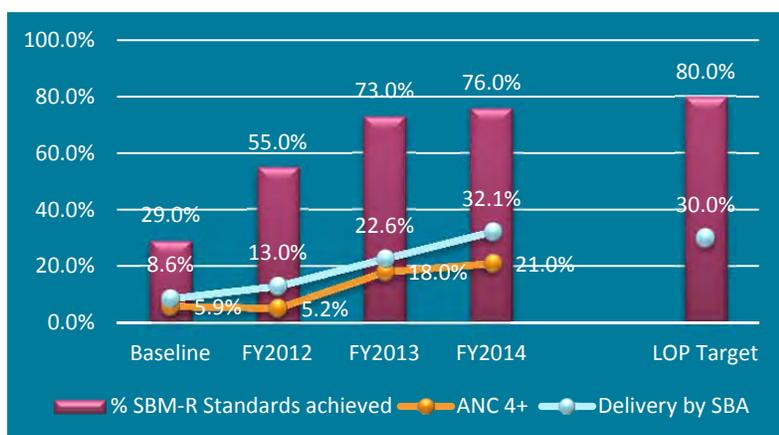
“...When we began to standardize health service in our facility, we focused not just on the hospital but the institution itself as a whole. Our transformation was certain because the smaller changes led to a bigger impact. That’s why the outcome of SBM-R was more visible in this hospital.”

- Members of the Quality Management Team, Shashemene Referral Hospital

Since the SBM-R approach was introduced in these facilities, an overall increase in the quality of MNH services has been noted that includes: improved treatment of pregnant women and mothers, more effective management of basic emergency obstetric complications, improved newborn resuscitation, and timely referral. These improvements were accompanied by increases in institutional delivery, first and fourth ANC visit, and postpartum care visits in the facility (See Figure 4). Although MCHIP accepts that there are a number of newly introduced initiatives such as the HDA that are likely to have supported increased facility utilization, MCHIP and SBM-R performance assessment data suggest that SBM-R is

contributing greatly to the improvements seen in the quality of MNCH service delivery. This, in turn, may be having an effect on service utilization in combination with other community-based demand generation activities that were also reinforced in the facilities by MCHIP.

Figure 4. MCHIP-Supported Sites Average ANC and SBA Utilization and Facility MNH Service Improvement Compared with Targets for the Life of Project (LOP), 2011–2014



The last SBM-R module focuses on institutionalizing and sustaining the change process within the health system and expanding it up to other areas within the facility or even to other facilities. After witnessing radical changes made using SBM-R, some facilities including Shashemene Hospital adapted the SBM-R tool and expanded its use to its other departments. Hadiya Zone in SNNPR supported by MCHIP, initiated a benchmarking visit in the two best performing Morsito and Homacho health centers for non-MCHIP health centers. To disseminate the gains of PQI to other facilities, MCHIP used seven special “knowledge-sharing events” at the facility level among key MNH stakeholders, health managers, providers, including clients from MCHIP-supported and non-supported zones, woredas, and health facilities. These events demonstrated how the PQI process using SBM-R has empowered providers and managers to assess and address performance gaps in MNH service delivery.

Furthermore, these events helped build local ownership and sustainability for quality improvement efforts.

Recognition of achievement is a critical element in the SBM-R process. Facilities from the initial group of 21 that had been implementing SBM-R since 2011 and had matured in the PQI process were used as benchmarks for other facilities and were then recognized for their progress upon achieving an internal monitoring assessment result of a minimum of 80% (for each area). Thus,



A woman in labor receiving prayer from her relatives during the coffee ceremony

Arsi Negele, Homicho, Hagerselam, and Kombolcha-02 Health Centers (from Oromia, SNNP, Tigray, and Amhara, respectively) were inspected by external verifiers and were publicly recognized for their success during recognition events organized by MCHIP. The recognition motivated the health facility management and staff to work harder and sustain their result and helped health facilities to promote their improved services and strengthened their bond with their community. For the other facilities not publically recognized, they will continue to work on closing their gaps under the leadership of the woreda and zonal health officers.

To date, MCHIP has trained a total of 1,841 health workers, woreda, zonal, regional health officials, and MNCH experts in SBM-R. Persistence, commitment, and systematic change management in MCHIP-supported facilities have led to recognition and accolades at woreda, zonal, and regional level. In one example, woredas that received MCHIP support received recognition in the form of certificates to trophies and even a motorcycle from their respective RHBs. Two hospitals supported by MCHIP, Nigist Eleni Memorial and Debre Berhan hospitals, were recognized and received prize money of 1 million Ethiopian Birr each (more than USD 50,000) from the GoE.

MCHIP has been leading the integration of RMC into routine MNH care. The project used the findings from the literature review on Cultural Barriers to Seeking Maternal Health Care to help MCHIP better understand how women-centered, culturally-sensitive care is understood and perceived, how it can be integrated, and what, if any, regional adaptations need to be made. The SBM-R tool is a constant reminder for health care providers to integrate culturally appropriate RMC as standard MNH care. These efforts are appreciated by women and their families and are felt to contribute to the increases in utilization seen in MCHIP-supported facilities.

Examples of RMC that MCHIP has supported providers to integrate into routine care include:

- 1 Inviting pregnant women to tour the health facility prior to delivery to observe the facilities' preparedness and allay fears about delivering in a facility
- 2 Re-organizing service outlets in the facility to have all MNH services in one part of the facility
- 3 Maintaining privacy, allowing women to deliver in positions of their choice, allowing companionship during labor and delivery
- 4 Designating areas where women in early labor and their families can stay and prepare coffee and traditional foods and hold religious rituals that play an important role in the birthing process

MCHIP organized a supervisory skills training for 42 regional, zonal, and woreda health experts to improve their knowledge and skills in conducting effective supportive supervisions in their respective woredas.

To strengthen implementation, institutionalization and ownership of PQI in Amhara, Oromia, Tigray, and SNNP regions, MCHIP utilized an innovative “**contracting out**” approach, or provision of direct financial assistant to woredas and health centers. Eleven woredas were

provided with small grants to monitor and support PQI roll-out within their health centers through supportive supervision and fostering learning for non-supported facilities through benchmarking visits. Similarly, to complement facility-level PQI efforts, MCHIP provided small grants to 15 selected health facilities to perform minor restoration of their MNH units to make them more appealing to clients such as repairing broken water taps, and installing curtains for privacy.

Finally, MCHIP concluded PQI efforts under the program with a systematic evaluation of the impact of SBM-R in improving MNH services of supported facilities. The study is a comparison of MNH service performance between selected MCHIP supported health facilities with their non-MCHIP supported counterparts. The full report will be completed and available after September 2014.

2.1.2 BEmONC

MCHIP piloted and documented an innovative “**blended learning**” approach for in-service training of BEmONC. Blended learning utilizes a combination of approaches including home study before the course, use of mobile technologies to facilitate learning, and a reduction of the number of hours spent in the classroom, and away from the work place. MCHIP conducted three rounds of training for 44 providers. The knowledge sharing is centered on key signal functions and reinforces key knowledge using a variety of knowledge tests including case studies, small group discussions on case scenarios, role plays, and skill demonstration, and practice sessions using anatomic models. Participants then move to the skills practice, as per the standard BEmONC training package. At the end of the classroom-based training and for the two months that follow, participants receive a daily short message service (SMS) question related to their BEmONC training for which they will receive a response as to how they answered. If the participants fail to respond, reminders are sent. Participants are awarded the course certificate only after they both complete a series of SMS questions, which are considered part of the training, and pass the post-training skill and knowledge assessment exams. The follow-up knowledge and skills assessment results showed that the retention of knowledge and skills learned during training overall are the same as the standard 3-week off site BEmONC training. The blended learning approach reduces the number of days that the providers are out of their facility without compromising the training quality and hence can be a cost-effective alternative approach for in-service-training. The full report “Experience of Blended Training Approach in BEmONC in Ethiopia” will be completed after the submission of this final project report.

2.1.3 Addressing Pre-eclampsia and eclampsia using magnesium sulfate

MCHIP introduced another innovative approach—the “Active-Audit-Feedback” intervention—to reduce maternal morbidity and mortality through increased and appropriate use of magnesium sulfate ($MgSO_4$) for women who develop severe pre-eclampsia and eclampsia (PE/E). This intervention was financed by MCHIP core funds and introduced in six hospitals selected for their high caseloads: Debre Berhan, Arbaminch, Dessie, Felegehiwot, Nigist Eleni Mohammed Memorial, and Shashemene Hospitals. First, a technical update and interactive video-based training was given for facility-based obstetric care providers on the use of $MgSO_4$ as part of the management of severe PE/E. A one-day orientation workshop was also provided to facility MNH clinical leaders and MCHIP zonal officers. This interactive video was developed by MCHIP’s global MNH team and distributed to all hospitals to be used for the initial training, as well as for ongoing knowledge and skill update exercise. Following this, every three months (or more, where feasible) a regular review of service statistics (an “audit”) of the $MgSO_4$ utilization was conducted followed by feedback to increase awareness and correct use among health care providers. A baseline and endline assessment were also conducted in these hospitals by reviewing records and assessing the knowledge and confidence of providers on the management

of severe PE/E to determine if the approach resulted in increased and appropriate use of MgSO₄ for women with severe PE/E overtime. The endline assessment showed improvements in the management of cases with PE/E, the documentation of records and the availability of drugs (MgSO₄ and calcium gluconate). MCHIP recommends for further scale up this intervention and for it to be strongly considered by other MNH programs.

2.2 Evidence-Based, High-Impact MNH and PMTCT Practices Implemented

According to the Accelerated Plan for Scaling-up of Prevention of Mother-to-Child Transmission (PMTCT) of HIV Services in Ethiopia¹⁵, PMTCT services that were being provided in health facilities were serving only 54% of all pregnant women attending ANC services. As a result, the GoE called for an ambitious expansion of PMTCT services to reach a target of 90% of pregnant women accessing ANC services, and for ARV prophylaxis to be made available to more than 80% of the HIV-positive pregnant women and breastfeeding mothers. In response to this accelerated plan, in 2011-2012, MCHIP initiated PMTCT interventions as part of a comprehensive MNCH program in 44 selected health centers in Amhara, Oromia, and SNNP regions. Selection of sites was done in consultation with RHBs and partners to ensure that there was no site overlap. Baseline data were collected from these facilities before implementation of services; the average ANC and skilled birth attendance coverage in the facilities was 38.2% and 4.7%, respectively. Neither PMTCT nor HIV testing and counseling services were previously being provided by these facilities to any segment of the population.



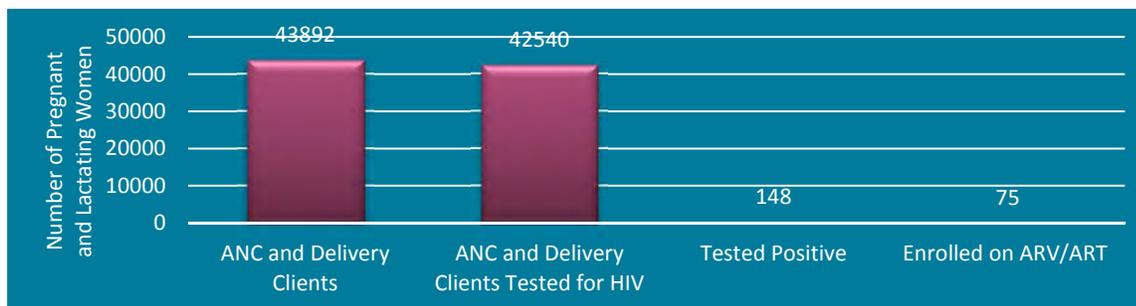
An HIV-positive mother came for follow-up on the 45th day in Leguma Health Center. During her appointment, the midwife advised her on the continuous use of ARV prophylaxis for her baby.

On a national level, MCHIP supported the revision of PMTCT guidelines, based on the revised World Health Organization (WHO) PMTCT guidelines, training packages, and the development of Continuous Quality Improvement (CQI) tools. MCHIP also provided 109 health care workers with training using the basic National Comprehensive PMTCT/MNCH/Reproductive Health training materials at the start of implementation. Refresher training was provided to update those health workers who had been previously trained in PMTCT on the revised Option B+¹⁶ treatment approach. A total of 42,540 pregnant and breastfeeding mothers who accessed ANC and labor and delivery services at the health center (97% of ANC and labor and delivery clients) were tested and counseled for HIV and received their results. Of these 148 pregnant women tested positive for HIV and subsequently 75 received ARVs (47 for maternal AZT and 28 triple ART/Option B+), 51 were already on Highly Active Antiretroviral Treatment (HAART), 17 were referred to other ART sites after WHO clinical staging assessment and 5 mothers were lost to follow-up. In addition, 52 HIV-exposed infants (HEI) were identified and were all provided with ARV prophylaxis. (see Figure 5 below).

¹⁵ Federal Ministry of Health, 2011.

¹⁶ Provide all HIV-positive pregnant or breastfeeding women with a course of ARV drugs to prevent mother-to-child transmission. A triple-drug ARV regimen should be taken throughout pregnancy, delivery, and breastfeeding—continuing for life, regardless of CD4 count or clinical stage. WHO Guidelines for PMTCT and Breastfeeding, July 2013.

Figure 5. PMTCT Services Cascade in 44 MCHIP-Supported Sites during the Life of Project



Data Source: Health Facilities' Registers and HMIS Reports.

In the two years of implementation, all 44 MCHIP-supported PMTCT health centers were able to provide the option B+ PMTCT treatment approach. ANC and labor and delivery coverage in these facilities showed an increasing trend from 38.2% to 78% (ANC) and 4.7% and 29.4% (labor and delivery) from baseline. The increase of facility MNH service utilization is highly attributed to the regular outreach PMTCT services conducted by health care providers in the community.

As **integration** is a central theme of MCHIP, the project ensured that HIV testing and counseling was integrated into all MNCH service outlets, including FP, postpartum, immunization, and under-5 clinics to maximize opportunities to identify HEI for care and treatment. In the 44 MCHIP PMTCT sites, 53% of FP clients were tested, counseled, and received their HIV status. Women who tested HIV-positive were provided with counseling on positive living and long-term FP methods. Women from this group who were eligible according to WHO clinical staging guidelines were referred to ARV treatment sites for further follow-up and treatment. MCHIP supported national efforts to increase the TB case detection rate during ANC. As a result of this support, TB screening messages have been integrated into the national focused ANC job aid¹⁷.

"I only came to the Health Center for check-up for my pregnancy, but I left knowing a lot more including my HIV status. I'm eager to tell my husband and neighbors about all these services I got."

- Shemsiya Fano, 18-year-old pregnant mother, Gobe Health Center

MCHIP also emphasized **male partner involvement** during HIV testing and counseling. Letters to partners were developed in local languages, informing them of MNCH services at the facility and inviting them to be tested for HIV. Creating a more conducive counseling and testing environment for couples helped increase the involvement of male partners, enabling 14,950 pregnant and breastfeeding women to be tested with their partners (35.1% from the total tested).

Regular supportive supervision was the foundation of the PMTCT program. The supervision provided an opportunity for health workers to regularly update their knowledge and skills. In addition, MCHIP implemented an approach to measure the impact that can be brought by frequent support to health care providers. *"Enhanced and Integrated MNCH/PMTCT Support"* was carried out in four selected PMTCT sites. Through this approach, health workers were provided with frequent knowledge and skills updates, referral and linkages between the community and facility were further strengthened, a stronger network was established between facilities and Pharmaceuticals Fund Supply Agency (PFSA) hubs, and best lessons and

¹⁷ TB screening during ANC is currently not recorded by the health management information system (HMIS) so an accurate baseline is not available. These data are obtained by MCHIP during its supportive supervision.

challenges in implementing services were documented. The enhanced and integrated support was implemented for nine consecutive months and service delivery data compared before (baseline) and after implementation. Accordingly, it was observed that there were increases in ANC and labor and delivery from 66% to 78% and from 76% to 89%, respectively. Improvements on the availability of critical PMTCT supplies including ARV drugs were also observed. Therefore, MCHIP recommends the use of frequent coaching and mentoring for a defined period of time by woreda health offices as it is likely to have a positive impact on service quality as well as increase in performance. The *Enhanced and Integrated MNCH/PMTCT Support* model also has a motivational factor for health workers: they are more actively engaged and it improves their decision-making skills by using available data. The full report “Enhanced and Integrated MNCH/PMTCT Support” will be completed after the finalization of this end of project report and made accessible on the Development Exchange Clearinghouse.

Despite all national and regional the efforts, the irregular supply of commodities made PMTCT service provision challenging at times. For sustained results, MCHIP strongly recommends better coordination mechanisms between the FMOH, RHB, and the PFSA.

2.3 Improved Quality of Facility-Based Newborn Health Services

MCHIP introduced high-impact newborn health interventions in ENC as part of the comprehensive MNH care in 116 health facilities in Amhara, Oromia, Tigray, and SNNP regions. ENC interventions include neonatal resuscitation for management of birth asphyxia benefitting from the HBB initiative, KMC and the prevention and management of hypothermia in pre-term and low birth weight (LBW) infants, and infection prevention. Because overall use of KMC is low nationally, MCHIP promoted universal KMC for all newborns not only for pre-term and LBW newborns.

To increase health care provider competencies in newborn care, MCHIP trained 323 health workers from supported facilities as part of the ENC training and 80 more were trained as part of BEmONC training. Additionally, MCHIP provided the health facilities with necessary equipment and materials, including newborn resuscitation equipment including suction devices, bag and masks for newborn resuscitation, and the NeoNatalie newborn resuscitation simulators and baby hats. Data from MCHIP-supported facilities indicate an increase in ENC services from 2013-2014. As part of KMC at the health centers and hospitals, 41% of the mothers practiced skin-to-skin contact (See Table 2).

Table 2. Skin-to-Skin and/or Facility-Based KMC and Newborn Resuscitation Services Utilization in MCHIP-Supported Facilities, March 2014, Ethiopia

PROGRAM IMPLEMENTATION PERIOD	NUMBER OF LIVE BIRTHS	SKIN-TO-SKIN AND/OR FACILITY-BASED KMC		HELPING BABIES BREATHE		
		NUMBER OF SKIN-TO-SKIN AND/OR KMC	PERCENTAGE OF SKIN-TO-SKIN AND/OR KMC	NUMBER OF ASPHYXIATED NEWBORNS	NUMBER OF RESUSCITATED BABIES	PERCENTAGE OF SUCCESSFUL RESUSCITATION
FY11	1,845	1,053	57.1	62	62	100
FY12	8,028	1,309	16.3	243	235	96.7
FY13	19,863	6,058	30.5	549	532	96.9
FY14	7,218	6,738	93.4	1,126	1,122	98.5
Total	36,954	15,158	41.0	1,980	1,951	98.5

Data Source: Health Facilities' Registers.

Finally, MCHIP provided additional training on newborn care through sessions integrated into the national BEmONC training. This allowed for sufficient time to acquire the necessary knowledge and skills and timely follow-up to maintain knowledge and skill development; this is essential particularly for KMC, which is a new practice for most providers. Absence of key newborn indicators in the HMIS made tracking of ENC very challenging. Consequently, MCHIP advocated through the National Child Survival TWG of the FMOH to include several critical newborn indicators for resuscitation and hypothermia that are not part of the HMIS.

2.4 Availability of Postpartum Family Planning Methods at the Facility Level Increased

Many postpartum women want to delay or avoid future pregnancies, but are not using a modern contraceptive method. Analysis of the 2011 EDHS found an unmet need for PFP of 81% within the first 12 months postpartum. As a result, 57% and 21% of non-first births were spaced less than 36 and 24 months, respectively. Cognizant of the high unmet need for PFP in Ethiopia, MCHIP, in collaboration with the FMOH, initiated PFP in 16 public health facilities in 2012 and then expanded to an additional 10 public hospitals in 2013 selected because of high caseload. Of these 26 supported health facilities, 18 provide PFP counseling and PPIUCD insertion services and the remaining eight provided only PFP counseling services. The program focused on comprehensive PFP counseling during ANC, labor, delivery, and immediate postpartum periods, as well as PPIUCD insertion within 48 hours postpartum for mothers who choose to use PPIUCD. The integration of PFP, including PPIUCD, into maternal health services like ANC and labor and delivery allows mothers to access to FP in the immediate postpartum period.

“This is my first time using a contraceptive. I don’t want to be pregnant again so I chose PPIUCD because it serves for 12 years and I am happy to have it.”

Birkinesh Debebe, new PPIUCD user, Debreberhan Hospital

Across the 26 facilities, MCHIP trained 104 service providers in PFP counseling skills, 60 of whom were further trained in PPIUCD insertion skills to initiate PPIUCD insertion in the 18 facilities. MCHIP used training materials from the previous USAID-funded ACCESS Program which were adapted to the Ethiopian context. MCHIP procured and provided PPIUCD insertion equipment and infection prevention supplies for supported facilities. MCHIP undertook transfer of learning, post-training follow-up, and review meetings so as to improve performance and quality. MCHIP also adapted job aids developed under the ACCESS Program and the MCHIP India program; these were then printed and distributed for use by service providers. As a result between March 2012 and 2014, service providers counseled more than 20,000 mothers on PFP during ANC by offering a mix of methods. 1,069 PPIUCD insertions were performed, addressing 3% of postpartum mothers who delivered in the 18 PPIUCD facilities in a two-year period. The reported expulsion rate was 2.3%, which is considered low for PPIUCD (See Table 3).

Table 3. PFP Counseling and PPIUCD Insertions (March 2012–March 2014)

# OF FACILITIES IMPLEMENTING BOTH PP-FP COUNSELING AND PPIUCD INSERTION	# OF FACILITIES PROVIDING ONLY PFP COUNSELING	PPIUCD INSERTIONS (MAR. 2012–MAR. 2014)	# OF PFP CLIENTS COUNSELED IN ANC	# MOTHERS RETURNING FOR 1 ST FOLLOW-UP VISIT (6 WEEKS AFTER PPIUCD INSERTION)	REPORTED SPONTANEOUS EXPULSION
18 (15 hospitals and 3 health centers)	8 health centers	1,069	>20,000	429	24 (2.3)

Data Source: Health Facilities’ Registers and HMIS Report.



Midwife Senait Lemma
counseling a postpartum mother
on PFPF

Because PPIUCD is a new program for Ethiopia, MCHIP set lower targets as it was expected that acceptability of this FP method would take a longer time; however, the program performed better than anticipated. MCHIP adhered to USAID's FP compliance and did not provide targets to health facilities and providers at the site level. Moreover during PFPF counseling health providers offered a mix of FP methods to mothers and performed insertion for those who chose PPIUCD. MCHIP also distributed the national FP chart (known as the TIHART chart) outlining FP choices for clients in Amharic and English.

MCHIP shared its PFPF/PPIUCD program experiences in national, regional, and international fora (see Annex 3 for a list of presentations). In addition to presentations of program successes and challenges, the fora helped MCHIP demonstrate its technical leadership in PFPF/PPIUCD in Ethiopia. The support MCHIP has provided the FMOH, has assured that PFPF is now positioned in the National FP Training Guidelines, and the FMOH is better informed in its decision to adopt PPIUCD as a PFPF method. To support the government's plan to expand PPIUCD services, MCHIP created a pool of national PPIUCD trainers with 12 proficient PPIUCD service providers who can assist in future expansion efforts.

The local PPIUCD trainers created by MCHIP, the adapted national PPIUCD training package, and the recently launched programming strategies for PFPF will also be important to standardize trainings and services. As there is a need to expand PFPF/PPIUCD services across the country, MCHIP calls upon the FMOH and other partners to expand the services by building on the efforts made by MCHIP.

Across the life of the project MCHIP has created fertile ground for the future scale-up of quality PFPF/PPIUCD services in Ethiopia by effectively introducing and establishing PFPF/PPIUCD in selected facilities that can be used as models for future expansion.

2.5 Clinical Sites Prepared for Deployment of New Surgical Officer Graduates

Under the GoE's HSDP IV, one of the major targets is to increase comprehensive EmONC in 87% of hospitals and 20% of health centers¹⁸. To achieve these targets, the GoE has made substantial investments in upgrading selected health centers to primary hospitals and procuring equipment for basic and comprehensive EmONC services. The government also introduced a new cadre of health workers Integrated Emergency Surgery and Obstetrics Officer who were trained through a master's-level post-graduate program in Integrated Emergency Surgery and Obstetrics (IESO) for Health Officers, launched in 2009.

In 2011-2012, USAID requested MCHIP to assist the FMOH in the deployment of the new IESO graduates. MCHIP joined the TWG especially established to assist the FMOH in deploying the new graduates and preparing the health facilities for the new services the IESO graduates would be starting. MCHIP developed the assessment tools used to assess facility readiness and participated in the FMOH's joint assessment to identify gaps in essential supplies, staffing, infrastructure, and training needs. Assessments were conducted in 37 health facilities selected by FMOH and RHBs to become IESO facilities – primary hospitals. Based on the findings of the assessment, MCHIP led the coordination and the mobilization and distribution of these resources to the health facilities.

¹⁸ Health Sector Development Program IV 2010/11–2014/15, Final Draft, October 2010, FMOH.

A lack of knowledge on basic infection prevention was a major gap identified during the assessment visit. Consequently, MCHIP trained 300 health care providers and 300 support staff in the facilities that would receive an IESO graduate on infection prevention and patient safety. To further support services, MCHIP provided technical and financial support to Tigray, Amhara, and SNNP regions to train 30 operating room nurses assigned to the new IESO sites. MCHIP then assisted the FMOH to follow up on the status of deployed IESO graduates, assess their site-level performance, and identify challenges encountered post-deployment. MCHIP drafted the tools to measure IESO performance and facilitated a session during a national consultative meeting on how to assess the performance of the deployed IESO graduates. The FMOH concluded that the universities that provided the post-graduate education for the IESO program should be responsible for the immediate post-deployment supervision.

2.6 Quality of Pre-Service Education for Midwifery in Selected Regional Colleges Improved

With 0.05 midwife for every 100 expected deliveries¹⁹ Ethiopia has shortage of manpower to reduce maternal mortality and morbidity as targeted in MDG 5. The GoE is thus focused on scaling up the education and deployment of competent and sufficient community and mid-level health professionals to fulfill the human resource requirement of ensuring universal primary health care coverage by 2015²⁰.

MCHIP support to Midwifery Education extended to:

- *Development of guidelines for clinical skills labs*
- *Revision of a “New Model” Curriculum for different mid-level health care providers*
- *Development of a curriculum and adaptation of the Center of Competency examination, the national competency examination for Level IV midwives*
- *Development of the curriculum for the new Accelerated Midwifery Education program*

In 2010-2012, MCHIP was asked to support midwifery PSE in selected regional health science colleges, as well as provide national-level support as needs arose. Building on investments made through the former ACCESS Regional Pre-Service Midwifery Education Program, MCHIP collaborated with the FMOH, WHO, and UNFPA to support PSE. Nationally, MCHIP played a lead role in supporting the development of the curriculum for the new accelerated midwifery education program, a diploma-level program that the FMOH had initiated to help address the national shortfall of midwives. The curriculum for this new program was evidence-based and focused on core competencies leading to more competent graduate midwives. (See additional curriculum development activities in the text box above.)

MCHIP sought to improve the quality of midwifery education in 10 selected health science colleges. In 2010-2012, MCHIP supported PSE for midwifery departments of 10 health science colleges in Ethiopia (Bahir Dar, Dessie, Teda, Debre Tabor, and Debre Berhan Health Science Colleges in Amhara region, Hawassa, Hossana, and Arbaminch Health Science Colleges in the SNNPR, and Nekemte and Shashemene Health Science Colleges in Oromia regions). MCHIP used the quality improvement process, SBM-R, to improve the quality of the education and updated the existing educational standards for midwifery. A total of 99 faculty were trained in how to improve PSE quality. Based on gaps identified through SBM-R, MCHIP also improved the teaching skills of a total of 148 instructors and

During supportive supervision it was observed that:

- *Instructors used session plans and a variety of interactive and appropriate teaching methods.*
- *Instructors constructed clearer and more competency-based examinations.*
- *Skills labs were better equipped and provided a better skills learning setup for students.*

¹⁹ National Baseline Assessment for Emergency Obstetric and Newborn Care 2008

²⁰ Health Sector Development Program IV, 2010/1 –2014/15, FINAL DRAFT, October 2010, FMOH.

clinical preceptors through effective teaching skills (ETS) and clinical training skills courses, as well as training on student performance assessments. Additionally, MCHIP provided knowledge update courses on BEmONC and PMTCT for a total of 32 instructors, providing them with the current MNH practices and national guidelines. MCHIP further fostered learning by facilitating experience sharing among supported colleges. MCHIP ensured the colleges had access to the updated and current national guidelines. Upon special request from USAID, MCHIP provided direct financial assistance to three health science colleges in SNNPR through a sub-agreement with the SNNPR RHB. The financial assistance was intended to support student clinical placements to remote health facilities in the region.

The application of SBM-R empowered the supported colleges to mobilize local resources on their own. For example, one college managed to procure used desktop computers from a local government office at a reduced rate and another college mobilized the staff from the college’s Information, Communication, and Technology department to set up Internet for the midwifery school, rather than wait for the telecommunication office to set it up at a price. Based on the material gaps identified during the baseline assessments in the colleges, MCHIP procured and supplied essential teaching aids, anatomical models, and other important teaching materials to strengthen the clinical skills labs.

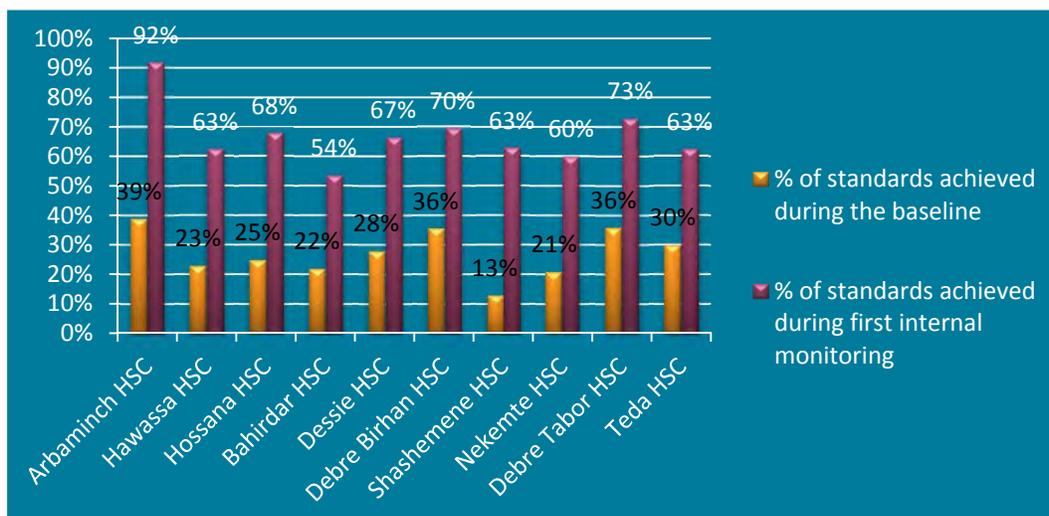
“A lot of the classroom theory is outdated from the perspective of actual clinical practice in the health facility and of the instructors. The majority of our instructors were not trained to be teachers. With MCHIP’s effective teaching skills course and knowledge-update training, our instructors were no longer challenged coaching students during clinical attachments.”

“SBM-R is a good guiding tool. The number of students who passed the examination in our college increased from 78.7% in 2011 to 85% in 2012.”

Yoseph Sonko, Dean of Arbaminch Health Science

Figure 6 shows the improvements from the baseline assessment with the first internal monitoring assessment across all colleges. All supported health science colleges improved the quality of taught instruction and clinical preceptorship, assisting in the development of competent midwives. All trained instructors and clinical preceptors utilized updated teaching methodologies and technical updates, which resulted in improved classroom, clinical skills lab, and clinical site teaching.

Figure 6. Comparisons of Average Scores between Baseline and First Internal Assessment and Baseline Assessment in Selected Health Science Colleges (2011-2012)



Overall MCHIP's support to improve quality of midwifery education in the 10 HSCs contributed to increasing the success rate of midwifery students in the national Center of Competency (COC) exam (this refers to the first exam encounter; the COC can be taken multiple times if students fail). The average COC pass mark for increased from 40.3% (highest 56%; lowest 25%) in 2011 to an average COC pass mark 4.6% (highest 67%; lowest 47.6%) by the end of fiscal year 2012²¹.

In 2012-2013, MCHIP transitioned its support for midwifery PSE to the USAID-funded Strengthening Human Resources for Health Project. One of the major goals of this project is to increase the availability of competent midwives by supporting PSE efforts in midwifery schools throughout the country. The Strengthening Human Resources for Health project has built on MCHIP's efforts in the 10 institutions and has since expanded the same quality improvement approach to an additional 38 health science colleges in the country.

IR 3: CARETAKERS' KNOWLEDGE AND BEHAVIORS ON KEY MNCH/POSTPARTUM FP/PMTCT HOUSEHOLD AND CARE-SEEKING PRACTICES IMPROVED

3.1 Effectiveness of Community-Based KMC Evaluated

Preterm birth and low birth weight complications are the leading cause of neonatal death in Ethiopia. Facility-based KMC has been shown to reduce mortality among LBW babies by approximately 40% by addressing the key problems of the LBW baby—thermal control, adequate feeding and risk of infection through continuous skin-to-skin contact with the mother/caretaker and initiation of early and exclusive breastfeeding. MCHIP supported the FMOH to expand facility-based KMC in its project areas²². Given that most deliveries take place at home in Ethiopia, MCHIP, in collaboration with FMOH and other partners, sought to assess the feasibility of counseling and coaching pregnant women during the antenatal and postpartum periods to initiate KMC when they deliver at home utilizing HEWs and HDA volunteers. Community-KMC was promoted to all pregnant women universally and irrespective of the babies' birth weight²³.

MCHIP began implementation of CKMC counseling services in communities surrounding 89 selected health posts (HP) in Amhara, Oromia, SNNP, and Tigray regions in 2011 through trained HEWs and HDA volunteers at HP level. The 12 health centers participating in the study also had KMC services established, and women attending ANC or who had delivered at these facilities were counseled about KMC. The KMC-trained HEWs counseled mothers about KMC during the mothers' ANC visits at the HP to assist mothers to practice KMC at home during their postpartum care home visit. This information was recorded by HEWs as part of their routine data collection, linked to HMIS.

²¹ The national COC exam was initiated in private colleges first and was gradually enrolled to public higher education institutions. As a result out of the total HSCs MCHIP supported, five HSC began providing the COC exam in 2011 (the first year of PSE support); by 2012 all 10 HSC had started using the COC exam (the second year of PSE support).

²² KMC was initiated in a few hospitals in Ethiopia a few years ago but its application did not reach health centers prior to MCHIP.

²³ KMC must be initiated immediately; weighing the baby to determine if it is LBW can delay care and put a LBW baby at risk.

A CKMC training manual including counseling materials was developed by the project and used to train 23 CKMC trainers and 174 HEWs. 17,500 CKMC job aids were also developed and distributed to HEWs and HDA volunteers. For the study HEWs were to visit women at home at least twice during the antenatal period, and on Days 1 and 3 of the postpartum period. However a review during the study showed that HEWs were not visiting most women as intended so MCHIP held discussions with woreda supervisors to improve the coverage of HEWs postpartum home visits. To improve the coverage of CKMC education, HEWs oriented a total of 13,649 HDA volunteers on CKMC so that they could incorporate this topic in their discussion with their assigned households. HDA volunteers did not receive direct training from MCHIP²⁴.



Alemitu Kelkaye at home holding her newborn baby in KMC position

Preliminary results from the study surveys showed that contact with an HEW during ANC increased from 20% at baseline to 35% at endline. Counseling on KMC for pregnant women who were seen by HEWs increased from 14% to 43%, and breastfeeding counseling increased from 46% to 61%. Home visits by an HEW during the postpartum period increased from 2% to 12%. Home visits by the HDA volunteers in the same period were only 2%. In addition, pregnant women and mothers received counseling on KMC from the health facility staff. Project data shows that from a total of 6,319 reported deliveries (deliveries reported by HEW in their kebeles; could be home or facility-based deliveries) between July 2011 and April 2014, 5,022 (79.5%) of newborns were kept in the KMC position by their mothers (See Table 4).

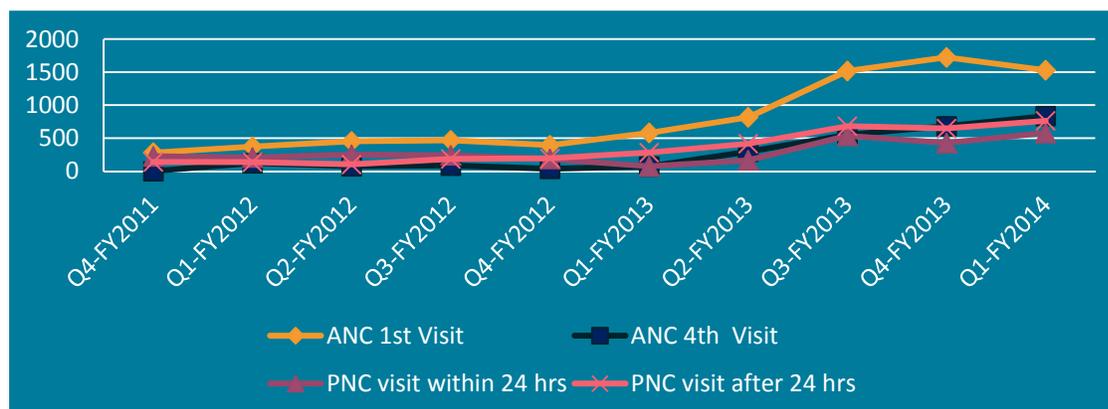
Table 4. Number of Reported Deliveries in CKMC Sites and CKMC Utilization, July 2011- April 2014

PROGRAM IMPLEMENTATION PERIOD	NUMBER OF LIVE BIRTHS IN MCHIP-SUPPORTED KEBELES	NUMBER OF CARETAKERS PRACTICING CKMC	PERCENTAGE OF BABIES PRACTICING CKMC
FY11	157	75	47.8
FY12	776	699	90.1
FY13	3,304	2,717	82.2
FY14	2,082	1,531	73.5
Total	6,319	5,022	79.5

Figure 7 shows increases in selected MNH services provided by the HEW.

²⁴ MCHIP adhered to the FMOH's guidance that prohibits direct interaction of partner organizations with HDAs and ensured HDAs get CKMC orientation through HEWs.

Figure 7. Trend of Selected MNH Practices in CKMC Implementing Kebeles, July 2011–December 2013



Data Source: Health Post Registers

Findings from the CKMC feasibility study indicated that messaging about KMC positioning during ANC visits by HEWs also increased during the course of the project from 7.6% to 29.5%. Although it is still low overall, the change is significant (See Table 5).

Table 5. CKMC Messaging by HEWs from Baseline 2011 to Endline 2013

SELECTED INDICATORS	BASELINE		ENDLINE		P-VALUE
	Frequency (Yes/Total Mothers Interviewed)	Percentage	Frequency (Yes/Total Mothers Interviewed)	Percentage	
ANC messages by HEW – KMC position	14/184	7.6%	57/193	29.5%	0.0000
ANC messages by HEWs – expressing breast milk	21/184	11.4%	54/193	28%	0.0006
Proportion of home deliveries where the baby was placed skin-to-skin	10/140	7.1%	21/111	18.9%	0.0216

Data Source: CKMC Household Survey

The findings showed a moderate increase in skin-to-skin care and exclusive breastfeeding in areas implementing a CKMC. Findings also showed low levels of contact by HEWs with pregnant and postpartum women, especially within the first week after birth. This could be explained by the fact that HEWs have multiple responsibilities and are also required to serve 25% of their time at the HP and with walking they can only reach a few households at a time. While the number of home visits by HDA volunteers was also found to be low in the study, MCHIP recommends using this structure for future roll out of CKMC as they are the group that are likely to have most frequent engagement with mothers.

This study is the only type of its kind in Ethiopia. MCHIP hopes that the results of the CKMC study will contribute to the national discussion and help convince the FMOH to identify CKMC as a feasible practice to be integrated into the HEW and the HDA volunteer counseling package for pregnant mothers. Even though the end line survey showed that home visits by HEWs and HDA volunteers immediately after childbirth were low, this structure in the community is ideal for strengthening counseling and support for pregnant and recently delivered women to practice ENC

behaviors including skin-to-skin care. Thus MCHIP calls for the FMOH and partners to expand this critical and low-cost intervention nationally using the existing community level health structure.

3.2 Integrated Community Case Management

All too frequently, children without access to health care die from curable diseases such as pneumonia, diarrhea, malaria, and malnutrition. The iCCM strategy, brings lifesaving, curative interventions for these common childhood illnesses to communities where children live.²⁵ In 2010, the GoE introduced iCCM to the more populous regions, later adapting the strategy to introduce it to pastoralist regions. MCHIP began supporting the GoE to scale up iCCM in Oromia region in 2012, and supported the woredas to deliver iCCM services to 29 woredas (799 HP) in West and South West Shoa zones of Oromia, and later in 2013 at the request from the Afar RHB and USAID to five woredas (47 HP) in two zones in Afar.

MCHIP successfully launched iCCM in West Shoa and South West Shoa zones in Oromia by initially training 60 iCCM Trainers that later assisted the roll out of the basic iCCM training to 1,461 HEWs. iCCM-trained HEWs were provided with adequate cases for the practical sessions and each received an iCCM training kit containing chart booklets, registration books, essential drugs, and job aids supplied by UNICEF. To strengthen the PHCU by capacitating the health centers, 217 health workers were trained on Integrated Management of Newborn and Childhood Illness (IMNCI). In addition, 282 supervisors were trained on iCCM and supervisory skills.

In Afar region MCHIP supported the introduction of iCCM to pastoralist communities in two zones in 2013. More than 200 community health workers (HEWs, frontline workers and clinical nurses) were trained on iCCM through 20 MCHIP iCCM trainers. IMNCI trainings were also provided for 16 health workers selected from seven health centers from the two zones. It was noted during program monitoring visits that the number of service users were insignificant considering the estimated under-5 child population (this is most probably because the pastoralist lifestyle does not lend itself to static health service delivery). MCHIP therefore launched an intensive community mobilization by facilitating the formation of kebele health committees, composed of kebele representatives including women, clan and religious leaders, and school teachers and HEWs to advocate for the program in the community. MCHIP also established mobile community mobilization teams that traveled at least once a month to each kebele. After the deployment of the mobile teams, the HP saw an increase in the number of cases brought in for treatment. With these efforts, MCHIP oriented a total of 5,262 community members in the reporting period, of which 52% (2,738) were women.

Conducting performance review and clinical mentoring meetings (PRCMM) is the iCCM approach to check the quality of iCCM services and improve the technical skill and knowledge of trained HEWs and supervisors. The PRCMM process reviews HP registers for completeness, consistency (a proxy for quality), and caseload (a proxy for utilization). In addition to HEW supervisors, PHCU directors, woreda health officers and iCCM implementing partners were



Head of Adea Woreda Health Office and MCHIP field officers mobilizing the community at Kassagita Kebele, Adea'r woreda, Afar Region

²⁵ Young M, Wolfheim C, Marsh DR, Hammamy D. 2012. World Health Organization/United Nations Children's Fund Joint Statement on Integrated Community Case Management: An Equity-Focused Strategy to Improve Access to Essential Treatment Services for Children. *Am J Trop Med Hyg* 87(Suppl 5): 6–10.

involved in this review process that was coordinated by MCHIP.

PRCMM in Oromia

MCHIP supported two rounds of PRCMM in Oromia (between April and August 2012 and between October and December 2013). Of a total 799 iCCM program implementing HP, 655 and 678 participated in the first and second rounds of the one day PRCMM, respectively. 1,177 HEWs and 452 supervisors participated in both rounds of the review meetings. Findings from the PRCMM showed that a total of 33,953 children under-five were registered and treated at the supported HP in Oromia. Of the total 1,409, (4%) were infants less than two months old.

HEWs performance in assessing, classifying, and treating cases was assessed by reviewing the iCCM registers. Compared with the first round of PRCMM, the ability of the HEWs to assess, treat, and follow-up increased significantly in the second round: 64% in PRCMM round one versus 80% in PRCMM round two 2 (Table 6).

Table 6. Consistency of Recording Case Management in Registers by PRCMM* and Syndrome in Oromia Region

SYNDROME	NUMBER OF CASES SELECTED		CLASSIFICATION CONSISTENT WITH ASSESSMENT (%)		CLASSIFICATION CONSISTENT WITH TREATMENT (%)		CLASSIFICATION CONSISTENT WITH FOLLOW-UP DATE (%)		AVERAGE	
	Round I	Round II	Round I	Round II	Round I	Round II	Round I	Round II	Round I	Round II
Pneumonia	770	1200	76	88	67	77	67	82	70	82
Malaria	612	811	79	95	64	80	60	83	68	86
Diarrhea	1313	1536	73	82	50	70	55	73	59	75
Weighted Average			75	87	58	74	60	78	64	80

PRCMM in Afar

Of a total 47 iCCM program implementing HP, 41 participated in the first PRCMM, and 44 in the second round. The quality of the performance in Afar region significantly improved in the second round of PRCMM compared to the first (84 in the first; PRCMM, 96 in the second), shown in Table 7.

Table 7. Consistency of Recording Case Management in Registers by PRCMM* and Syndrome, Afar region

SYNDROME	NUMBER OF CASES SELECTED		CLASSIFICATION CONSISTENT WITH ASSESSMENT (%)		CLASSIFICATION CONSISTENT WITH TREATMENT (%)		CLASSIFICATION CONSISTENT WITH FOLLOW-UP DATE (%)		AVERAGE	
	Round I	Round II	Round I	Round II	Round I	Round II	Round I	Round II	Round I	Round II
Pneumonia	72	853	86	96	83	92	89	94	86	94
Malaria	70	1159	91	99	87	99	89	99	89	99
Diarrhea	76	1124	83	99	75	89	75	94	78	94
Weighted Average			87	98	82	93	84	96	84	96

Recommendations and Way Forward

MCHIP's recommendations from four years of program implementation in Ethiopia are outlined by Intermediate Result.

IR 1 MNCH AND PMTCT SERVICES IMPROVED BY ENHANCING AND STRENGTHENING THE ENABLING ENVIRONMENT FOR MNH CARE

- Findings from the Cultural Barriers literature review indicate that health services need to be made more culturally appropriate to child-bearing women. MCHIP learned that facilities' efforts to provide RMC are appreciated by women and their families and are felt to contribute to the increases in utilization. At policy level the FMOH should incorporate RMC as a standard in all MNH care.
- Health facilities should capitalize on and strengthen existing community-level, health care demand generation structures through the HEWs and HDA volunteers, and regular PHCU and pregnant women meetings, as they can significantly increase facility utilization.
- National and regional MNH programs should consider scaling up the promising practices outlined in the Promising Practices in Maternal and Newborn Health and Family Planning and Reproductive Health review. The documentation and dissemination of promising practices in MNH should be a continuous process and could serve as learning platform for the FMOH.
- Although FMOH efforts are focused on improving quality, gaps remain in defining how to bring this about. Additionally, initial efforts often are not sustained to completion nor effectively rolled out. Furthermore, the division in MOH structures for hospital and health center-based care is resulting in a fragmented approach. The FMOH should pursue the finalization of the National Comprehensive Health Service Quality Management Manual. A national tool will support the integration of quality in MNH, and will be applicable to both hospitals and health centers. This is the best option to ensure that quality improvement is fully owned within the health system.
- The EMA needs to continually develop its existing technical, programmatic, and management capacity and continue to positively influence the education of midwives and further enhance how the public views midwives. The EMA will also need to pay close attention to ensuring technically appropriate representation in key stakeholder discussions and play a greater advisory role to the FMOH in midwifery workforce related matters. The EMA must strengthen its networks with its members and chapter offices, with midwifery teaching institutions as well as with other professional midwifery associations globally.

IR 2 AVAILABILITY, ACCESSIBILITY, AND QUALITY OF KEY MNH AND PMTCT SERVICES IMPROVED

- MCHIP recommends the woreda-based blanket coverage of facility support when possible. This approach creates more opportunities for cross-learning among facilities that were closer to each other geographically, and leveraged resources and enhanced synergies.
- Coordination among partners is crucial to avoid duplication of efforts and where feasible, partners working in the same sites or woredas should work together in a harmonized effort. MCHIP recommends that the coordination among partners become a normal operating procedure and that there be a culture of partners openly sharing lists of project sites.

- The facility-level knowledge and experience-sharing events fostered sharing of best practices among MCHIP and non-MCHIP facilities and woredas. This also increased ownership of the shared success. This type of low-cost event should be replicated in other areas.
- The contracting out of the quality improvement processes to the woreda was worthwhile in building local government ownership beyond the life of the project. However, the current government financial “pool” system of transferring funds and then tracking them in a government account remains a challenge and could complicate future efforts by donors and implementation to decentralize funding to district level through legitimate mechanisms. A review of how funds could be more easily tracked would be beneficial for future decentralization.
- Absence of key newborn indicators in the HMIS made implementation of ENC challenging. It is critical that the FMOH consider inclusion of critical basic maternal and newborn health indicators such as proportion of fresh still birth, resuscitation and hypothermia in future revisions of the HMIS.
- Facility-based KMC is a low-cost intervention that is critical to saving the lives of newborns and should be scaled up nationally by FMOH and other MNH partners.
- Health offices can improve outcomes of PMTCT services by using the “enhanced and integrated support” approach. Moreover for sustained results in PMTCT, MCHIP strongly recommends better coordination mechanisms among the FMOH, RHBs, and the PFSA.
- From MCHIP’s FP program experience, there is a demand for PPIUCD and the FMOH should consider expanding PFP and PPIUCD services using the platform created by MCHIP.
- Blended BEmONC training could be considered by the FMOH as alternative approach to the existing standard off-site training; it will significantly reduce providers’ time away from services and minimize training cost without affecting the quality of training.

IR 3 CARETAKERS’ KNOWLEDGE AND BEHAVIORS ON KEY MNH/POSTPARTUM/FP/PMTCT HOUSEHOLD AND CARE-SEEKING BEHAVIOR

- Future newborn care programs must complement community-based newborn care programs. A recent government priority includes community-based newborn sepsis management, use of antenatal corticosteroid, and use of chlorhexidine gel for cord care. These practices should be integrated with community-based newborn care programs, as well as the inclusion of the rotavirus vaccine and zinc tablets into infant and child survival strategies.
- The FMOH should consider expanding KMC nationally and make it part of the standard for ENC applicable to public as well as private facilities.
- Results of the evaluation of CKMC showed that CKMC can be practiced by postpartum mothers at home with the help of HEWs and HDA volunteers. Even though the study showed that interaction of HEW and HDAs with mothers was lower than expected, MCHIP still recommends scale-up by FMOH by integrating CKMC in the counseling package of these cadres considering their strong presence in the community.
- In pastoral areas, iCCM implementation requires a different approach. MCHIP recommends that community mobilization activities to increase service utilization be an integral part of any new program in these areas. Despite achieving remarkable results in iCCM over such a short period of time, it was noted by the national iCCM TWG that the implementation period of less than 12 months was not long enough for Afar RHB to be in a position to take over such a large, new program. It is therefore recommended that iCCM implementation in Afar region be continued either with further support from USAID or other implementing mechanisms.

Annex 1: Indicator Matrix

S#	NAME OF THE INDICATOR (AND ITS DISAGGREGATION) BY RESULT AREAS	LOP TARGETS	EOP ACHIEVEMENT
Result 1: MNH and PMTCT services improved by enhancing and strengthening the enabling environment for MNH care			
	Standard indicators		
1.1	Number of studies	3	3
	Custom indicators		
1.3	Number of midwives who receive professional technical updates through EMA and MCHIP support	300	525
Result 2: Availability, accessibility, and quality of key MNH and PMTCT services improved			
	Standard indicators		
2.1	Number of deliveries with an SBA in USG-assisted programs	25,000	36,712
	<i>Explanation: Over achievement was partly due to site expansion at the request of regional health bureaus</i>		
2.4	Number of first ANC visits by skilled providers from USG-assisted facilities (health centers only)	70,000	96,761
	<i>Explanation: Over achievement was partly due to site expansion at the request of regional health bureaus</i>		
2.5	Number of health workers trained by cadre on MNH services	3,200	5,207
	<i>Explanation: Over achievement in number of individuals trained was due to the addition of IESO site strengthening activity at the request of FMOH and USAID to support site standardization, which resulted in additional trainings. Use of onsite training in quality improvement training also contributed to the inclusion of additional trainees with minimal cost. MCHIP did not set a new target for the FY14 extension as no additional funds were provided.</i>		
2.6	Number of USG-assisted service delivery points providing FP counseling or services (the focus is long-acting PPFPP)	16	26 ²⁶
2.8	Number of clients undergoing PPIUCD	500	1,069
	<i>Explanation: PPIUCD is a new program for Ethiopia and MCHIP set lower targets as it was anticipated that acceptability of this method of FP would take a longer time; however, the program performed better than anticipated. MCHIP adheres to USAID's FP compliance and did not provide targets to health facilities nor health care providers.</i>		
2.9	Number/percentage of MCHIP-supported health facilities demonstrating increased compliance with clinical standards over baseline	50% 36	38% 44

²⁶ PPFPP site includes 26 health facilities providing comprehensive PPFPP services; out of which 18 facilities provide PPFPP counseling and PP-IUCD insertion services and eight facilities only provide counseling on PPFPP services.

S#	NAME OF THE INDICATOR (AND ITS DISAGGREGATION) BY RESULT AREAS	LOP TARGETS	EOP ACHIEVEMENT
	<i>Explanation for variation in number and percentage achievements: Targets were set assuming a total of 73 implementation facilities. The expansion facilities were not considered when we set target so the number is lower. Percentage target was not achieved as the expansion facilities were mostly rural with infrastructural problems to make improvements in short period of time</i>		
2.10	Number of pregnant women who were tested for HIV and know their results	22,937	39,302
2.11	Percentage of HIV-positive pregnant women who received ARVs to reduce the risk of mother-to-child transmission N: Number of HIV-positive pregnant women who received ARVs to reduce the risk of mother-to-child transmission D: Number of HIV-positive pregnant women identified in the health facility	100% 186	97/114 (85%)
	<i>Explanation: Target was not achieved as in some instances women were referred to nearby facilities due to stock out of ARV drugs</i>		
2.12	Percentage of newborns born to HIV-positive mothers who received ARV prophylaxis ²⁷ N: Number of newborns born to HIV-positive mothers who received ARV prophylaxis D: Number of infants born to HIV-positive mothers in the facility	100% 70	50/50 (100%)
2.13	Percentage of infants receiving cotrimoxazole prophylaxis ²⁸ N: Number of infants receiving cotrimoxazole prophylaxis D: Number of HEI identified in the reporting period	50% 35	30/60 (50%)
2.14	Percentage of infants born to HIV-positive women who received an HIV test within 12 months of birth ²⁹ N: Number of infants born to HIV-positive women who received an HIV test within 12 months of birth D: Number of HEI identified in the reporting period	50% 103	28/62 (45%)
	Custom indicators		
2.15	Percentage of births with correct use of partograph to manage delivery in MCHIP-supported facilities	75%	73%
2.16	Number of MCHIP-supported health centers that practice KMC	104 100%	104
2.17	Number of babies who received KMC at the facility level	11,000	21,940
	<i>Explanation: This indicator developed at the beginning of the project, is inclusive of both KMC and skin to skin.</i>		
Result 3: Caretakers' knowledge and behaviors on key MNH/Postpartum/FP/PMTCT household and care-seeking behavior			
	Custom indicators		

²⁷ Percentage is calculated from the actual number of infants born to HIV-positive women whereas target is set using expected number of HIV-positive mothers in the population.

²⁸Percentage is calculated from the actual number of infants born to HIV-positive women whereas target is set using HIV prevalence of the population.

²⁹ Percentage is calculated from the actual number of infants born to HIV-positive women whereas target is set using HIV prevalence of the population.

S#	NAME OF THE INDICATOR (AND ITS DISAGGREGATION) BY RESULT AREAS	LOP TARGETS	EOP ACHIEVEMENT
3.1	Number of information, education, and communication/behavior change communication materials printed and distributed on newborn care	20,000 job aid	17,425 job aids
3.2	Number of health posts that practice CKMC	82	82
3.3	Percentage of treated pneumonia cases to expected cases by iCCM condition in a given catchment area N: # of diarrhea treatments for under-5 children provided through iCCM in one-year period in a given catchment area D: # of diarrhea illnesses expected in a given catchment area in one-year period	15%	7.2%
3.4	Percentage of treated diarrhea cases to expected cases by iCCM condition in a given catchment area N: Number of diarrhea treatments for under-5 children provided through iCCM in one-year period in a given catchment area D: Number of diarrhea illnesses expected in a given catchment area in one-year period	15%	0.96%
3.5	Percentage of treated malaria cases to expected cases by iCCM condition in a given catchment area N: Number of malaria treatments for under-5 children provided through iCCM in one-year period in a given catchment area D: Number of malaria illnesses expected in a given catchment area in one-year period	15%	8.8%
3.6	Percentage of pneumonia cases with consistency between classification and treatment N: Number of pneumonia cases with consistency between classification and treatment D: total number of pneumonia cases reviewed	80%	88.7%
3.7	Percentage of malaria cases with consistency between classification and treatment N: Number of malaria cases with consistency between classification and treatment D: total number of malaria cases reviewed	80%	84%
3.8	Percentage of HP that received at least one supervisory contact in the last 30 days N: Number of HP who received at least one supervisory contact in a month period D: Number of HP that implement iCCM	100%	13.8%
<p><i>Explanation: ICCM indicators – with regards to low performance this relates to service utilization due in part to misconceptions by the community that HEWs do not provide curative services and only provide preventative services. As a result sick children often bypass the health post and go directly to the health center. Additionally, the supervisory target of 100% set by the FMOH and the National CSTWG is highly ambitious and perhaps unrealistic indicator as it comes with the expectation that every HP will be visited every 30 days which is unfeasible and in reality never happens MCHIP and other partners are requesting that the FMOH and partners review this target and make it more feasible.</i></p>			

Annex 2: Success Stories

MCHIP Empowers Health Workers to help an HIV Positive Mother Regain Hope for Life with PMTCT Services. By Gojjam Hageru and Tigist Worku



Yesuf giving health advice to Yeworkwuha on important medication to her and her son

LEGUAMA, Ethiopia – As her pregnancy advanced, Yeworkwuha Gebeyehu knew she should seek prenatal care. The 39-year-old mother of six had not intended to have another child, and the news she received earlier in her pregnancy had made Yeworkwuha even more despondent: she had tested positive for HIV. Although she had started treatment, traveling the 19 miles to the nearest hospital became too costly and she stopped going. Now, concerned about the health of her unborn child, Yeworkwuha visited Leguama Health Center where she met midwife Yesuf Adem.

Yeworkwuha didn't share her HIV status, but instead underwent HIV test at Adem's urging, secretly hoping the outcome would be different. It wasn't. Adem carefully advised and counseled Yeworkwuha on the prospects of living positively with HIV, offering her hope for the very first time.

And that has made all the difference for Yeworkwuha, who first married at age 12, and lives now with her second husband, Seid Muhie. He is a farmer and the father of her children.

Adem had previously been trained on Prevention of Mother-to-Child Transmission of HIV (PMTCT) by the Jhpiego-led Maternal and Child Health Integrated Program (MCHIP), a project funded by U.S. Agency for International Development that has been supporting Leguama Health Center to improve maternal and newborn health (MNH) services since 2012. In addition to the PMTCT training, Adem and his colleagues were trained in Basic Emergency Obstetric Newborn Care (BEmONC), Essential Newborn Care (ENC) and Performance Quality Improvement (PQI) by MCHIP as part of strengthening the quality of comprehensive maternal and child health services in the health center.

In talking with Yeowrkwuha, Adem explained to her the high chance of having an HIV free baby with proper medication and even how to exclusively breastfeed. When he recommended that she bring her husband on her next visit, Yeworkwuha did just that. Adem had a long discussion with the couple about the benefits of HIV testing before Seid finally agreed to take the test. Seid's result was a surprise -- he was negative.

Yeworkwuha remembers that after the news of their discordant result their relationship began to crumble. "Seid stopped talking to me; I felt so afraid and I didn't know what to do. I wanted to run away and live alone." She fled to his brother's house, but Seid came looking for her. They talked seriously about how they can still live together and with their children and returned home together. Yeworkwuha is grateful that their union still holds strong.

Adem was a big help as Yeworkwuha worked through the issues involving her health, such as giving birth in the health facility and using family planning. "His advice comforted me a lot," she said.

After introducing PMTCT services in Leguama Health Center, MCHIP provided regular mentoring and coaching for the health workers to ensure the smooth integration of the service into the routine MNH care. MCHIP also provided the facility with essential equipment to

improve service delivery. In two years (from 2012-2014), Leguama Health Center has increased skill birth attendance rates from 13% to 25.7% and antenatal coverage from 56.4% to 87.6%. With the support of MCHIP, a total of 834 pregnant and breast feeding mothers who accessed antenatal and labor and delivery services in the facility were tested and counseled for HIV. Eleven of these women tested HIV positive and started ARV prophylaxis and ART treatment. Moreover, nine HIV-exposed Infants were identified and provided with ARV prophylaxis. These babies will be tested again after the age of 12 months to determine their exact result.

MCHIP provided similar support to 43 other health facilities in Amhara, Oromia and SNNP regions of Ethiopia where it either introduced or strengthened existing PMTCT service. A few selected health facilities, including Leguama Health Center, received intensive follow-up from MCHIP over nine months. This included onsite visits and regular phone follow-up. Such intensive follow-up and support helped centers sustain quality service delivery by further minimizing missed opportunities in testing and treating HIV positive pregnant mothers.

In September 2013, Yeworkwuha gave birth to a baby boy in Leguama Health Center. She received the necessary care during labor. The baby immediately started Neveapine prophylaxis-medication, the treatment for HIV exposed infants to reduce HIV transmission during labor and breast feeding.

“As instructed I only give my son breast milk. He is growing healthily and he smiles a lot too. I’m very happy and glad I decided to keep him; I would have regretted it now,” the mother said. “My husband and I are using condoms for dual protection, from HIV and pregnancy, and in addition I’m using Implanon, a family planning method inserted in my arm.” The baby’s growth is regularly monitored in the health facility and 45 days after birth, a Dried Blood Spot sample was taken from him for HIV testing. His result was negative. Yeworkwuha gives her son medication and takes her own drugs regularly.

“Even my husband reminds me to take them on time” she says. “Without all this support, I could have been severely ill or could have even ended up dead. Instead, I was given the chance to see my children grow.”

Taking a Critical Life-Saving Technique to the Door of Every Household: The Introduction of Community-Based Kangaroo Mother Care with the Help of Health Extension Workers. By Thewodros Zewde



Tiringo and Tamiralech outside Mosebo Health Post

Tamiralech Sileshi and Tiringo Alamirew are two health extension workers (HEWs) working in Mosebo Health Post located in Yilmana-Densa district of Amhara region in Central Ethiopia. Tamiralech and Tiringo are primarily responsible for implementing the 16 essential health packages set by the Ministry of Health in all the households in their villages (kebeles). Maternal and child health constitutes a major part of their routine activity. By going house to house, they identify pregnant women, provide them with antenatal care, counsel them on danger signs in pregnancy and birth preparedness, and advise them to deliver in the health facility. An average 500 households are assigned to each of the HEWs, who are also

supported by the health development armies (HDAs), a group of volunteer women who are influential community members, to assist in mobilizing and spreading key health messages in the community. In the health post, Tamiralech and Tiringo have a vigorous recording system, and they are well-informed of the health profile of each household in their kebele. Every month, they report the number of pregnant women existing in the kebeles to their catchment health center, and, by doing so, they link expecting mothers to the health care providers at the health facility.

When the USAID-funded Maternal and Child Health Integrated Program (MCHIP) introduced community kangaroo mother care (CKMC) to selected areas in Ethiopia in 2011, the project trained a number of HEWs and HDAs in how to provide CKMC and how to counsel mothers about using CKMC. Tamiralech and Tiringo were among the HEWs trained in use of KMC. Use of KMC in health facilities is a proven intervention to reduce newborn mortality for preterm and low birth weight babies. Such babies are about 20 times more likely to die compared to babies who have higher birth weights; around one-third of low birth weight babies die within the first 12 hours of delivery. KMC provides essential thermal care for these babies through continuous skin-to-skin contact with the mother, father, or other caretaker, and is used for 2-3 weeks until the baby reaches a normal weight. As most deliveries take place at home in Ethiopia, MCHIP introduced KMC at the community level and is evaluating whether it is feasible to implement community-level KMC before the intervention is scaled-up. The MCHIP led intervention consists of supporting mothers and other caretakers to practice prolonged skin-to-skin contact and provide exclusive breastfeeding while they are in their home.

Tamiralech and Tiringo have been disseminating information about the benefits of KMC to the mothers in their kebeles. They use locally made dolls to demonstrate how mothers should hold their newborns in the correct KMC position. They also recorded the number of mothers attending their sessions that those that are practicing KMC.

KMC has even become a recurring agenda item in the regular month pregnant mothers' meeting the two HEWs organize in their health post. The more they saw the benefit of KMC, the more they advocated for it.



Tiringo and Tamiralech educating the community outside Mosebo Health Post with demonstration

Living a few meters away from Mosobo Health Center is Alemitu Kelkaye, a mother of three. Alemitu is one of the kebeles health development army (HDA) volunteers and works closely with Tamiralech and Tiringo. She meets with them regularly to learn from them and assist them in their community mobilization efforts. Her first two children were born at home. During her third pregnancy, Alemitu was not feeling “so good,” so during her antenatal care follow-up at the health post with Tamiralech and Tiringo, she followed their advice and went on to give birth in the neighboring Adet Health Center. MCHIP is supporting Adet Health Center by improving the quality of maternal newborn health services. “The midwives and nurses in the health center are great and friendly. I would like to thank them because they helped me a lot,” she said. Upon her arrival, the health center staff immediately admitted her in the waiting room.

Unlike previous times, her relatives were even allowed to accompany her in the maternity waiting room while she labored. When her time came, the midwife gently took her into the delivery room where she gave birth to a baby boy. The health care providers monitored Alemitu for six hours after the birth, checked her newborn son, and before discharging her, they counseled her about the importance of feeding the baby with colostrum and exclusive breast milk.



Tamiralech showing Alemitu how to express breast milk.

When she got home, Alemitu experienced difficulties in feeding her newborn baby, who was not sucking properly and which meant Alemitu could not produce enough milk. When Tamiralech, the HEW, came and visited her for her postpartum check-up, Alemitu shared her concerns about the baby’s feeding. Tamiralech explained how she can express milk from for her breast in a cup and feed her baby from the cup.

Alemitu did as she was taught and fed her baby breast milk from the cup, but at 2.3 kg her baby was also slightly underweight. So, Tamiralech put the newborn in between Alemitu’s breasts and wrapped them tight with *netela gabi*, a locally available traditional scarf, in the perfect kangaroo mother care (KMC) position. The baby was then warm and comfortable and he began to feed from the breast. “When I felt my baby relax, I felt happy and relaxed too.” Alemitu practiced KMC for more than two weeks without a break and kept her baby nourished. She says, “He has grown now and he wants to come out.” Alemitu says that she will tell others of the importance of KMC so that other mothers can also increase the chances of their newborns’ survival.



Alemitu at home holding her newborn baby in the KMC position

MCHIP began implementation of community KMC counseling and services in communities surrounding 89 selected health posts in Amhara, Oromia, SNNP, and Tigray regions. The project trained 190 HEWs and 13,649 HDA volunteers. Of a total 5,296 reported deliveries between 2011 and January 2014, 4,400 (83.1%) of newborns were kept in the KMC position by their mothers. The mothers had been supported by a KMC trained HEW or HDA in their home.

Annex 3: List of Presentations at International Conferences and Publications

DOCUMENT TYPE	STATUS	AUTHOR AND PUBLICATION DATE
Abstracts and Presentations		
Improving MNH Nursing Care through Competency-Based Basic Emergency Obstetric and Newborn Care (BEmONC) Training in Ethiopia	Oral Presentation	Alemnesh Tekleberhan, 25th Quadrennial Congress of the International Confederation of Nurses, Australia, May 2013
Experiences in Ethiopia: Building Midwifery Organizational Capacity for Stronger Regulation	Oral Presentation	Alemnesh Tekleberhan, Triennial Congress of the International Confederation of Midwives, Czech Republic, June 2014
Improving Skilled Birth Attendants' Service Utilization through Performance Quality Improvement Intervention	Oral Presentation	Hannah Gibson, Triennial Congress of the International Confederation of Midwives, Czech Republic, June 2014
Introducing PPIUCD in Ethiopia: Experience of MCHIP	Oral Presentation	Serawit Lisanework, National FP symposium, Ethiopia, November 2012
Postpartum Intrauterine Contraceptive Device (PPIUCD) – Experience from Starting a Program in Ethiopia	Oral Presentation	Serawit Lisanework and Nega Tesfaw, 1st FIGO Africa Conference, Ethiopia, October 2013
Capturing a Missed Opportunity through PPIUCD in Ethiopia: Experience of MCHIP	Oral Presentation	Serawit Lisanework, 3rd International Conference on Family Planning, Ethiopia, November 2013
Maternal and Newborn Health in Four Regions of Ethiopia: Results from the Baseline Household Survey for the Community Kangaroo Mother Care Feasibility Study	Oral Presentation	Jennifer Callaghan-Koru, International Conference on KMC in India, Nov 2012
Newborn Care Practices at Home and in Health Facilities in Four Regions of Ethiopia	Article Published at http://www.biomedcentral.com/1471-2431/13/198	Callaghan-Koru et al. 2013. <i>BMC Pediatrics</i> 13:19
Results from the Qualitative Midline Assessment of the Community Kangaroo Mother Care Feasibility Study	Oral Presentation	Ephrem Daniel, Ethiopian Pediatrics Association Annual Assembly, January 2014

Annex 4: List of Materials and Tools Developed or Adapted by the Program

DOCUMENT TYPE	STATUS	AUTHOR, PUBLICATION DATE
Technical Reports		
Cultural Barriers to Seeking Maternal Health Care: A Review of the Literature on Cultural Barriers to Seeking MNH Care	Published	MCHIP December 2012
Implementing Best Practices in Midwifery – A Booklet for Midwives	Published	MCHIP and EMA 2013
Promising Practices in Maternal and Newborn Health and Family Planning and Reproductive Health in Ethiopia in 2012	Published	MCHIP December 2013
Standards and Guidelines		
Guide for Implementation of Helping Babies Breathe®, Strengthening Neonatal Resuscitation in Sustainable Programs of Essential Newborn Care	Not published	Global Public Private Alliance 2011
National Implementation Plan for Community-Based Case Management of Common Childhood Illnesses	Final draft	FMOH February 2010
Training Materials and Tools		
National BEmONC Training Package: Reference Manual, Facilitators' Guide, and Participants' Handout	Final	FMOH December 2013
National PPIUCD Training Package: Reference Manual and Learners' Manual	Published	FMOH December 2012
CKMC Complementary Module for Health Extension Workers: Facilitators' Guide and Participants' Guide-English, Amharic, Oromifa and Tigrigna	Published	MCHIP March 2012
Integrated Management of Newborn and Childhood Illness (IMNCI) for Health Extension Workers: Exercise Booklet and Facilitators' Guide	Published	FMOH January and April 2010
Health Worker Job Aids		
Posters: Management of Shock, Referral Checklist-English Women Friendly Care-English and Amharic	Published	MCHIP 2012
Family Planning Job aids: ANC Counseling Guide for PPFP, PPFP Counseling Job aid and PPIUCD Insertion Steps	Published	MCHIP 2012
CKMC Flip chart and CKMC Job aids for Health Development Army- English, Amharic, Oromifa and Tigrigna	Published	MCHIP March 2012
iCCM Chart booklet-Amharic	Published	FMOH and UNICEF 2012
Success Stories		
Improving the Quality of Maternal and Child Newborn Health Care -Oromia	Published	MCHIP 2013
Improving the Quality of Maternal and Child Newborn Health Care-Southern Nations, Nationalities and Peoples Region	Published	MCHIP 2013

Annex 5: Program Learning Priorities

PROGRAM LEARNING TOPIC	RELEVANCE OF TOPIC	PLANS FOR STUDYING, DOCUMENTING, DISSEMINATING	RESULTS
<p>Cultural Barriers to Seeking maternal health care in Ethiopia (Result 1)</p> <ul style="list-style-type: none"> Facilitates access to existing Ethiopia-specific resources that can guide MH program design. Within MCHIP sites providers will discuss with the client group to identify cultural practices that can enhance women's experience of facility-based care that leads to improved utilization Document examples of health facilities which have been responsive to community's needs and reported increased utilization 	<ul style="list-style-type: none"> Could answer questions of why Ethiopia still has a low facility and skilled birth attendant delivery rate and provides an acknowledgment that services do not meet the needs of clients There is an existing knowledge base in country but it is not easily accessible and generalizations used where documented knowledge not available Findings and list of resources should be shared with FMOH, RHB, partners, and donors to inform program design and implementation 	<ul style="list-style-type: none"> Develop a report of the literature review Conduct key informant interviews with providers in selected facilities (to cover all 4 regions) on perceptions of women centered care to operationalize improved service delivery. Disseminate to FMOH and partners findings of the literature review and discussions with providers nationally and use to guide program implementation through: <ul style="list-style-type: none"> Technical report Dissemination meeting Peer reviewed journals 	<ul style="list-style-type: none"> Published a technical report [Report can be accessed here: Cultural Barriers] Shared findings during MCHIP's annual review meeting in January 2012 Advocated respectful maternity care to FMOH and partners at national level Integrated respectful maternity care into routine MNH services in all MCHIP supported facilities and presented experience on the first FIGO Africa conference in October, 2013 Not shared in peer review journal as this was not a rigorous study.
<p>Promising Practices in MNH and FP - RH in Ethiopia in 2012 (Result 1)</p> <ul style="list-style-type: none"> How can existing promising MNH practices be identified and how can this information be used to guide strategic thinking of MNCH program implementation in Ethiopia? Description of the process that includes the rigor of practices (short-listing of practices, verification process) the interest and leadership of the FMOH in identifying this information as useful, and finding some hidden gems of practices that could be replicated and scaled up. How can MCHIP take the findings from the 	<ul style="list-style-type: none"> Helps to replicate promising practices in other technical or areas geographical. Also important to tease out practices that have not come to light and are to date hidden Recommends ways to take the documentation of these MNH Promising Practices to the next level - the FMOH and other MNCH partners can take the ownership and include in their programs to scale up nationally and regionally Similar programs may want to refine their approaches based on these findings From initial stakeholder discussions the 	<ul style="list-style-type: none"> Technical Report Peer-review journals Two promising practices submitted by Jhpiego selected as promising practice (competency based training and PQI to improve MNH service quality). MCHIP will implement approaches in all MCHIP supported facilities as needs dictate, and document their implementation. 	<ul style="list-style-type: none"> Published technical report shared to FMOH, partners and stakeholders. MCHIP shared to FMOH and recommended for scale up [Report can be accessed here: Promising Practices] Not shared in peer review journal as this was not a rigorous study MCHIP BEmONC training and SBM-R were among the selected promising practices. MCHIP is implementing these approaches in all the health

<p>process to the next level where it can be used to inform practice (program implementation) and policy? Once promising practices are identified, what's the next step in promoting these practices?</p>	<p>ease with which services can be effectively integrated (be it MNH with HIV, MNH with FP, nutrition with MNH etc.,) holds considerable interest for the FMOH and RHBs.</p>		<p>facilities it supports.</p>
<p>Experience of Blended Training Approach in BEmONC (Result 2)</p> <ul style="list-style-type: none"> • How can blended learning for BEmONC/Effective Teaching Skills be effectively implemented feasibly (in a country where network/internet coverage is perceived to be low)? • Does blended BEmONC training improve MNH skill competencies of midwifery faculty tutors so they can deliver quality training to students? • Does BEmONC positively impact the knowledge and skill of providers? How long is knowledge/skill retained post-training? 	<ul style="list-style-type: none"> • Need to look for innovative approaches to minimize disruption to service delivery caused when providers leave sites for training as well as more cost-effective ways to conduct in-service training in a country where needs are so great and resources limited • With the national focus on BEmONC there is a critical need to look at what its impact is on provider knowledge and skill 	<ul style="list-style-type: none"> • Technical report • Dissemination meeting • Sharing findings with FMOH and make recommendations as to whether this could be an alternative way to effectively use available training resources without compromising the quality of training • One round of training provided to the faculty tutors and another round for service providers to see if this approach is equally applicable for health care providers working in different settings i.e. Education and service delivery settings 	<ul style="list-style-type: none"> • BEmONC training package adapted for blended learning approach with the support from Global Learning Office [Training Package can be accessed here: Training Manual, Facilitator's Handbook, Participant's Handbook] • Three blended BEmONC trainings conducted • Technical Report to be completed August 2014 • Shared preliminary results during MCHIP National Dissemination meeting in May, 2014 • Conduct a meeting with FMOH to share the full report and provide recommendations and way forward (August 2014)
<p>Enhanced and Integrated PMTCT/MNCH Support for Selected MCHIP PMTCT Health Facilities (Result 2)</p> <p>Does enhanced MNH/PMTCT service affect the service utilization at selected health facilities of the following services? 1) HIV testing and counseling and provision of ARVs/ART for women and their children? 2) Syphilis testing and treatment? 3) TB screening</p>	<p>MCHIP implemented this approach in four selected PMTCT sites to measure the impact that can be brought by frequent support to health care providers. The findings will:</p> <ul style="list-style-type: none"> • Inform local health program managers on how PMTCT services increases uptake of MNH when integrated with MNH services. • Explain how the use of frequent coaching and mentoring for a defined period of 	<ul style="list-style-type: none"> • Technical Report 	<ul style="list-style-type: none"> • Technical Report to be completed August 2014

<p>and treatment? 4) ANC first and fourth visits? 5) Facility delivery? 6) Improved availability of key PMTCT supplies including ARV drugs?</p>	<p>time by woreda health offices can have a positive impact on service quality as well as increase in performance of facility health workers.</p>		
<p>Effects of SBM-R on Quality of Maternal and Newborn Services in Ethiopia (Result 2)</p> <ul style="list-style-type: none"> • Are the improvements in standards really making a difference in MNH service as measured by health service indicators as variables? • How do we know we are implementing PQI in a way that will continue post program support? What are levels of government leadership and ownership that exist and are required? 	<ul style="list-style-type: none"> • It is desirable to show that the improvement in processes using standards also improves service at outcome level • MCHIP will issue technical service contracts to woredas in MCHIP Phase II sites – is this an appropriate mechanism? Can it be effectively scaled up? Is it a model that can be replicated in other parts of the country/regionally? 	<ul style="list-style-type: none"> • Regular review of program monitoring data • Comparison of SBM-R and Non-SBM-R sites in levels of performance using standards and outcome indicators • Use LQAS to dig deeper into selected outcome indicators to determine quality (e.g. correct and consistent partograph use) • Evaluate the effectiveness of the technical service contract using a qualitative design which includes key informant interview, observation and review of secondary data on client satisfaction survey 	<ul style="list-style-type: none"> • Technical Report to be completed August 2014
<p>Community-based Promotion of Kangaroo Mother Care by Health Extension Workers: Results from a Feasibility Study (Result 3)</p> <ul style="list-style-type: none"> • What level of utilization of CKMC can be achieved through existing systems considering low coverage of skilled birth attendants or a low institutional delivery rate? • Can CKMC knowledge and acceptability improve among post-partum moms and their families? If so how? • What are the barriers and facilitating factors related to uptake of CKMC? • How does HEW promotion of CKMC and other newborn care interventions influence utilization of facility-based delivery and newborn services? 	<p>2011 DHS reflects need to focus on neonatal mortality reduction given limited improvement since the 2005 survey. Prematurity is one of the three leading causes of neonatal mortality. This work will contribute to both understanding how to address the national priority of reducing neonatal mortality AND the global understanding of community-based approaches to reach pregnant, recently delivered women and caretakers with timely counseling on thermal care and exclusive breastfeeding for newborn infants at the community level.</p>	<p>Pre/Post evaluation in 10 woredas/4 regions. Data to be collected through baseline and end line household surveys, program monitoring, skills assessments, qualitative sub-study on implementation barriers and successes (focus groups/in-depth interviews with recently delivered women, HEWs and program managers) and HMIS data will be reviewed.</p> <p>Household survey modules include: ANC, Birth Preparedness, Delivery and Immediate Newborn Care, PNC for mother and baby, Neonatal illness and care seeking, Nutrition.</p> <ul style="list-style-type: none"> • Technical reports to be developed and disseminated nationally - National stakeholders meeting, MOH/Child Survival technical working group, EPHA, EMA, EPS, and other national 	<ul style="list-style-type: none"> • Global and local conference: <ul style="list-style-type: none"> - International Conference on KMC in India, Nov 2012 - Ethiopian Pediatric Society 15th conference in January 16, 2014 in Addis Ababa • Shared preliminary results during MCHIP National Dissemination meeting in May, 2014 • Results Dissemination of Workshop held in June 17, 2014 • Journal manuscript to be submitted to BMC Pediatrics journal

<ul style="list-style-type: none"> • Can HEWs be trained to provide timely home visits and counseling of pregnant and recently delivered women on CKMC? 		<p>conferences</p> <ul style="list-style-type: none"> • Global conferences • Peer reviewed articles • Global technical working groups 	<ul style="list-style-type: none"> • Technical Report to be completed August 2014 • Policy Brief to be developed and shared with FMOH and TWG to be completed August 2014
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