Under the leadership of the Ethiopian Federal Ministry of Health, the Maternal and Newborn Health in Ethiopia Partnership (MaNHEP) is working to strengthen Ethiopia’s Health Extension Program by building skills of frontline health workers and strengthening district-wide administrative and health systems for improved care during the critical 48-hour period after birth.

MaNHEP, which works in six districts in Amhara and Oromia Regions, is funded by the Bill & Melinda Gates Foundation and led by Emory University, in collaboration with John Snow Research and Training Inc., University Research Co. LLC, and Addis Ababa University.

QI TEAM TAKES INITIATIVE TO DETERMINE CAUSE OF MOTHER’S DEATH

A MaNHEP-trained community quality improvement (QI) team in one of the project districts (woreda) in Oromia Region recently took the initiative to determine the cause of death of a woman who died during childbirth. The team’s work was designed to determine improvements, which could be made to avoid a similar outcome in the future.

In investigating the death, the team found that the woman and her family care givers had completed all four of the CMNH family meetings. As it is the tradition for a mother who is pregnant for the first time to give birth at her parents’ home, the woman went to her parent’s home, which happened to be in a different kebele, one that was not part of the MaNHEP project area. The woman experienced prolonged labor and excessive bleeding. As they have learned what to do through the CMNH family meetings, the woman and her husband requested that her family to take her to a health facility for a higher level of service. Unfortunately, the woman’s family had not participated in the CMNH meetings and failed to take the correct action and go to the health facility. They instead consulted a traditional religious healer who disputed the need for referral, reassuring the family that everything will be fine. The woman and her husband were unable to convince them otherwise. Exhausted and in critical condition, the woman subsequently died at her mother’s home, along with her unborn baby.

After this incident, the QI team realized that there is a great need to address the situation in which a woman lives in the project area but delivers outside of the project area, and also the situation in which a woman from outside of the project area comes to give birth in her family home within the project area. Measures that the QI team has planned to adopt include making sure that women who leave their kebele to deliver in their family home outside the project area register with the health post in the kebele where they will actually deliver, and ensuring that the women have made the necessary preparations for possible referral before giving birth. Women who come from other areas to give birth in the project area will be enrolled them in the CMNH family meetings and advise them on birth preparedness and complication readiness.
QUALITY IMPROVEMENT (QI) ACTIVITIES

Mini Learning Sessions

In July 2011, the MaNHEP team conducted “mini” learning sessions in the project woredas. A total of 182 participants in Amhara and 175 participants in Oromia Region attended the meetings. Participants represented regional health bureaus, zonal health departments, woreda administrations, woreda health offices, health centers, and the QI teams. The objectives of the mini-learning sessions were:

• To discuss the progress of QI activities in improving community maternal and newborn health (CMNH) care around the time of birth.
• To share best experiences in the implementation of CMNH care at the community level that could be adopted by other kebeles.

During the meetings, participants reviewed CMNH family meeting and quality improvement activities that support CMNH in each kebele, shared experiences in implementing the CMNH family meetings, and discussed ways to improving monthly data collection processes. The MaNHEP coaches who support the QI teams also shared their experiences. The mini-learning sessions provided a time for participants to share successes and challenges within their woredas with regards to improving pregnancy identification, antenatal care registration, CMNH family meetings attendance, labor/birth notification and postnatal care follow-up by HEWs within 48 hours of birth.

Learning Session 3

Learning sessions provide an excellent forum for cross-district learning and quality improvement in maternal and newborn health care. In August 2011, a total of 253 participants attended learning sessions in Amhara and Oromia Regions. Participants included QI team representatives from the project kebeles, coaches from the woredas and health centers, zonal administration representatives, woreda administrations, woreda health office heads, health center heads and representatives of regional health bureaus.

Participants presented their data and discussed their successes and challenges in improving pregnancy identification and registration, CMNH family meeting attendance, labor and birth notification, and postnatal care visits by HEWs.

BEHAVIOR CHANGE COMMUNICATION ACTIVITIES

In support of the integrated CMNH family meetings and QI activities, behavior change communication activities have been launched to raise awareness about safe delivery in the project kebeles. Six songs and two films (in Amharic and in Oromiffa) on community maternal and newborn health have been produced and are being presented to project communities. In addition, MaNHEP is conducting quarterly community events and holding poetry contests in the area of maternal and newborn health. Themes of these events are birth preparedness and complication readiness, safe clean delivery, and postnatal care. Different promotional items that include 634 caps, 2000 shopping bags, 1000 T-shirts, 1000 umbrella and 634 hand torches that have key messages on the main themes are procured for distribution during the different community events. The team will conduct focus group discussions and individual interviews to determine the effectiveness of these activities in promoting safe delivery practices.
PROGRESS ON SELECTED INDICATORS

Pregnancy Identification

Between November 2010 and August 2011, 9,649 pregnant women had been identified—86% of the total expected number of pregnancies (Figure 1).

The community QI teams have determined that effective pregnancy identification requires community and family awareness of the need for pregnant women to seek antenatal care and make themselves known to HEWs or other health workers, in order to receive proper care throughout pregnancy, labor and delivery, and during the immediate postnatal period. To ensure awareness of the importance of these measures, QI teams are involved in:

- Spreading messages through existing formal and informal social and political structures, such as community organizations or development group meetings, religious and social gatherings such as Iddir, Tsewamahibir, Senbete, and coffee ceremonies.
- Disseminating messages through existing social networks to target mothers-in-law and husbands, as well as other influential or model families, and elder wise women.

In addition, the QI teams are working to develop mechanisms for identifying women and reporting pregnancies to HEWs or other health workers. These mechanisms include:

- Self-reporting by women to HEWs or an identified point person at a sub-kebele, who regularly reports to an HEW.
- Identifying women during regular home visits or activities such as immunization campaigns, conducted by HEWs.

Pregnancy Registration

By August 2011, of the identified pregnant women, 80% received their first ANC service—an increase from 38% in November 2010 (Figure 2).

Community QI teams have found that the most effective changes to improve pregnancy registration for ANC are:

- Encouraging family members, such as husbands and mothers-in-law, to accompany women to ANC.
- Arranging peer support from mothers who have attended ANC.

Figure 1. Number of newly identified pregnant women (November 2010 – August 2011)

![Graph showing the number of newly identified pregnant women between November 2010 and August 2011.]

Figure 2. Cumulative percent of newly identified pregnant women who registered/received first ANC (November 2010 – August 2011)

![Graph showing the cumulative percent of newly identified pregnant women who registered/received first ANC. The median is 72.2%.]
• Maintaining a flexible approach to when and where ANC can be delivered, such as creating a specific day at the health post for ANC, during regular home visits by HEWs or at the same time that immunizations are administered.

• Creating follow-up mechanisms and procedures to identify women who do not come for ANC. The processes for identifying these women may include:
  – Comparing lists of identified women with those registered to determine and/or cross check with nearby facilities to see whether all women have received services.
  – Providing care during visits for those who do not attend ANC.
  – Assigning a community member, such as a Community Health Development Agents (CHDA) or QI team member, to follow up with women and accompany them to ANC when possible.

**Community Maternal and Newborn Health (CMNH) Family Meetings**

*By the end of August 2011, about one third of identified pregnant women had attended CMNH family meetings (Figure 3).*

CMNH guides are also QI team members. They teach CMNH knowledge and skills to pregnant women and families in the third trimester of pregnancy, before delivery. The CMNH guides have organized CMNH family meetings to ensure that all women participate using the following improvement ideas:

• Using the master list of newly identified pregnant women, inviting those in the 3rd trimester to attend the CMNH family meetings.

• HEWs and CMNH guides creating a mutually agreed on schedule with each woman/family team and respective CMNH guide team.

• Spot follow-up visits by coaches and HEWs to monitoring quality of CMNH family meetings.

Although CMNH family meeting participation is increasing, challenges remain. These challenges include increasing participation by husbands and mothers-in-law in the CMNH meetings and ensuring that women complete the four CMNH meetings before giving birth. These areas will become emphasis of quality improvement.

**Labor/Birth Notification and Postnatal Care (PNC) Visit by HEWs within two days**

*About half of expected births were reported from November 2010 through August 2011. Of expected births, 37% were notified to HEWs during labor or birth and 34% of were followed by a PNC visit from the HEW within two days (Figure 4).*

QI teams continue to test new ideas to improve labor and birth notification and PNC visits by the HEWs within two days after birth. To date, the teams have determined that HEWs who are notified of labor or birth are able to provide PNC within two days more than 80% of the time. The changes that they have used to make the improvements to date include:

• Assigning point people to inform HEWs when labor begins, including family members, Community Health Development Agents (CHDAs), either on foot, using a mobile phone or by riding horse.
• Other measures for ensuring birth notification and PNC visits are making sure that HEWs can be easily located. This can be accomplished by:
  – Having HEWs leave notes on the health post doors indicating her location in the kebele
  – Having point people leave notes at health posts notifying the HEWs of labor or birth

A major challenge in providing PNC is failure of families to routinely notify the guide team or the HEWs, especially in the case of normal births. The QI teams are currently testing an approach to assign one person among the pregnant woman’s family who participate in the CMNH meetings to be responsible for labor and birth notification.

**Maturity Index**

The average QI team maturity index for the month of August 2011 was 2.73 out of 5 (Figure 5).

The large majority of QI teams (88%) have reached a maturity index of > 2.5. This means that teams are regularly testing ideas to improve multiple care processes (described in Figures 1-4) to support CMNH training and care, are seeing and maintaining improvement in at least 1 to 2 of the care processes (i.e., pregnancy identification, ANC registration, CMNH family meeting attendance, labor and birth notification, and PNC follow-up), and are regularly collecting data to monitor their own progress.

**Advancing Distribution of Misoprostol**

The MaNHEP project began providing misoprostol to HEWs in March 2011. By August 2011, of reported deliveries, 61.5% of women received misoprostol immediately after birth of the placenta. The percentage, however, was much lower for deliveries reported in Amhara Region compared to Oromiya Region (31.8% and 98%, respectively). When the number of estimated deliveries is the denominator, the percentages are lower-- 29.6% overall, 15.8% and 45.8 percent for Amhara and Oromiya regions respectively. The regional difference in misoprostol use may reflect the mechanism of local distribution to women-- among other factors. For example in Amhara region, the HEWs offer misoprostol to
women during labor and birth when they (HEWs) are present; whereas in Oromia region, the HEWs provide the tablets to the CMNH guides who, in turn, both teach pregnant women to safely use the drug and also provide the tablets during the last CMNH family meeting. Gaining a better understanding of these systems level factors that influence advancing distribution of misoprostol will become a focus of upcoming quality improvement activities and the subject of additional in-depth implementation research.

Under-reporting of perinatal deaths will become a focus of improvement activities going forward. Additional in-depth qualitative research on factors contributing to non-disclosure of perinatal deaths will begin in January 2012, led by Dr. Mitike Molla, School of Public Health, Addis Ababa University. Dr. Molla is member of the AAU faculty and a Postdoctoral Fellow who is participating in MaNHEP.

**Perinatal Health Outcomes**

A challenging improvement area for the project is the under-reporting of perinatal deaths. Based on the 2005 Ethiopian Demographic and Health Survey rate of 10.4, the expected number of stillbirths is 70 in project area. The number of stillbirths reported in the project area is 24 (34%). Based on the early neonatal death rate of 26.9, the expected number of early neonatal deaths in the project sites is 182. The number of early neonatal deaths reported is only 12 (7%). Overall reporting of perinatal deaths in the project area is only 14% of the expected figure.
A number of other improvements have also been identified in the implementation of project interventions including:

- Increased frontline health worker collaboration and improved community relations.
- Growing HEW confidence, motivation and accountability.
- Increased responsibility for project activities by kebele administration and woreda health office staff.
- More women are getting MNH care, new information and skills, and social support.
- More women are seeking MNH care as they learn how care has become more widely available and improved.
- QI teams are developing skills in compiling, analyzing, plotting and presenting data on graphs.
- Woreda and health center coaches are beginning to take on more responsibility for monthly coaching visits.

Taken collectively, the CNMH family meetings, collaborative improvement work which sets improvement targets and monitors outcomes are improving care for women and newborns.

**CHALLENGES AND LOOKING AHEAD TO THE NEXT PERIOD**

**Challenges**

Major project challenges include inadequate infrastructure and supplies at health posts for HEWs to conduct ANC and provide delivery service, unfilled HEW positions, and a turnover of HEWs. MaNHEP is working closely with woreda, zonal and regional health officials to advocate for an adequate number of HEWs and construction and equipping of standard health posts.

**Technical Update for Midwives and HEWs**

Rapid assessment of HEW conducted in June 2010 revealed that of 69 HEWs residing in the MaNHEP project area who received prior safe clean delivery training, none had attended the required minimum of five deliveries (only 10% had attended four deliveries and 54% had not attended any deliveries). Recognizing this gap in requirement and achievement, MaNHEP has organized a clinical update on safe and clean delivery for those HEWs who were previously trained on safe and clean delivery and newborn care but did not attend five deliveries. Seven, week-long waves of clinical update will take place in Debra Markos (October–November) and in Adama (September–October).

**Planning for Spread**

In early November, MaNHEP will begin planning spread within project woredas together with MoH counterparts from all levels. MaNHEP will support MoH partners as they take the lead to spread best MNH practices and processes to new kebeles, with an eye to lessons learned for future national scale-up planning. Over the coming months, MaNHEP will focus its efforts to build capacity and identify champions of the community MNH approach among district administrative and health sector partners.

**Leveraging Partners and Primary Health Care Unit Strategy**

MaNHEP seeks to engage MOH and development partners to complement MaNHEP’s community-oriented model with health facility strengthening in basic emergency obstetric and newborn care and collaborative quality improvement. This will allow for a true household-to-health facility continuum of care that is inherent in the national Primary Health Care Unit Strategy.
# Glossary

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<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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<tr>
<td>ANC1</td>
<td>First Antenatal Care Visit</td>
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<td>AP</td>
<td>Action Period</td>
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<td>BCC</td>
<td>Behavior Change Communications</td>
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<td>CHDA/vCHW</td>
<td>Community Health and Development Agents/Voluntary Community Health Workers</td>
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<td>CMNH</td>
<td>Community Maternal and Newborn Health</td>
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<tr>
<td>DHS</td>
<td>Demographic and Health Survey</td>
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<tr>
<td>FLWs</td>
<td>Frontline Workers (TBAs, CHDAs, HEWs)</td>
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<tr>
<td>GT</td>
<td>Guide Team</td>
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<tr>
<td>HC</td>
<td>Health Center</td>
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<td>HEP</td>
<td>Health Extension Program</td>
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<td>HEW</td>
<td>Health Extension Worker</td>
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<td>HP</td>
<td>Health Post</td>
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<td>HMIS</td>
<td>Health Management Information System</td>
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<td>IEC</td>
<td>Information Education and Communication</td>
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<td>LS</td>
<td>Learning Session</td>
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<td>MaNHEP</td>
<td>Maternal and Newborn Health in Ethiopia Partnership</td>
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<td>MNH</td>
<td>Maternal and Newborn Health</td>
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<td>PNC1</td>
<td>First Postnatal Care Visit</td>
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<td>QI</td>
<td>Quality Improvement</td>
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<td>QIT</td>
<td>Quality Improvement Team</td>
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<td>RHB</td>
<td>Regional Health Bureau</td>
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<tr>
<td>TBA</td>
<td>Traditional Birth Attendant</td>
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<td>ZHD</td>
<td>Zonal Health Department</td>
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