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Adoption and Sustainability of Community Based Maternal and Newborn Health Innovations by Decision-makers in Ethiopia

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Abstract

Adoption and Sustainability of Community Based Maternal and Newborn Health Innovations by Decision-makers in Ethiopia

Maternal and child mortality rates in Ethiopia are among the highest in the world, with a woman in Ethiopia having a 1 in 27 lifetime chance of dying of pregnancy-related causes. As in many resource poor settings, the Ethiopian health system is relatively weak with limited resources allocated and expended for maternal and child health. This study examines maternal and child health service provision from the perspective of key stakeholders who have decision-making roles in the allocation of resources. This study uses qualitative in-depth interviews and focus-group discussions to explore levels of maternal and child health (MCH) knowledge among stakeholders, and examines how this knowledge influences attitudes towards service provision, perceptions of community needs and priorities in resource allocation. Decision-makers interviewed include village/ kebele administrators and woreda (district) health officers (WHOs). Results suggest that while key decision-makers endorse and support Health Extension Workers (HEWs) and the Health Extension Program, both groups identify problems within the program and the health system that limit the effectiveness and sustainability of the program. Community leaders express skepticism over the ability of HEWs to provide quality delivery services and remain hesitant to advocate for deliveries in the health post. Despite advocating for HEWs to provide delivery services, WHOs report that HEWs lack the training and supplies to provide skilled attendance. Both groups of decision-makers feel it is the responsibility of other parties (the Ethiopian government and donor partners) to create the necessary changes to improve maternal and child health outcomes. Our results suggest that decision-makers want HEWs to provide delivery care but feel they lack the necessary training and equipment. Training of HEWs in delivery skills can be an effective medium for providing skilled attendance at birth; however HEW trainings need to be incorporated into the government health plan to be sustainable. Decision makers currently perceive that they are unable to influence maternal and neonatal outcomes in their communities, thus preventing action. The Ethiopian government and MaNHEP should commit to improving the health infrastructure in Ethiopia, while empowering decision-makers to act within their own locus of control.

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Introduction

In Ethiopia, approximately 22,000 women die a year due to causes associated with pregnancy and childbirth (Say, 2007). The maternal mortality ratio varies from 673 deaths to 720 deaths per 100,000 live births (Say, 2007) while the neonatal mortality rate is 39 per 1000 (Macro, 2006). It is believed that many of the causes of maternal and neonatal mortality in Ethiopia stem from the inability of women to access quality healthcare during and after delivery (Sibley, Buffington, Tedessa, & McNatt, 2006) as fewer than 6% of Ethiopian women deliver with the assistance of a skilled attendant (Macro, 2006).

As in many resource poor settings, the Ethiopian health system is relatively weak with limited resources allocated and expended for maternal and child health (MCH) (Mekonnen Y, 2002). However, in 2005, the new Health System Development Program-III (HSDP) was created which is working towards improving maternal child health in Ethiopia. The key strategy of HSDP-III is the Health Extension Program (HEP) in which 30,000 young women were selected to serve as Health Extension Workers (HEWs) in their communities (HSDP-III, 2008). These women received training on 16 different health issues of which delivery care is one component (Argaw, 2007). The effectiveness of this program is in part, dependent of the support of local and national stakeholders (USAID, 2009). If these stakeholders prioritize maternal health, it is believed that they have the ability to mobilize and engage the community, positively influencing maternal and child health outcomes (Shiffman & Okonofua, 2007)

The purpose of this study was to examine the attitudes and perceptions of decision-makers, community leaders and woreda (district) level health officials (WHOs) in Ethiopia on maternal child health and the effectiveness and sustainability of the Health Extension program. It is believed that these decision-makers have influence over MCH outcomes and care-seeking behaviors; community leaders represent the top the community power structure and are influential in their communities, while WHOs have influence over the allocation of resources. This study uses qualitative in-depth interviews and focus-group discussions to explore levels of maternal and child health (MCH) knowledge among these stakeholders, and examines how this knowledge influences attitudes towards service provision, perceptions of community needs and priorities in resource allocation. This area of research is critical given the potential the HEP program has on maternal and child health outcomes in Ethiopia.

AIMS

Research Question

Given the evidence that key decision-makers can influence health outcomes (USAID, 2009), does an attitude which prioritizes maternal and child health by these decision-makers result in greater support for the health extension program and improved maternal and child health?

Primary Objective

- To establish whether decision-makers in Ethiopia prioritize maternal health and to determine if prioritization of maternal health results in greater support for the Health Extension Program.

Specific Aims

1) Determine how maternal and child health is prioritized by decision-makers.
2) Explore how decision-maker perceptions and attitudes towards maternal health influence their decision to allocate resources for MCH.
3) Determine the attitudes of decision-makers towards the health extension workers and the health extension program.

Background

Maternal and Child Health in Ethiopia

Ethiopia is one of the largest countries in Africa; it is home to approximately 80 million people, 85% of which live in rural areas (Argaw, 2007). At a country level, more than 70% of women live more than 5 km from a health post, which makes accessing health care difficult (Reformplus, 2006). Ethiopia also has one of the highest total fertility rates in the world at 5.4 births per woman, a low percentage of women using a modern method of birth control (9%) and only 5.6% of births are attended by a health professional (Macro, 2006). These statistics indicate that a large majority of women who give birth in Ethiopia are at risk for serious complications and infections associated with delivery; a woman in Ethiopia has a 1

in 27 lifetime chance of dying of pregnancy-related causes (Macro, 2006). Women who are repeatedly exposed to the risks of pregnancy and child bearing and are unable to access quality medical care are understandably at greater risk of morbidity and mortality related to pregnancy. The maternal mortality ratio in Ethiopia is very high, varying from 673 deaths to 720 deaths per 100,000 live births (Say, 2007). The Infant mortality ratio is also high at 77 deaths per 1,000 live births with half of the deaths occurring in the first month after birth (Macro, 2006). Each year, approximately 22,000 women and 143,439 newborns die in Ethiopia from complications related to childbirth (Say, 2007) .

A majority of births in Ethiopia (94%) occur in the home, which makes providing clean and safe delivery services to mother more difficult (Macro, 2006). A community and family survey conducted in southern Ethiopia in 1997 revealed that 26.1% of women received antenatal care and only 3.3% received care during delivery (Mekonnen Y, 2002). The leading causes of maternal death in Ethiopia are infection, obstructed labor, eclampsia/preeclampsia, and postpartum hemorrhage, each of which could be prevented or treated by the attendance of a skilled person at the time of delivery (Abdella, 2010)

Table 1. Maternal, newborn and child health indicators, Ethiopia

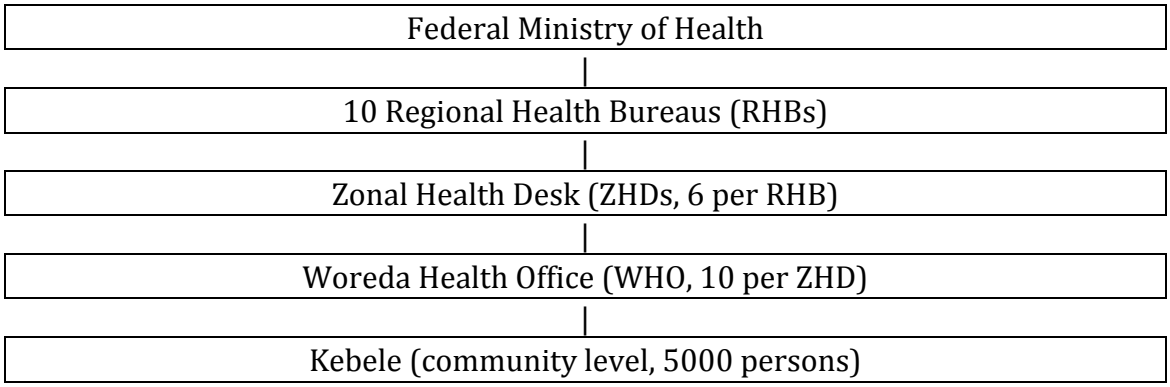
Indicator	Value	Data Unit	Year	Source
Total Fertility Rate (DHS)	5.4	%	2005	Ethiopia DHS-2005
Contraceptive Prevalence Rate, Modern Methods, All Women	9.7	%	2005	Ethiopia DHS-2005
Women 20-24 Who Gave Birth Before Age 20	46.1	%	2005	Ethiopia DHS-2005
Maternal Mortality Ratio (WHO/Hill)	720	Per 100,000 live births	2005	WHO/Hill-2005
Maternal Mortality Ratio (DHS)	673	Per 100,000 live births	2005	Ethiopia DHS-2005
Antenatal Care (at least 1 visit)	28.1	%	2005	Ethiopia DHS-2005
Assisted delivery by a Health Professional	5.7	%	2005	Ethiopia DHS-2005
Infant Mortality Ratio (DHS)	77	Per 1,000 live births	2005	Ethiopia DHS-2005
Neonatal Mortality Rate	39	Per 1,000 live births	2005	DHS STAT compiler as of September 2008

The Ethiopian Health System

Ethiopia is a democracy governed by a federal system, which consists of 9 regions and 2 administrative councils. The regions are divided into 62 zones and 523 districts or woredas (as referred to in Amharic) (HSDP-III, 2008). (See Figure 1) The smallest administrative until, which is not part of the federal system, is organized by community leaders and is called a 'kebele'. There are several kebeles in each woreda, with each kebele covering approximately 5000 people. The federal government in Ethiopia is responsible for creating national health policies, while the

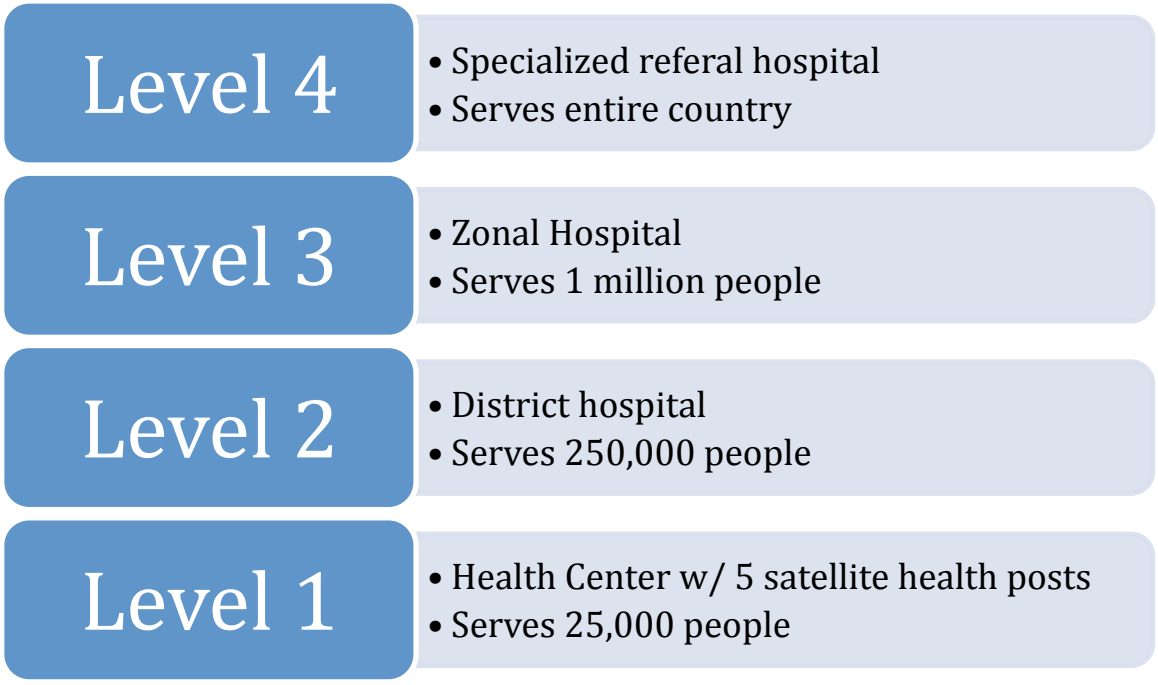
regional and district governments are responsible for implementation of these policies (HSDP-III, 2008).

Figure 1. Organizational Structure of the Ministry of Health, Ethiopia



In Ethiopia, there is a four-tier health delivery system, which focuses on providing essential health services. The National Essential Health Service Package is this delivery plan and it has five major components, one of which is family health service, which encompasses reproductive and child health interventions (Reformplus, 2006). The base level of this tier is the 'kebele' level, where there is a health center with five satellite health posts, which is designated to serve 25,000 people. It is at this base level that the HEWs work. The next tier is the district hospital that serves 250,000 people followed by the zonal hospital, which serves approximately 1 million people. The last tier is the specialized referral hospitals, which serve the entire country.

Figure 2. Organizational structure of health system, Ethiopia



In the Amhara region, there are 19 hospitals, 169 health centers and 2,590 health posts (HSDP-III, 2008). The Amhara region is home to nearly 20 million people and has a physician to population ration of 1: 147,549 with only 133 physicians (HSDP-III, 2008). The situation in the Amhara region is echoed across the country, as the organizational setup at each of the tiers is weak in terms of trained manpower, technical capacity and resource availability. It is thought that improvements in service delivery are dependent on strengthening the health system at the regional and woreda levels (Reformplus, 2006).

Health Care Financing

Health expenditures in Ethiopia from 2004/05 show that 37% of funding comes from donors, 31% from the government and 30% from households; there is minimal

involvement from the private sector (Reformplus, 2006). According to the 2004/2005 National Health Accounts (NHA), government spending has increased by 37% from the 1999/2000 allocations; however, donor spending has increased by over 50% for that same period (Reformplus, 2006). When looking at health care allocations by topic, the most recent estimates indicate that 12% of total health expenditure is on reproductive health; this amounts to $3.69 spent per year on each woman aged 15-49. (Total health expenditure for reproductive health was not estimated in the earlier 1999/2000 NHA). While 12% of total health expenditure seems good, the dollar amount is much less than most African countries spend per woman on reproductive health (Reformplus, 2006).

A large portion of the expenditure on reproductive health care comes from donors 44%, while 34% comes from households and only 19% from the government (Reformplus, 2006). That being said, health expenditures are up from previous years with 5% of the total gross domestic product (GDP) being spent on health (Wamai, 2009). Although this number remains low, the Ethiopian government is working to strengthen its health system and has created policy to focus on the health services delivery system. To implement this policy, the Health Sector Development Program was developed and is now in its third stage, HSDP-III, which will continue until the end of 2010 (Accorsi, Bilal, Farese, & Racalbuto, 2010). HSDP-III is focused on high-impact and cost-effective interventions to increase access to primary health care in addition to strengthening the health system (Hadley, 2010).

Health Extension Program (HEP)

The key strategy of HSDP-III is the Health Extension Program (HEP) in which 30,000 young women were selected from their kebeles to serve as health extension workers (HEWs) and received training from Technical and Vocational Training and Education Centers (TVET) (Argaw, 2007). These women received training on 16 different health packages and are to serve as the first point of contact of the community with the health system. These women work at the district level in rural health posts, 2 per kebele, and are responsible for delivering integrated prevention, promotive and curative health services with a special focus on MCH (Argaw, 2007). In addition, the HEWs are supported by a cadre of community health volunteers (vCHW), who assist with community mobilization and education.

The purpose of the HEP is to bring the health sector to the community, at the kebele level. The two HEWs are representatives of the health sector in the local administration. Each kebele has a local administration, a health committee, which includes HEWs and other elected members of the Kebele such as agricultural development agents, teachers and other important members of the kebele. This committee brings the kebele together to discuss important issues regarding the community (Argaw, 2007).

Health Service Utilization

The new availability of female providers (HEWs) is an important step for improving maternal and child health in Ethiopia, as it is believed that women health workers will have an easier time approaching and speaking with women, especially about pregnancy and delivery (Argaw, 2007). In Ethiopia, maternal mortality is likely tied

to extremely low utilization of skilled birth attendants and facility delivery and to even lower use of emergency obstetric care (Kruk, et al., 2010). The availability of skilled birth attendants remains low with 80% of pregnant women delivering without the assistance of a skilled attendant (Macro, 2006). An article by Pitchforth et al., 2010, found that 94% of women in Gondar (a zone in the Amhara region which is characterized by mountainous, rural areas) were delivering without a skilled birth attendant (Pitchforth, et al., 2010). According to the 2005 Demographic and Health Survey, the majority of mothers living in rural areas (75%) did not receive any antenatal care from a health professional and only 3% delivered in a health facility.

Research indicates a variety of complex reasons for choosing to deliver at home rather than at a health facility, which involve demand and supply side factors (Mekonnen, 2003). There is limited research on determinants of maternal health service utilization in Ethiopia, however, a recent article by Kruk et al, found that women in rural Ethiopia strongly preferred health facilities that had highly trained personnel, a reliable supply of drugs and functioning equipment. Respectful attitudes from providers were also important, however, convenient access and availability of transport were less important. This study suggests that individuals with technical expertise in delivery and well-equipped facilities are needed to encourage women to utilize health facilities for delivery.

Although the Kruk et al., 2010 article does suggest that convenient access to care is of lesser importance than other issues; many Ethiopian women still do not access care. The 2004 Welfare Monitoring Survey report showed that only 46% of

women with a self-reported illness consulted for treatment. Women report several reasons for low attendance at health facilities including: expense of services (99% of costs for pharmaceuticals and medial non-durables are out of pocket expenses), long wait times, unavailability of drugs, lack of labor facilities and shortage of health personnel (Reformplus, 2006). According to the 2005 DHS, 80% of women were concerned that there might not be a provider at a health facility, 76% were concerned about paying for treatment, 74% were concerned about transportation and 73% were concerned that there may not be a female provider to help them. This is where the HEP can help service utilization, as its goal is to provide women with a comfortable connection to the health system at a low cost.

Literature Review

The purpose of this review is to provide information on the Health Extension Program in Ethiopia (HEP), exploring the current successes and challenges of the program. As the HEP in Ethiopia is in its infancy, this review will examine the literature on comparable community health worker programs around the world to provide a better understanding of the effect these programs have on maternal and child health (MCH). This review will also explore literature on the power structures and the effect key stakeholders have on community decision-making and how this may affect maternal child health and maternal care seeking behaviors. Lastly, this review will explore the literature on the challenges of funding and sustaining a MCH community based intervention in developing countries.

Review of the HEP in Ethiopia

The Health Extension Program (HEP) in Ethiopia was created in 2003 to respond to the challenges of the Millennium Development Goals, particularly maternal, neonatal and child health goals, and to address the gap that exists between rural communities and the health care system (HSDP-III, 2008). With such a large rural population and an extremely low number of skilled health practitioners, the health system needed a way into the communities to provide care as well as encourage the utilization of health services by the community. The HEP completed its rollout in 2009; 30,193 HEWs have been deployed and 11,000 of 15,000 projected Health Posts (HP) have been constructed (Messelech, 2009). Since the HEP is still young

with the final rollout recently completed, research evaluating the effectiveness and receptiveness of the program is limited.

However, Koblinsky et al (2010) did conduct a review to explore the literature that has been written about the health extension program and its work on maternal health care. The review states that the health system development goal of increasing skilled birth attendance from 12% in 2009 to 32% by 2010 is unlikely to happen. This is because the health system has yet to address many of the issues that prevent health service utilization and because the majority of HEWs have not yet received training on delivery skills (Argaw, 2007). The FMOH reported that only about 20% of HEWs had received a 4 week training which included safe delivery and about 25% had received training on essential neonatal health care (ENCH) (L10K, 2009). Although the maternal health reviewers of the HSDP-III stated that HEWs should not be expected to provide delivery care, the expectation is still there from health officials and the community that HEWs be able to provide delivery care in the home (Team, 2008).

This is a problem however, as the HEWs have minimal theoretical training on delivery and virtually no practical training on delivery skills (Koblinsky, 2010). The HEWs are given training on maternal and child health care in their initial one year of training; however, the majority of HEWs were unable to practice their delivery skills, as it was difficult to find a training facility for so many people (Argaw, 2007). It has been found that even among those who do have training, retention of practical skills is difficult, as these women are not routinely delivering babies (Sibley, et al., 2006). Some interventions are easier for HEWs, such as ANC and PNC

counseling, since these visits can be scheduled. However, as labor and delivery cannot be scheduled in this same way and since the HEWs spend a majority of their time out of the health post, it is much more difficult to assist with deliveries.

In addition, the HEWs are expected to deliver 16 health packages to the community, of which maternal and neonatal health is only a small part (Table 2). The HEWs are also expected to provide health education and a variety of other preventive interventions which take up much of their time; it is also likely that the HEWs feel more comfortable performing some of these tasks than assisting with delivery (Koblinsky, 2010).

Table 2. HEW Training Package

Health Extension Program – Major Training Packages	
Hygiene and Environmental Sanitation	1. Building and maintaining healthful housing 2. Construction, usage and maintenance of sanitary latrine 3. Control of insects, rodents and other biting species 4. Food hygiene and safety measures 5. Personal hygiene 6. Solid liquid waste management 7. Water supply safety measures
Family Health Service	8. Maternal and child health 9. Adolescent and reproductive health 10. Family planning 11. Vaccine Services 12. Nutrition
Disease Prevention and Control	13. HIV/AIDS and tuberculosis prevention and control 14. Malaria prevention and control 15. First Aid
Health Education and Communication	16. Health education and communication methods

Referral to a health center can be a difficult 'sell' for HEWs, especially when functioning health centers are not yet able to provide the community with skilled workers, supplies, or equipment (Bekele, 2008). HEWs are supposed to be supported by at least two diploma level midwives and one health officer with emergency obstetric care (EMOC) training at the health center, however, most health centers do not have these skilled practitioners (Koblinsky, 2010).

Evaluation of the Health Extension Program (HEP) suggests that the program does have its successes. The most recent article by Karmin (2010) used a cross-sectional study of 2,916 women with children 0-11 months, to evaluate the influence of the HEP on maternal health care. The study reported that kebeles with higher reporting of HEP influence, model families and household visits by HEWs, were associated with improved ANC use, TT coverage and PNC visits. However, there was no association with increased deliveries attended by a health professional (Karmin, 2010). This result is not surprising, as the latest review reports that only 4% of deliveries are assisted by a HEW and that 91% of women are still delivering at home (L10K, 2009). This review indicates the need to increase the practical training of HEWs in "normal" delivery, the need to increase the number of skilled practitioners, supplies, and equipment in the health centers, and the need to strengthen the referral system from the HEWs to the health center.

The review does indicate that the community is beginning to accept the HEP, believing that HEWs are generally helpful and that the program is improving access to health services in rural areas. However, the community still wants the HEWs to provide curative care (Negusse, McAuliffe, & MacLachlan, 2007). There seems to be

a gap in the research, as little is written on the acceptability of the HEP by decision makers in the health system. It is important to understand how stakeholders at each level of the health system evaluate the success of the HEP and to understand their perceptions of its capability and usefulness in the future.

Evaluation of the HEP in Ethiopia indicates that much needs to be done to strengthen the program, such as increasing the amount of practical training the HEWs are given, increasing supportive supervision of the HEWs and creating communication guidelines to help HEWs communicate with other community based health workers (Argaw, 2007). The HEP in Ethiopia has yet to reach it's potential, however, research from other countries show that programs like the HEP can succeed in improving maternal and neonatal health in rural areas. As the HEP is still at a very early stage in Ethiopia, it is important to look at the successes of other similar programs to grasp the possibilities of what the HEP in Ethiopia can become.

Community Health Worker Programs

Purpose and influence of programs:

Across the globe, developing countries have recognized the need to increase service access and improve service utilization among populations that are underserved and hard to reach, mostly in rural areas. These programs have been researched and validated, demonstrating that relatively unskilled and even illiterate health workers can positively influence underserved populations, improving access and utilization of health services (Carlough & McCall, 2005) (Dawson, et al., 2008) (Gogia & Sachdev, 2010) (Bhutta, Darmstadt, Hasan, & Haws, 2005). A review by Rosato et al. in 2008 looked at community participation and lessons for maternal, newborn and

child health, and found that programs which implement community mobilization activities:

> Can bring about cost-effective and substantial reductions in mortality and improvements in the health of newborn infants, children, and mothers. (Rosato, et al., 2008)

The Female Community Health Volunteers (FCHVs) were established in 1988 in Nepal and the Lady Health Workers (LHWs) were created in 1994 in Pakistan for reasons similar to those of the health extension program in Ethiopia (Era, 2007) (Hafeez, 2011). In both Nepal and Pakistan, maternal and child health indicators were very poor; it was recognized that rural communities had limited access to primary care centers and the health system and that something needed to be done to address this gap (Hafeez, 2011). Both programs were created to improve community participation in health activities, increase access to the health system, and to provide basic curative and preventative care (Era, 2007) (Siddiqi, Haq, Ghaffar, Akhtar, & Mahaini, 2004).

Several articles have been written about both programs and their influence on maternal and child health. A descriptive study by Hafeez et al. (2011) was carried out to assess the achievements of the LHW program. The study revealed that, "health indicators are significantly better than the national average in areas served by the LHWs." A study in Nepal by Glenton et al. in 2000 found that community health workers improved access to MCH services while a study by P. Dawson et al (2008) found that FCHVs were able to diagnose and treat pneumonia cases and were effective in reducing child deaths. What is important to note from

these case studies, is that the Ethiopian health extension program was created for similar reasons and with similar goals. These case studies demonstrate that a community level health worker program can positively influence maternal and child health outcomes, suggesting that the HEP in Ethiopia has similar a potential.

Stakeholder influence:

One of the most important components of any successful community based program is its acceptance by the community. In order for any program to be successful, the communities have to be able to access, trust, and respect those who are working with them. Community health worker programs are unique, as health workers are usually recruited from the communities in which they live and are therefore more acceptable to the communities (Negusse, et al., 2007). In addition, the program needs to be supported and embraced by the individuals creating and running the program, such as health officials and the Ministry of Health (as well as other key Ministries, such as Planning and Finance). A 2004 paper on MCH in Pakistan found that:

> Experience in Pakistan has shown that stakeholders such as the government and the donors have a lot to do with the success of a program. The achievements of the LHWs Program in the 1990s were due to the firm political commitment and will of successive governments backed by availability of resources (Siddiqi, et al., 2004).

Stakeholders have an enormous influence over whether a program will be successful, especially those stakeholders who design and implement the programs. In 2010, Glenton et al. explored perceptions of decision makers in Nepal, mostly

men from the Ministry of Health and Population, on female community health volunteers. They found that there was little support among stakeholders to adopt salaries for the FCHVs, as they feared salaries would make the program unsustainable. In addition, the stakeholders believed that "salaries clearly collide with expectations, changing the FCHVs moral status and undermining social prestige" (Glenton, 2010). Although demands for salaries have been made through FCHV associations (Glenton, 2010), this article indicates that these demands are unlikely to be met, as the stakeholders who are responsible for the program are opposed. These articles demonstrate the influence stakeholders can have on community-based programs. They show that community health workers require the trust of those they serve and support from stakeholders in the health system. Community health worker programs are difficult to implement and will not be successful without the backing of all those involved.

Implementation problems of community health worker programs

Health system infrastructure and community acceptance

Community health worker programs have the opportunity to improve the heath and well being of people in rural communities; however, community programs can be quite difficult to implement effectively. Where these programs primarily struggle is in providing access to quality care, as often community health workers lack the training needed to provide the necessary care or are not supported by quality care at the health centers to which they provide referrals. A study conducted by DFID in 2005 on Health Surveillance Assistants (HSAs) in Malawi found that the program was ineffective because the HSAs received insufficient training, experienced an

overburdened workload, were poorly supervised, and had inadequate access to drugs and supplies (Kadzandira, 2001). In 2005, a study on community based care in Nepal found that despite receiving refresher training and feeling more confident about their work, the 112 surveyed MCHWs were "frustrated at the lack of basic facilities at the SHP and logistical support, almost complete absence of professional support from the D/PHO, and lack of recognition for their services within the community (Chhetry, Clapham, & Basnett, 2005).

These articles illustrate the difficulties of implementing a community health worker (CHW) program, revealing how important is it for the CHW to have the support of a strong health system. The irony is that the majority of CHW programs are in countries where the health infrastructure is weak, as the purpose of the program is to address a gap in the health system. The lesson to learn from these case studies is to acknowledge infrastructure shortcomings and to work with the health workers to find interim solutions.

Another problem that is often mentioned in regards to health worker programs is the difficulty of changing long-standing community behaviors. This can be frustrating and disheartening for health workers and can make them feel unappreciated by the communities themselves. A study by Chhetry et al. found that the health workers felt unrecognized by their communities and that this lowered their motivation to do good work. However, despite experiencing resistance from the communities, many studies show that while communities may be resistant to change, most are grateful for the services provided by their community health workers. A 2001 study of the Health Surveillance Assistants in Malawi, which

included 121 HSAs and 325 mothers, found that 80% of sampled mothers who had interacted with HSAs applauded those HSAs very highly for their work (Kadzandira, 2001). Most mothers gave high ratings to the HSAs for their work while poor ratings were given for HSAs who made irregular visits, shouted at the mothers, or those whose vaccinations had side effects (Kadzandira, 2001). The evidence suggests that although communities may be resistant to new ideas and frustrated by the inefficiency of their health system, most are supportive of community health workers and value the work that is done.

Need for recurrent training:

Training is a crucial part of every community health worker program; trainings provide the opportunity to learn new skills while refreshing old ones. Community members, decision makers, as well as health workers themselves all recognize the need for improved, recurrent training. The Kadzandira study in Malawi reported that the surveyed mothers suggested that to improve the HSA program, the HSAs needed more training (including refresher training), a consistent supply of drugs, and a reduction in their workload (Kadzandira, 2001). A qualitative study by Haq et al. with health workers and their supervisors in Pakistan, found that both the Lady Health Workers and their supervisors believed that there should be a continual process to improve and update knowledge (Haq & Hafeez, 2009). Lastly, a study by Carlough and McCall in 2004 looked at skilled birth attendance in Nepal among 104 maternal and child health workers (MCHWs), and reported that refresher training improved knowledge, competence, and confidence in health workers (Carlough & McCall, 2005). Despite this recognition that trainings are crucial to the success of a

CHW program, the fact remains that training is time consuming, takes the health worker away from their duties in the community and is expensive with most community-based programs relying on donors for funding and sustainability (Siddiqi et al. 2004).

In Ethiopia, trainings are largely subsidized by donor partners; however the initial one year training all HEWS receive within the HEP is organized and funded by the Ethiopian government (Argaw, 2007). Donors usually fund subsequent trainings in specific technical areas such as immunization or safe delivery (USAID, 2009) as these trainings are costly and require technical expertise. However, one issue that can result from donor sponsored trainings, is that the national government can become reliant upon partners to provide funds for trainings (Shiffman & Okonofua, 2007). This can mean that the government is not allocating funds for training within the health budget, so money for subsequent and refresher trainings are never put into a long-term health plan. It is then that a cycle has formed in which the government continues to rely upon donors for funds and is therefore unable to pay for trainings in the future. This training paradox is important to consider when designing community health worker programs.

Another difficulty is that CHW programs will receive funding from several different partners, depending on the technical area of interest, as CHWs are usually required to provide a broad array of health services (Haines, et al., 2007). The communities want and expect the health workers to be able to provide quality curative and preventative care and the numerous trainings are trying to reflect this. However, trainings are time consuming and the CHWs often have to leave their

posts for these trainings, taking them away from their responsibilities in the field. In addition, in countries where there are high rates of attrition, there is the constant need to recruit and train new health workers (USAID, 2010). Presumably, this would become very expensive for any health system to maintain. The solution may be for donors to work with the government to incorporate specific technical trainings into their health budget during the life of the program. In addition, the CHW program may want to provide salaries for its workers and offer opportunities to advance within the system to reduce attrition (USAID, 2010).

Community leader and government stakeholder perspectives

Research by the World Bank Poverty Reduction group on local power structures in Ethiopia reported that men who are powerful in the community have the ability to mobilize the collective power of the community (Bevan, 2007). The report also found that women and girls in male-headed households had their activities overseen by these men, indicating limited decision-making abilities on the part of the women. This demonstrates the importance of involving community leaders who are decision makers and have the ability to influence health behavior. Further research suggests that community leaders have a significant role to play in improving maternal and child health; these individuals are decision-makers who serve as positive role models to other community members, encouraging utilization of services and encouraging health communication between mothers and health workers (USAID, 2009). A five-year USAID funded project, Health Communication Partnership in Zambia, found that with training, national and local leaders were able to promote behavior change in their communities, encouraging mothers to go for voluntary

counseling and testing (VCT) and reducing the stigma and discrimination associated with living with HIV/AIDS. The program's approach was to put the leaders of the community at the forefront, spearheading the health programs. The endline evaluation in 2009 found significant improvements in community-generated capacity indicators, (created, tested and validated by the program) (USAID, 2009). This study demonstrates that community leaders can have an effect on behavior change and health. It shows how important it is to understand the perspectives of community leaders and to work with them to improve the health in their communities.

Other important stakeholders to consider are government health officials. Effective health interventions exist to improve maternal and child health, however none of the interventions will work without the political backing of those who matter most, national and district level officials (Filippi, et al., 2006). A qualitative case study by Schiffman et al. (2007) found that in Nigeria, a crucial barrier to providing quality maternal and neonatal care were the absence of adherence to the cause at the district level and from domestic revenues. Maternal health was seen by district level officials as a lesser priority, as they found other causes, such as HIV/AIDS to be more political advantageous and believed that MCH programs were already being adequately funded by donor sources (Shiffman & Okonofua, 2007). Therefore, safe motherhood programs in Nigeria are suffering from the disinterest expressed by district level officials.

Furthermore, a recent review looking at CHWs and their effect on child survival reported that community health worker programs need policy support to

be effective and to be able to sustain programs (Haines, et al., 2007). These studies demonstrate how important it is to have backing from community and district level stakeholders. Community health workers cannot deliver effective and sustainable interventions without the support from stakeholders at every level.

MCH funding and sustainability

One of the main concerns of any public health program is funding and sustainability. Some community health worker programs, such as the HEP in Ethiopia, are designed and funded by the national government and then subsidized by donor partners. Donor partners want to create a program that can be sustained after the project has ended; the project is therefore working towards enabling the national government to absorb the program into their health plan. Because of this, donors usually fund capacity building portions of the project, such as trainings. Government funds are usually allocated for the payment of health workers, construction of clinics and other infrastructure development (Bossert, 1990).

Since maternal mortality is a priority for the Millennium Development Goals (MDGs), bilateral and multilateral donors have increased funding for maternal health programs in low-income countries. Although this donor funding is essential for the creation of effective and sustainable programs, "it also carries the danger that national governments in developing countries will perceive safe motherhood to have adequate international funding and fail to appropriate domestic budgetary resources for the cause" (Shiffman & Okonofua, 2007). The review by Shiffman noted that district level officials felt that donor funding already covered maternal programs, failing to see the need to prioritize maternal health despite the fact that

Nigeria has a high maternal mortality rate. The review demonstrates the need to work collaboratively with federal, regional and district health officials in designing and funding maternal health programs, as collaboration is important for sustainability.

A five-country synthesis on the sustainability of USAID funded projects in the 1980s found that programs that were effective in reaching goals and objectives, integrated their activities into the established administrative structures, gained significant levels of funding form national sources during the life of the project, worked mutually with partners and included a strong training component were more likely to be sustainable (Bossert, 1990). A program that is created through the collaborative work of donor partners and individuals from all levels of the government will be more likely to succeed and be sustainable. A study by P Dawson et al. found that continued government and donor investment were effective in sustaining and growing a community-based pneumonia program in Nepal:

> Strong and sustained leadership from the MOH and donor partners facilitated the start-up of this programme and kept it on track during the early years. There is now sufficient commitment and momentum among a much larger group of partners to complete national expansion (Dawson, et al., 2008).

Continued collaboration from the Nepali government and donor partners enabled the program to be sustained, demonstrating that their needs to be commitment from both sides if the project is to succeed. Donor funding is crucial for the success of maternal child health programs in low-income countries; however sustainability

will only be achieved if the government prioritizes the intervention, absorbing it into the countries health plan.

Summary

A review of the literature indicates that community health worker programs can have a positive influence on maternal and child health outcomes. However, research also demonstrates that creating an effective program requires invested support and transparent communication from all stakeholders involved. Special attention needs to be given to strengthening the national health system and to collaboration on ways to budget for trainings and other donor funded activities. Training is mentioned as an important component of every MCH program; however, to my knowledge there is no research on the impact donor funding of trainings has on the uptake and sustainability of that training program by the national government and this should be further investigated.

This review presents evidence that key stakeholders have influence over the effectiveness and sustainability of community health worker programs. However, little is known about the influence of key stakeholders on MCH in Ethiopia. The evidence suggests that by involving key stakeholders in the design and implementation of community health programming, positive health outcomes can occur. It is therefore crucial to understand the perspectives of key stakeholders in Ethiopia on maternal child health and the health extension program in order to create the most effective and integrated program.

Methodology

Study Setting: Amhara Region, Ethiopia

This study was conducted by the Maternal and Newborn Health in Ethiopia Partnership (MaNHEP) in the Amhara region of Ethiopia, during the months of June - July in 2010. The study took place in three woredas (districts): Mecha, North Achefer and South Achefer where MaNHEP is currently working with the Ethiopian health system to improve maternal and neonatal health outcomes. The three woredas were selected for the study by MaNHEP based on previously determined criteria for the project: need, population size/number of expected deliveries, accessibility of health services, presence of frontline workers, and absence of other development partners working on the same or similar maternal neonatal health (MNH) issues (Hadley, 2010).

Figure 3: Map of Ethiopia

The Maternal and Newborn Health in Ethiopia Partnership (MaNHEP)

MaNHEP is a two and a half year project funded by the Bill and Melinda Gates Foundation whose purpose is to work within the existing health system to bring a defined package of evidence-based critical interventions into the homes of mothers at the time of birth and 48 hours following. The MaNHEP strategy includes four main components: training Frontline Health Workers, behavior change communication to increase demand of maternal and newborn health (MNH) services, quality improvement, and formative and baseline research (Olsen, 2010). The aim of the program is to work with Frontline Health Workers, which includes health extension workers, volunteer community health workers and traditional birth attendants, to provide pregnancy and postpartum care in the home. The end goal of the program is to demonstrate an effective community-oriented model for MNH care provision that can be scaled-up and utilized at the national level (Olsen 2010).

Description of qualitative research with decision-makers

An important component of the MaNHEP strategic framework is the collection of formative and baseline research. The purpose of this research is to better understand community-based maternal and neonatal health care with a focus on understanding MNH access and service utilization. One part of this research is to determine how important decision-makers in the Amhara region influence maternal, newborn and child health outcomes, as little is known about the role decision-makers play in maternal and child health (MCH) in Ethiopia. MaNHEP selected woreda (district) level health officials (WHOs) and leaders from the

communities, as the two main decision-maker groups of interest. It is believed that these two groups, who work and are based within the community, are the groups that are most likely to influence a community-oriented model on MNCH care.

Justification of qualitative methods

The researchers used qualitative methods to explore levels of maternal and child health (MCH) knowledge among decision-makers to examine how this knowledge influences attitudes towards service provision, perceptions of community needs and priorities in resource allocation. A qualitative methodology was used for this research, as this methodology is more appropriate for identifying personal and communal health priorities and investigating the feasibility and acceptability of a community-based intervention.

This study involved the use of two qualitative data collection methods, in-depth interviews (IDIs) and focus group discussions (FGDs). The researchers identified in-depth interviews as the most appropriate research method for interviewing the woreda level health officials (WHOs), as IDIs provide more accurate information regarding sensitive issues than tradition survey techniques (Ulin, 2005). This format encourages respondents to discuss an issue, problem or question at length and in greater detail, and provided the opportunity to explore the personal accounts of the health officials (Ulin, 2005).

Focus group discussions were used to explore information about the social context and issues important to maternal child health within these Ethiopian communities. The focus of the research with the community leaders was to better understand community perspectives surrounding maternal child health and

attitudes towards health extension workers. FGDs allow for interaction between participants; they allow participants to hear from others in the discussion, which provides a valuable opportunity to show and discuss the differences among participants. This cannot happen with one-on-one interviews (Hennink, 2007).

Population and sample

The study took place within three woredas in the Amhara region: Mecha, North Achefer and South Achefer, all of which are within a three-hour drive of the regional capital, Bahir Dar. The in-depth interviews were conducted with the WHOs at the health office in each woreda. The focus group discussions were conducted in the communities based on the following rationale: Two kebeles (administrative unit covering about 5000 people) were selected per woreda, one in each health center catchment area. Each of the selected kebeles is considered rural but the selection criteria were as follows: 1). One kebele that is considered accessible - by the road and somewhat close to the health center and 2). One kebele that is considered inaccessible - off the road and further from the health center. The infrastructure in Ethiopia is such that kebeles that are located off the main road have great difficulty accessing the health posts. This is especially true during the rainy season in which the roads get washed away; people either have to walk and carry the injured or sick person, or ride a donkey to access care. The purpose of the kebele selection in this manner was to address this issue of accessibility.

The selected kebeles and their descriptions are as followed:

Kebele	Woreda	Location
Rim	Mecha (pilot study)	Rural
Bachima	Mecha	Near road
Medregernet	Mecha	Rural
Dembola	North Achefer	Rural
Yismala	North Achefer	Near road
Ahuri	South Achefer	Near road
Lalibela	South Achefer	Rural

The following two figures provide visual depictions of the selection process for the focus group discussions, at the regional and woreda level.

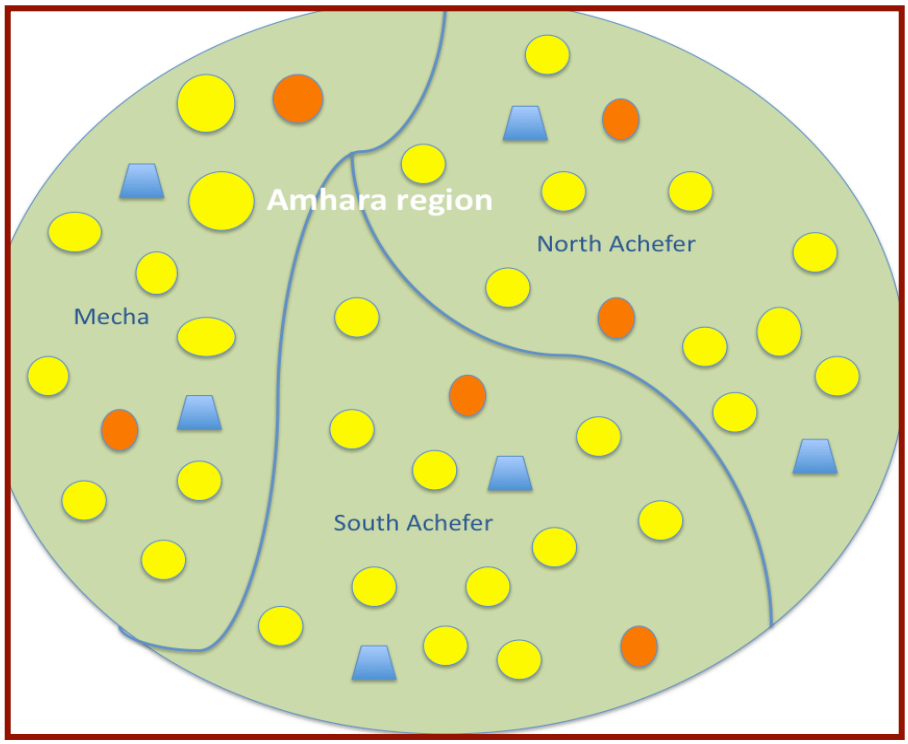


Figure 4. Kebele selection from a regional level

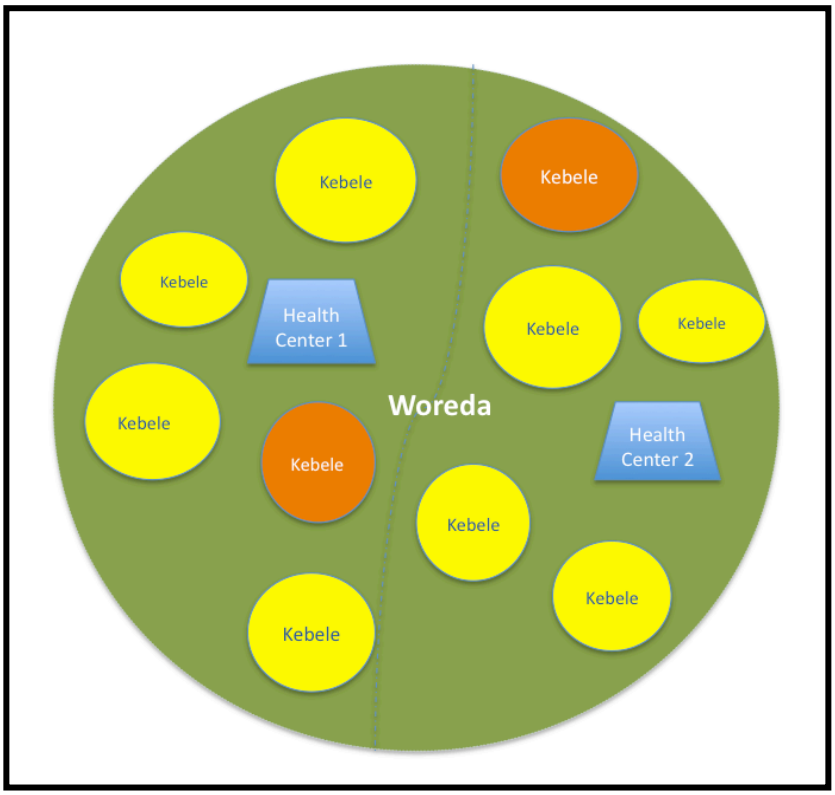


Figure 5. Selection of kebele at woreda level

Description of study population

In this study, two different groups of participants were identified as important decision-makers, woreda (district) health officials and leaders from the community (kebele), as it is believed that these groups have decision-making roles in their communities. A total of 55 participants were recruited in this study across the six kebeles. This included 48 community leaders and 7 woreda health officials. The typical focus group included the kebele head, the kebele vice head, kebele health committee leaders and a priest. Three of the focus groups consisted of men only, while the other 4 included mostly men with one female. Seven focus group discussions with community leaders were completed; this includes the pilot FGD, which was included in data analysis, as the information was considered rich.

Community gatekeepers, local health officials and health extension workers helped with the recruitment of the community leaders, who were recruited into the study through verbal communication.

The researchers conducted in-depth interviews with seven specifically selected woreda health officials, two health officials per woreda. The pilot interview was also included in the analysis, as the collected information was considered rich and could add to analysis of the study. The head woreda health official and the MCH officer were selected as interviewees, as the research team identified these individuals as the individuals who make key decisions on maternal child health in their district. All of the health officials who were interviewed were male. Qualitative data collection

Study instrument: qualitative guides

Before arriving in Ethiopia, preliminary guides were created for both the woreda health officials and community leaders (Appendix A and B). Upon arrival in Bahir Dar, the researcher and the local MaNHEP team scrutinized the guides, going through both guides and discussing the content, understanding and phrasing of each question. After lengthy discussions, the guides were translated by the MaNHEP team into Amharic, as they are familiar with local terminology for maternal and child health topics. The guides were then translated back into English from Amharic to ensure that the questions had been correctly interpreted.

Table 3. Topic guidelines for in-depth interviews and focus group discussions

Category of participants	Topics covered in Interview/FDG guide
Woreda Level Health Officials	Prioritization of health issues Current funding for maternal and child health Maternal and child health knowledge • Problems with child-bearing • Problems with accessing care in an emergency Attitudes towards health extension workers (HEW) • How do HEWs help with maternal child health • Quality of HEW training • Sustainability of the program • Payment of HEWs
Community Leaders	Prioritization of health issues Community involvement in maternal and child health • Access to care during an emergency (for pregnancy and delivery) Maternal child health knowledge • Factors that influence care seeking during pregnancy and delivery • Registration of births and deaths • Signs/symptoms of complications • Access to care and quality of care Attitudes towards HEWs • Quality and type of services provided • Payment of HEWs

Selection and training of data collectors

Two research assistants were recruited from the public health school at Gondar University to assist with data collection and data analysis. The research assistants were given a five-day training on qualitative interviewing and data analysis. The first four days of the training were conducted in the classroom. The training covered topics in maternal child health, in-depth interviewing, focus groups discussions, ethical conduct of research and the overall objective of the study. On the fifth day of the training, the research assistants conducted pilot interviews and FGDs to become more familiar with the interview and FGD guides and to test the

wording and comprehension of the interview questions. Following the pilot tests, the researchers translated, transcribed and analyzed the data, using information from the pilot tests to make revisions to the guides. The actual field-testing lasted for two weeks in which the research assistants completed six in-depth interviews and six focus group discussions.

Figure 6. Picture of a focus group discussion

Photo taken by Lisa Oot.

Final data collection

In total, seven focus group discussions and seven in-depth interviews were conducted across the six kebeles. Informed consent was obtained from all participants, which included the consent to have the interview or discussion tape

recorded. FGDs and IDIs were conducted in Amharic, the local language, according to the topic guidelines shown in Table 1. In-depth interviews were conducted within a confidential setting, usually in the office of the interviewee. The interviews varied from 33 to 52 minutes in length. Focus group discussions were conducted in a room at the health post; in one kebele, Medergenet, the FGD was conducted outside as all of the health offices were locked. Each of the FDGs lasted approximately an hour and a half and were moderated by one research assistant while the other took diligent notes and used a seating chart. All interviews and discussions were audio recorded.

Data Analysis

The in-depth interviews and focus groups were audio-recorded and detailed notes, which included a seating chart, notes on order of speakers and key points, were taken during the focus-group discussion to help make transcription easier. The audio files were transcribed verbatim. The interviews and focus group discussions were translated and transcribed into English by the research assistants. The transcripts were then read and cleaned. Transcripts were entered into MAXQDA, a qualitative software package that aids with qualitative analysis.

The researcher chose to use the grounded theory methodology developed by Glaser and Strauss (1967), which provides systematic and flexible guidelines to conduct the analysis. With grounded theory, theories are built from the data using a rigorous scientific process, which includes the use of an inductive process to identify participant issues and links concepts into theory to explain phenomenon (Hennink, 2007). The data analysis process began with thorough readings of the data and the

creation of memos (notes on the text, reflections and preliminary thoughts on themes), which are used to help create inductive and deductive codes. After the initial creation of the codes and codebook, the researcher had an outside associate code the data, to help with inner-coder reliability. The researcher consulted with the associate, revising her code and the codebook before coding the remainder of the data. Next, the researcher used these codes to analyze the data using description, comparison, categorization and conceptualization tools. Using the themes that emerged in the data, the researcher developed a theory (explanation) that came from the data; the final step was to validate the theory by again, returning to the data.

Ethical clearance

Ethical clearance was obtained from the International Review Board (IRB) at the University of Emory, Atlanta, Georgia and from the Ethical Review Board in Ethiopia.

Results

As the issues in this study are similar across the differing contexts, data are first presented by issue and then expanded to show the different perspectives of the two decision-maker groups. The study results elucidate key themes including prioritization of health issues, knowledge about MCH, utilization of services, attitudes towards the health system and the health extension program and barriers towards implementing MCH programming.

Table 4. Summary of results

Category	Woreda Health Officials	Community Leaders
MCH priorities	- Malaria - Communicable disease - MCH priority for Ethiopia - Gap in child/newborn	- Malaria - Communicable disease - MCH immediately discussed
MCH knowledge	- Knew steps taken for delivery - Delays in care-seeking increase morbidity and mortality	- Knew steps taken for delivery - Delays in care-seeking increase morbidity and mortality
Delivery services	- Want HEWs to provide delivery services in the home and to refer to health facility	- Traditional beliefs are still important - Not convinced to advocate for health facility or HEW deliveries
HEWs and the health system	- HEP is a good program; only needs to be strengthened - HEWs fill niche - Health system is not ready to support deliveries at the health facility or in the home by HEWs	- HEWs fulfill an important role - HEWs need more training - Health system is unable to support deliveries at the health facility or by the HEWs - Government health facilities are inadequate
MCH programming	- MCH funding is reliant on donors - Programs are not sustainable w/o donor support - MCH will continue to be a priority for Ethiopia	- Do no address delays in accessing care - Desire for HEWs to be trained to provide deliveries in the home - Are willing to help w/construction of infrastructure

1. Both groups of decision-makers

1.1 Health priorities and attitudes towards maternal and newborn health

Community leaders and woreda health officials (WHOs) universally identified malaria as the greatest health priority for the region. The decision-makers stated that several government and partner funded health interventions focus on malaria. Both groups reported that malaria is endemic in the Amhara region and believed that malaria was debilitating because it affects productivity and requires medication. Both community leaders and WHOs cite the frequency and severity of the disease as the reason behind its prioritization:

> You see that malaria affects not only individuals but the community as a whole. If someone is stricken with malaria, they cannot do his or her work and its killing pregnant women and children most importantly. (Community leader, Lalibela)

> Why is malaria so important? For one thing, there are mosquito-breeding sites everywhere in the district and we have seen in the past that malaria is endemic in this area. We have 43 kebeles in the district and all of the kebeles have malaria. (WHO, Rim)

The decision-makers also reported prioritizing communicable disease such as typhoid and tuberculosis as well as diarrhea and water-borne illnesses, as these diseases are common and affect everyone in the community. The community leaders also prioritized HIV; they expressed fear of the disease infiltrating their communities while saying that there is no cure. None of the WHOs listed HIV as a priority issue.

> This is a serious disease, which has no treatment and is a killer. Even though not very many people are infected in our community, it is common in the towns. (Community leader, Dembola)

> Malaria has treatment but HIV does not and HIV is also a problem in our Kebele. (Community leader, Bachima)

1.2 Prioritization of MCH

The general attitude held by decision-makers was that maternal and child health was an important issue. Both groups identified problems that occur during delivery as important health issues; however, community leaders immediately brought up problems associated with delivery whereas the majority of the WHOs brought up problems associated with delivery only after they were prompted. Newborn health was not mentioned by any of the informants and child health was discussed mainly with regard to immunization.

Although both groups reported that MCH is a priority, neither group mentioned a plan of action that could specifically be taken to improve maternal and newborn health. Community leaders reported that they wanted health workers and the health system to improve so that there is better access to care, but there was little mention of how the community could directly influence positive health outcomes for women and newborns or help improve the health system. Woreda health officials reported that MCH programs are dependent upon the support of partner organizations, "most of the necessary budget allocated for mothers and children come from aid agents (NGOs)" (WHO, North Achefer). The WHOs also reported that the community members needed to be the agents of change, suggesting that if the communities were more receptive to the health messages there would be health benefits for mother and baby. Similar to the community

leaders, the majority of WHOs did not specify actions the district could take to improve health.

1.3 Knowledge regarding maternal and child health

Both groups were aware of and could recite the usual steps currently taken by the community when a woman goes into labor. They recognized that this scenario may delay care seeking and contribute to maternal and neonatal mortality and morbidity. Community leaders and WHOs express similar descriptions of the steps taken when a woman is delivering:

> The TBA will come first and they will attend the delivery but if the mother is not able to give birth then we will take the mother to the health facility. The community will coordinate to arrange for the mother to go to the health facility. (Community leader, Rim)

> If the labor is simple then she would be supported by her families at home. If the labor is a bit higher it will be done by TBAs. It is after the TBAs and then the HEW has been called and she has spend one to two days at home that she will come to the higher health facilities. So in this case the chance that they will be safe from death is narrow. (WHO, North Achefer)

The majority of decision-makers are knowledgeable about the health problems that occur during delivery but expressed that there are few care-seeking options for the woman. The community leaders reported that when a mother experiences difficulty during or after delivery she either stays at home under the care of traditional healers or she is taken on a stretcher to the nearest health facility.

> If the TBA can assist with delivery, there is no problem but if there is an emergency the mother will be taken to Durbete and if the people at Durbete cannot help the mother, there are two options: either they go to Bahir Dar or else they come back here. (Community leader, Lalibela)

2. Woreda health officials

2.1. Perspectives on maternal and child health

The majority of woreda health officials did not mention MCH as a priority health issue when explicitly asked how they would prioritize the health issues of their district. However, throughout the interviews, the WHOs reported that maternal child health was an important issue and a priority of the Ethiopian health system. There is recognition by the Ethiopian health system and the WHOs that one of the major contributors to maternal and neonatal mortality is women delivering at home without the assistance of a skilled birth attendant but the WHOs report that it is difficult to address this issue. The majority of WHOs do not advocate for facility-based deliveries, as it is reported that the majority of health facilities are not equipped to deal with obstetric emergencies. These results are explored in greater depth in the following sections.

2.2. Perceptions regarding delivery

The WHOs reported that the goal of the health extension program is to have the HEWs meet with pregnant mothers in their communities and provide them with antenatal care. They then want the HEWs to follow these women throughout their pregnancy so that the HEWs can assist with the pregnancy if it is "normal" and then refer the women to a higher facility if there are obstetric complications. However, the WHOs reported that this is not yet happening and thus found it confusing to know what to advocate. The WHOs felt that they should advocate for health facility deliveries and that they should be motivating women to go to the health facility to deliver. The following quotes illustrate this point:

> If we can convince the community to use the services available to them it will be better. The tradition of using services by coming to the health center and health post is not very common. People in the community do not always accept or perceive that they should be using the health facility. (WHO, North Achefer)

> The other is that there is still some unawareness of delivery services. The community is not overly convinced to come to health facilities for delivery and services. We are trying our best to bring a change to delivery services but the community is not still making use of delivery services. (WHO, North Achefer)

They also felt that they should be advocating for the HEWs to provide delivery care in the home, yet some were reluctant, as the health infrastructure cannot currently support safe deliveries. The WHOs reported that the majority of HEWs are not trained to perform deliveries. They also reported that the only health facility within the study district able to provide emergency obstetric health care is in the capital, Bahir Dar. The extracts below highlight the barriers to advocating for health facilities and HEW deliveries:

> Just to inform you, now there is safe delivery in our health system but if you ask me if the delivery services they give are safe, my answer is no. There is no equipment and the health workers are not well trained. (WHO, Mecha)

> Yes, it is only in Merawi (the capital city of the district) that we expect to have safe deliveries. If you go to other health facilities things are not well sufficient. Nurses and BSC midwives may be there but they are do not have up to date trainings and there is no equipment. There is also a lack of medications and there are occasions when we cannot find ergometrin and other related medications. (WHO, Mecha)

> This time there is limitation of facilities and personnel in the health posts. Most of the kebeles have one or two HEWs in each health post. So in this situation it may not be possible to satisfy the need of the community. Therefore the situation should be arranged to fulfill the shortage of health professionals. Health inputs like laboratory equipments and other materials should be fulfilled at the rural kebele level. Training should also be given to HEWs. The community should also be educated and aware of it. (WHO, South Achefer)

2.3. Gap regarding child and neonatal health

The woreda health officials spoke sparingly about child and neonatal health. Although the WHOs spoke of diseases that disproportionately affect young children such as malaria and diarrhea, they did not specifically link the diseases to child health nor did they offer explanations of how the district is dealing with these issues. The majority of WHOs summed up child health with one word, vaccination. One of the WHOs felt that child health was not a problem in his district because all of the children were vaccinated. His statement is as follows:

> Regarding children's health I can say we have prevented it because vaccination is fully implemented. (WHO, North Achefer)

3. Community leaders perspectives on maternal child health

3.1. Perspectives on access to care

Community leaders reported that maternal health and child health were important issues in their community. Many of them expressed the importance of the issue by telling personal stories of women in their communities dying during childbirth because of the inability to access care during an emergency. The following excerpts illustrate their thoughts on the issue:

> The number of mothers that give birth at health facilities is very limited. The degree to which health workers enable mothers to deliver at health facilities is very limited. Therefore mothers give birth at home and are victims of bleeding. (Community leader, North Achefer)

> The major problem is that there are women who die of bleeding and there is only one health center at the woreda level. They have problems to reaching that health center and they will die. (Community leader, Ahuri)

> Despite education, many mothers still do not go to health facilities for services. On the other hand, there are no skilled health workers at the health post. The workers at the health post usually say that this is above our

> capacity would you please go to the health center. Therefore, the mothers decide to stay at home until there is a big problem and if there is a big problem the mothers go to Merawi or Bahir Dar to get care. They do not trust the HEWs and that is why they do not go to the health post. (Community leader, Rim)

Although the majority of community leaders spoke about the importance of maternal and child health in their communities, one of the focus groups felt that communities were not prioritizing women and children, stating that the needs of the head of household were held above them. The following is an excerpt from that group:

> Of course we may say that mothers and children are getting services more than others. However, priority is given to household heads, not mothers. The government distributes malaria nets to be used by mothers and children, but mostly, it is those household heads that uses it. Actually, children should be given more care until they grow up. But we haven't seen this in our kebele. The children will be sent to tend the cattle when they are not mature. No husband, including myself, other than the government programs, gives special attention to his wife. Here, the awareness of the people is poor. (Community leader, Medregernet)

3.2. Traditions surrounding pregnancy and childbearing

The community leaders reported that their communities had not moved away from many of the traditions associated with pregnancy and childbearing. It is still uncommon for anyone but a woman's close friends, female relatives and sometimes her husband to know about the pregnancy. In addition, there are certain beliefs that prevent utilization of health services for pregnancy. The community leaders reported that many community members and pregnant women believe that a pregnancy will be normal and that prolonged labor is an inherited trait; therefore they do not support the idea of going to a health facility to deliver. Two of the focus groups mentioned the idea that if a delivery is good or bad it is because "God allows

it", essentially taking the control of the delivery out of the hands of individuals and placing it in the hands of God. There is also the belief that when a woman faints after childbirth it is because the devil has come and taken her. This is known as "seraqia" and was discussed at length by each of the discussion groups. If the community believes the woman is experiencing seraqia, they will not seek treatment for her but administer their own traditional treatments. The following quotes illustrate the barriers women face in accessing care during delivery:

> Mothers usually say "If God allows it, my delivery will be safe and if it is not his will I will accept what happens." (Community leader, Lalibela)

> There are some people who still practice some harmful traditional beliefs. The belief is that some of the women have inherited a disease from their mother which makes their labor painful and extended. Because of this, these women will stay at home believing that they are "supposed" to have a prolonged labor. There are cases in which the mother will be in labor for three days. When some people ask to take her to the health facility others will say that it is inherited from her mother and she will give birth sometime soon. In the meantime, the mother and the baby in the womb will suffer. I have seen such practices. (Community leader, Yismala)

> Seraqia" is listed as the main problem. It kills many mothers; it is the worst problem. For example, in the recent past, one mother died in Qongara village. She delivered safely but was bleeding too much and the people treated her with traditional treatments and then the mother died. The health workers say that "seraqia" is due to too much bleeding while others say that it is because of the devil. We don't know which one is true. It has been harmful to our women in the past and remains to be a problem. That is why we say that it is important. (Community leader, Dembola)

> Then to combat "seraqaria" the people put a kind of coin (a kind of jewelry) in her mouth and have her bite down and they also shoot a gun into the sky to try to make her wake up. They will also beat a cooking pan loudly so that she will awake from her fainting. But this is not a good solution because she has fainted due to losing too much blood. Doing this may lead to death because they will keep her at home and not take her to the health facility. (Community leader, Mecha)

3.3. Service utilization for delivery care

The community leaders reported that there were several barriers to accessing care during delivery. The barriers are grouped into five categories: 1) transportation, 2) money, 3) knowledge, 4) health infrastructure and 5) traditional customs, discussed in the previous section.

3.3a. Transportation

The community leaders reported that during an emergency, women were carried on foot to the health facility, stating that roads were often impassable, and that finding vehicles to assist with transportation was difficult. The community leaders acknowledged that travel was expensive, as the family either had to pay for a car to take the woman into town or the family had to pay for the food and drink of the men who carried the woman to the health facility.

3.3b. Money

The community leaders reported that money was another barrier; although health services at the government are free, money is needed to buy supplies, drugs and to pay for travel. They reported that men often needed to borrow money in order to take their wives to the health facility and that this was a reason for the decision to delay seeking care. Men could not afford to take their wives to the health facility so they waited until the labor became "serious" before deciding to borrow money. The following quotes illustrate this difficulty:

> We cannot say that they can access health services quickly. For example, if a mother is in labor and has a problem and if she is poor, we have to wait and collect money at community gatherings, maybe at church during the weekends, therefore we cannot say that the mothers can access care quickly. (Community leader, Rim)

> Some husbands see their wives die due to delivery because of the fear of credit. That is because of the fear that he will not have a means to return that money, he will not take the action to prevent his wife from that. (Community leader, Ahuri)

> The other problem is the old traditions we have because some people do not want to take their wives to the health facility. This is from our fathers and mothers. In addition to this, there are problems of being poor. If they do not have money, they decide to deliver at home and take that risk. (Community leader, Medregernet)

3.3c. Knowledge and infrastructure

The community leaders also reported that many of their community members were still unaware of some of the benefits of utilizing the HEWs and the health facilities. They believed that people were beginning to learn about the importance of prevention and ANC from the HEWs but that more education was needed.

> The HEWs travel house to house and find pregnant mothers and register and appoint them to go for antenatal care. I appreciate them. They are as strong as males. They educate the community very well. (Community leader, Yismala)

3.4. Gap regarding child and neonatal health

Like the WHOs, the community leaders did not speak in depth about child and neonatal health. Although the community leaders did talk about babies dying during childbirth and children dying from malaria, tuberculosis and pneumonia, they spoke very little about the devastation of newborn and child deaths as they did for maternal deaths, or what should be done in their communities to improve child health. The community leaders did talk about the importance of having their children vaccinated and stated that they encouraged the women in their areas to vaccinate their children. The majority of community leaders felt that the incidence of vaccine-preventable diseases had decreased in their communities and most were

convinced of the benefits of vaccinating their children. This issue is highlighted by the community leaders in the following extracts:

> The major problem in maternal and child health is that materials and drugs are not available; the government and partners are not supplying enough materials and drugs. For example, we have give vaccinations on the 7th, 19th and 23rd; they visit each sub-kebele once a month. It is usual for the women to go to these campaigns to get vaccinated but we often do not have enough drugs for vaccinations so they go home without their children being vaccinated. (Community leader, Yismala)

> Care provided for the children after delivery is good. In the past for example, measles, tetanus, etc. were very common diseases among children but now vaccinations for polio and others diseases have expanded and we are getting better care for our children. (Community leader, Rim)

4. Decision-maker attitudes towards the health system, health extension workers and the health extension program

4.1. Attitudes towards HEWs

The decision-makers spoke favorably about the health extension workers; they explained that life is better with the HEWs providing services in the communities. Both groups reported that the HEWs were well accepted because they knew the people and knew the problems of the community, which made it easier for people to trust them. They both acknowledged that the HEWs were filling a niche that no other cadre of health worker could fill.

> No other health workers can interact with the community like the HEWs, and I think that the HEWs perform better than any other health workers. Even if you go and ask children in the village, they know these health extension workers and they are treated just like a member of each and every family. I appreciate how they fit into our community and live together with us, sharing a social life and doing so without compromising their daily tasks. They are really doing a good job. (Community leader, Bachima)

> What makes the health extension program different is that the HEWs are aware of the customs, culture and traditions of the community and as the

> work is from house to house it is good that they are able to fit in with the community. Therefore, the other health workers cannot perform better than the HEWs. (WHO, Mecha)

Both groups reported that the HEWs provided valuable services to the community, namely preventive services. They also stated that the HEWs were good at providing family planning services and vaccinations and that these services were provided with care and quality. They also reported that the HEWs were providing antenatal care (ANC) to the women in their communities and that this service was improving maternal health. The following quote is from a WHO regarding ANC:

> Now different efforts are made like educating the community at church. The education includes about delivery, malaria, the packages, and prevention. Now we see changes. Mothers are following ANC and give delivery at health posts. Our interest is not necessarily mothers come to health centers. Rather to enable them to follow ANC and give delivery at health posts or at their home by HEWs. But now there are short comings in these regard and will be improved through time. (WHO, South Achefer)

Both groups felt that the education provided by the HEWs to the communities was important, believing that education improved awareness of different diseases and helped motivate people to use the health system. Each group stated that the HEWs taught the communities about hygiene and sanitation, the importance of family planning, of sleeping under a bet net, etc. They stated that they felt as if the community was beginning to listen and respond to this education and that if this education were backed by a strong health system, the communities would begin to utilize the health system.

> The community practices everything that the HEWs teach us and we have a strong tie with the HEWs. In the early years of their introduction, there were problems with acceptability because of a lack of knowledge in the community. But now the community understands that their work is

> advantageous to the community and the community asks about them if they are gone even for one day. (Community leader, Dembola)
>
> Yes, creating awareness in the community through education. Then the second thing is equipping the health facilities with materials and trained man power. If you increase awareness and if the community goes to get services at health facility, equipped with material and skilled manpower; everyone will be convinced to use services at health facilities. The community will accept the services without any problem or challenges if we can do that. (WHO, Mecha).

However, both groups also reported that there is still a great need for continued education and motivation within the community, as people still have a limited understanding of the importance of prevention and its health benefits. One of the WHOs from Mecha explained, "people do not have the experience to prevent disease" (WHO, Mecha). In addition, one community leader from Medregerent said that "one major problem is that people are not clear about the importance of the education that is given by the HEWs. That means that they have limited understanding of the benefits." Both groups reported that their communities needed continued education to learn more about the benefits of prevention and of utilizing the HEWs and the services given at the health facilities.

4.2. Attitudes towards the health system and health extension program

Both the community leaders and WHOs felt that the HEWs could be more effective in their work if the Ethiopian health system and the health extension program (HEP) were stronger. They saw that many of the barriers HEWs faced in providing quality care were because of problems related to health system infrastructure and the programming of the HEP. It was acknowledged that the health system was weak because of shortages in drugs, supplies and human resources at the health facilities.

It was also acknowledged that the HEWs were overburdened with tasks; with sixteen different packages to deliver, the decisions-makers realized the difficulty of providing comprehensive care on each package. The following statements illustrate these views:

> But the obstacle is, you see, that our kebele is widespread and big one and there are only three HEWs. This is not enough, even you consider the churches, and there are seven churches in our kebele; how can they teach people at all the churches. Our HEWs are also facing difficulty that they cannot cover the entire households in the kebele with health extension packages. There is lack of HEWs in the kebele. It is therefore good to give consideration for such big kebeles. There are small kebeles in which the HEWs have not that much load. Otherwise health extension package is very good one with many advantages. It is the HEWs that are the closest solutions for our problems. (Community leader, Lalibela)

> Our health extension workers have 16 packages to fulfill; maternal and child health is one of these packages. The HEW is unable to handle all 16 of these packages at the same time. (WHO, Mecha)

> Their job is very difficult. Frankly speaking, the task is challenging one. They are working being combined with the community. They also cover many things during their work if some of the community members are failing to fulfil. Relative to their work their payment is not enough. It is low. (WHO, South Achefer)

Both groups felt that the HEWs were underpaid for their work. They felt that the work was difficult both mentally and physically, and that for the amount of work the HEWs were expected to do, the pay was insufficient. However, some of the community leaders expressed resentment over the per diem the HEWs received for trainings, meetings, etc. Community leaders felt that they too should receive per diem for some of the work they did, such as attending meetings and mobilizing community members. In addition, both groups reported that the HEWs needed more training, specifically on delivery services.

5. Woreda health official attitudes towards the health system and the HEP

The Woreda health officials were positive advocates of the HEP; they all stated that the program was good and that the HEWs were filling this important gap in the health system.

> If there were no health extension workers, we would lack the capacity to educate and mobilize the community as much as we do. But their presence has made it possible to quickly access and share information while educating the community. Again, since the HEWs are from their own kebele, they may perform better (WHO, Mecha).

> But now the HEWs are here in the society. They know the problem of the people and fill the gaps that the community lacks. When you compare this with the previous it has a good beginning. I do have a positive attitude towards it personally. (WHO, Mecha)

They reported however, that the program was moving more slowly than originally envisioned but acknowledged that attitude and behavior change is difficult and more time was needed to create change within the communities. They reported that the HEP needed to be strengthened and recommended that the monitoring and evaluation of the program was lacking:

> Now the problem is monitoring the implementation of projects. They simply give the budget but do not follow how it is going. (WHO, Mecha)

> The system is good and the priority given from the higher officials to maternal and child health services are also good. It is only monitoring and evaluation task that lacks a little bit. Otherwise the system is good. The strategies drawn and priority given to MCH are good. (WHO, South Achefer)

5.1. Attitudes towards HEW benefits

An important problem identified by the WHOs is a lack of incentives for the HEWs to continue to do good work. The WHOs acknowledged that the HEWs have a challenging job trying to cover a large communal area with sixteen different health

packages. As mentioned before, behavior change takes time and the WHOs reported that a lack of cooperation from the communities could be disheartening and discouraging to the HEWs. In addition, the WHOs reported that the inability to move beyond the cadre of an HEW, to a more advanced position such as a nurse, is causing people to leave after a few years of working. Some of the WHOs thought that the HEWs were becoming bored with their work and were leaving because they had career aspirations beyond the scope of work of an HEW. The quotes below illustrate these thoughts:

> Our HEWs have become less motivated and some are leaving their jobs. Even in our district, we now have only 82 HEWs but we trained 95. Thirteen of them have quit on their own. They complain, "Why are we wasting our time for such a useless amount of money?" They prefer to leave the work and do other jobs or upgrade their careers. (WHO, Mecha)

> There is complaining from their side about their salary. This is because it is not revised. The other is that transfer is not allowed for them by the curriculum. Some of them are working for the last four years in one kebele. They also complain on the curriculum that forbids them to learn further education. Therefore the curriculum should be revised to improve their payment, further education, and transfer so that they will be productive. (WHO, South Achefer)

5.2. Attitudes towards HEW training

The WHOs stated that training was needed to build the capacity of the HEWs. They reported that the initial one-year training provided by the government was insufficient and additional training was needed. One of the WHOs commented that the trainings were mostly theoretical and felt that the trainings needed to have a more practical approach.

> The trainings just skim the surface; they do not go into great depth. The training takes about three or four days. I am hesitant to speak about the

> quality of the training. It is not very in-depth. It would be better if they were trained practically with different supporting materials for a longer period of time. (WHO, Mecha)
>
> Health workers can do their job based on their knowledge from school. But we should see the quality. They may learn the schedule of vaccination and some theories but when they try to do their job quality may fall. But if there are practical training in school, some practices and practical training while working on their job, then the quality of work will be high. (WHO, North Achefer)

6. Community leader attitudes towards the health system and delivery services

6.1 Attitudes towards HEWs and delivery services

Community leaders reported that health extension workers were not used in their communities for delivery services; traditional birth attendants are still desired over an HEW for delivery purposes. There were several reasons stated for not using the HEWs but the three most common points were: 1) that the HEWs are not used because it is not the custom, 2) the HEWs are not trained in delivery care and the community does not feel they have the capacity to assist with deliveries, and 3) the HEWs are not available to help with deliveries as they are often away from the health post making house visits. However, one community leader from Medregernet stated that the community wasn't using the HEWs because they "did not want to burden" the HEWs. The following is a story told by one of the community leaders explaining his reluctance to use the health system for delivery services:

> She was not able to deliver so we took her to the health worker. The health worker checked her and told us that she still had some time until she would deliver and that it would be a normal pregnancy. He kept telling us over and over again that it is not her time to deliver, that we must wait and she will have a normal delivery. But I asked him to tell us the truth as to whether or

> not he could assist with the delivery and if he was unable to, then to have us take her to Bahir Dar. Then he told me that he was unable to assist with the delivery and told me to take her to Bahir Dar. I didn't have any money so I began to collect money from my brothers. My daughter was unable to move and we could not carry her to Bahir Dar so we returned home with her. Our only option was to ask a TBA for help. We asked one known TBA to come and help deliver the baby and she was able to do so. Therefore the TBA was more effective than the health worker (Community leader, Yismala).

The community leaders complained that the HEWs simply referred women to the health facility when they came to help with the delivery, which was not seen as very helpful. The community leaders did express however, that they would like the HEWs to be able to assist with deliveries and wanted them to be trained in delivery care so that they could be utilized in the home. Having a trained HEW in the home would mean that they would not have to travel with the woman in active labor from place to place to receive care. The following comments support this issue:

> Training should be given to HEWs. If this happens then she can deliver or treat mothers very well. If she finds that it is beyond her capacity, she can refer to a higher facility. And the facilities and the health post should be complete. If all health posts are the same as ours, there are already HEWs working there. So it is better to assign a nurse in addition to the HEWs. (Community leader, Medregernet)

> The HEWs are provided with one year of training and that is it. They are not provided with up to date information or more training. They are not even provided with a chance to upgrade their career with distance learning. Therefore they have no new knowledge aside from what they got at school. Therefore, I strongly recommend the HEWs be given more trainings and distance learning in shifts, so each one gets an opportunity. I would also be better if we had equipment available to treat the health problems of the community. (Community leader, Rim)

6.2. Attitudes towards the health system

Although the community leaders were critical of the HEWs and their inability to provide labor care, most of the criticisms were directed towards the health system.

They blamed the health system for failing to train the HEWs in delivery care and for their inability to supply the HEWs with the necessary materials to perform emergency care. They blamed the health system for the inability to receive quality care for an obstetric emergency at any health facility aside from the one in the capital, as Bahir Dar is over two hours away by car for many. The following statements illustrate these criticisms:

> I think that the HEWs provide good quality services when they educate on the 12 health packages. But when they assist mothers with pregnancy, delivery and post delivery care, they are not providing quality care because they do not have treatments. This problem is not the fault of the HEWs but a larger problem that impacts the entire country. (Community leader, Rim)

> I can give you an example. A mother has gone to the health facility because she had bleeding during pregnancy. They (health extension workers) gave her treatment but the baby was harmed by the treatment. If we had had a skilled health worker in that occasion, we would have been able to save the baby. The bleeding did not stop and we carried the mother to Liben. We didn't have very much money but I did have 900 ETB in my pocket. We took loans from other merchants; 500 from one and 400 from another. We then sent her to Bahir Dar but when she reached Bahir Dar the baby had already died in her womb and they operated on her. These problems are happening too much in our community. If we had a skilled health worker here with equipment, we would not have lost this baby. (Community leader, Dembola)

> In the past few days we lost one mother due to bleeding too much and we were unable to take her to the health facility on time. She died because of this because she was bleeding too much. This was because we went to the health post but there were no health extension workers at the health post. We took her to Merawi and in Merawi we were referred to Bahir Dar then she died in Bahir Dar. (Community leader, Rim)

The Community leaders reported that the quality of care received at the health posts and by most government health facilities is poor. The common complaint was that the health workers did not treat the community members well and that the

government facilities were unable to provide them with the care or medications that they needed, forcing them to use private clinics and pharmacies at a great cost. The comments below illustrate the frustration over this issue:

> At private clinics the workers respect us and provide us with good care but when we go to the government health facilities, they are not cooperative and do not provide us with clear instructions. They tell us that when we bring a mother we have to go to the back of the line and they do not seem to generally care about us. (Community leader, Rim)

> It would be okay to pay if we received treatment or medications but we are not receiving these things. The mother comes for service here but the health workers tell her to buy gloves outside at the private pharmacy, buy this treatment from another private pharmacy and so on, and therefore the mother is not willing to go to the government health facility for services. It is necessary to equip the health facilities with materials and treatments. (Community leader, Lalibela)

There is hesitancy on the part of community leaders to advocate for the use of health facilities during delivery, as they do not feel the health facilities have the necessary human resources or equipment to suggest using them over the TBA in the home.

> If we are to get mothers to increase their use of the health facilities, we need to have well trained people at the health post. On the other hand, we should increase the supply of treatment and medication at the health post. We have discussed earlier that mothers used to go to health facilities' for treatment but when they get to the health center and there is no medication or treatment, they become frustrated with going to the health post. (Community leader, Rim)

7. WHO Attitudes towards current MCH programming and sustainability

The current perception by the majority of WHOs regarding MCH is that donor partners will provide and sustain programming for the majority of MCH activities. It is believed that the government will provide funding for salaries and the creation of

health posts; however, it is assumed that partners will fund trainings, monitoring and evaluations and will provide supplies, such as vaccinations. The WHOs were unaware of the current budget for MCH activities in their district but believed that the budget allocated from the government for MCH was small. The following quotes illustrate this perception:

> Of the total that is allocated to the health office, this budget is lowered because there is a thought that partners may come and become involved in providing services. For example, if I take the last year's budget allocation, the lowest amount is allocated for maternal and child health. MCH received the least amount of money because we believed that NGOs and partners will join us for further services in maternal and child health issues. Therefore, I can say that in this section, we are living with hope we just hope that we get a budget for maternal and child health. (WHO, Mecha)

> Most of the budget is allocated for education and agriculture. But the majority of the budget is allocated for salary. The major budget for this section (MCH) is from partners; there is not that much different amount allocated to this section from the government. (WHO, South Achefer)

7.1. Attitudes towards the funding of trainings

The WHOs reported that aside from the initial one-year training all HEWs received, all other trainings were funded by donor partners. The majority of WHOs reported that donor partners needed to continue to pay for technical trainings, as they did not feel the government would be able to take over financial responsibility for them. They reported that since trainings were dependent on sustained funding from donor partners, that when a partner-funded program ended, so did the trainings. The following quotes illustrate this issue:

> ESHE was working with us; they gave us money for trainings and helped us very much. Then the project ended. On this occasion we should have continued with how they had started the project but we have been unable to do many of the things that they started with us. (WHO, Mecha)

> Partners are the main bodies who are providing training on MCH issues. We have expectation that partners will be helping us by providing training always. (WHO, Mecha)

> Based on the current trend, the sustainability of the trainings requires help from partners. It is not possible to do this with the district budget alone. If there is no help from the partners and if there is no exclusive funding for this section, it is difficult to sustain it. (WHO, North Achefer)

However, one WHO felt that it was the responsibility of the government and the community to sustain programming:

> NGOs are not permanent usually. They may show you only the direction. They may fill some gaps related to budget and materials. The responsibility of making this sustainable is the role of the Government and its users, which is the community. (WHO, North Achefer)

Regardless of funding constraints, the WHOs felt that MCH was a priority for Ethiopia and because of this, they felt that MCH programming would continue to receive funding and would be sustainable. They expressed that having healthy mothers and children were integral to having a healthy and happy community. They felt that because of this, the communities, health workers, partners and the government of Ethiopia, would continue to prioritize the health of women and children.

> Maternal and child health issues are important in the community as well. It is also a policy issue. It is incorporated into the MDGs. Therefore, it is more likely that it will be sustainable. (WHO, Mecha)

8. Community leader attitudes towards MCH programming

While community leaders recognized that the delay in getting women to care during an obstetric emergency is a reason for maternal and neonatal morbidity and mortality, the group did not advocate to change the customary delivery process (i.e.

assume a normal delivery, then call a TBA, then HEW, and finally take the woman to the health facility if the labor is prolonged 2-3 days). Community leaders reported that they would be happy to help with the construction of a new health post in the community and would continue to encourage women to utilize the HEWs for family planning, vaccination and ANC services. However, the community leaders did not advocate for the creation of a birth plan nor did they advocate for the creation of a system to collect money for emergencies in advance. They leaders simply stated that this is not how we do things; money is not collected in advance. The following comments illustrate this point:

> We may collect money in advance for the construction of the health post or to buy equipment but it is not common to contribute money in advance for emergency problems. (Community leader, Yismala)

> "Arwa" (Oh!) It is only after the problem has become more and more serious that we collect money. You can say that just when she is about to die that we collect money. (Community leader, Lalibela)

However, one focus group did talk about collecting money for emergencies:

> Oh, in the past no one collected money in advance. But now we are starting an association to start collecting money to put into the bank by creating an account so we can use it in case we have a problem. For example, we help orphan children and families who are poor. Therefore in the future, we hope not to have to run for money when a problem occurs but will have money ready. (Community leader, Bachima)

Community leaders turned to the health system and the HEWs for solutions to problems relating to maternal and child health. The community leaders made several demands of the Ethiopian health system. They wanted HEWs trained in deliveries; they wanted roads built and more health posts created. They wanted health workers to be present and trained in delivery care when they go to the health

facilities and they wanted to know that the health facilities would have the necessary supplies and equipment to provide quality care. They reported being frustrated by the referral system which may bring the women and her family to three or four different health facilities before being able to find someone who can give the appropriate care and by then it is too late. They wanted the government and donor partners to fix these health infrastructure issues.

> First, delivery equipment should be made available at the kebele level. The other improvement is to assign well trained health professionals. Now, only people who are at the center of the district or along the main roads are using health facilities. The other people who are in the exterior part of the district are not getting the services. Therefore, if we have well equipped health facilities with trained health personnel, this problem would not exist. For mothers, this is the best solution. (Community leader, Ahuri)

> We expect the government to train people on delivery services. For example the TBAs in our Kebele are not trained in delivery services. But it is interesting that they use gloves when they assist with delivery and the mother will pay the TBA back for the cost of the gloves and for the assistance with delivery. (Community leader, Bachima)

Summary

The results from this study indicate that community leaders and woreda health officials have varying attitudes and perspectives towards the prioritization of maternal, neonatal and child health and the effectiveness of the health system in providing quality care. Although both groups state that they prioritize MCH, the community leaders express a personal connection to the issue that the WHOs did not. It is clear that both groups want improvements to be made in maternal and child health care, but neither group makes specific recommendations for how they can address the problems in their communities. Community leaders look to the health system to address the issues related to maternal morbidity and mortality,

while WHOs look to donor partners to provide programming and funding. Both groups are supportive of the health extension program (HEP) and the HEWs yet feel as if the program needs to be strengthened. The results indicate that support for MCH and the HEP does translate to decision-makers taking action to improve maternal, neonatal and child health outcomes.

Discussion

Main Findings

This study highlights that prioritization of maternal and child health issues does not translate into action, suggesting that there are barriers in place which prevent decision-makers from creating and implementing changes that would positively influence MCH in their communities. The results also indicate that although similar in some ways, community leaders and woreda health officials have different perspectives and attitudes towards maternal, child and newborn health and the effectiveness of health system and the health extension program. These differences emphasize the fact that these groups require separate interventions to improve their involvement in MCH activities.

Specifically, MaNHEP should incorporate community leaders into the home based life saving skills (HBLSS) program, as these leaders are respected within their communities and can serve as agents for change. Community leaders make decisions for their kebeles, thus are in a prime position to implement kebele wide changes. That being said, it is important to include them in the HBLSS trainings and in behavior change discussions surrounding birth preparedness and delivery, harmful traditions and the delays in accessing care, so that they can advocate for MaNHEP and important life-saving changes.

Woreda health officials can also be agents for change; however these health officials must be incorporated more effectively into the regional health plan and

given concrete ways that they, at the district level, can create change. One recommendation is for the Ethiopian Ministry of Health (MOH) to include WHOs in monthly regional meetings in which discussions are held regarding the regional MCH budget and MCH activities. These meetings might also serve as an opportunity for the WHOs to share district activities and issues with zonal and regional health officials. Transparency between the different health levels is key. The WHOs can provide a link to the communities if utilized effectively; these men know what is happening in the rural communities and may be in a better position to make decisions regarding the allocation of district funds.

In addition, the Ethiopian government needs to be thinking strategically and practically about the allocation of funds and how to sustain effective MCH programs. This means the MOH must decide which donor-funded trainings are effective and necessary. The Ethiopian health infrastructure is improving; however, while this improvement is taking place, community-based interventions are necessary for maternal and neonatal health care. It is not currently feasible to advocate for facility-based deliveries, which means a community-based intervention to increase skilled attendance in the home is needed. MaNHEP is currently working to address this need by training HEWs in delivery skills and providing traditional birth attendants (TBAs) and volunteer community health workers (VCHWs) with other life saving skills. My recommendation to the Ethiopian government is for the adoption of the MaNHEP delivery training into the initial one-year HEW training program. This will provide more leverage for sustainability of the training.

In summary, both sets of decision makers currently perceive that they lack control over the factors that influence maternal morbidity and morality in their communities. This perception prevents action and, in fact, creates inaction and a sense that maternal morbidity and mortality are somebody else's problems. What is needed from the Ethiopian government and MaNHEP, is a long-term commitment to improve health infrastructure in Ethiopia, while empowering community leaders and WHOs to act by helping them realize ways in which they can make a difference in the lives of women, newborns and children in their community.

Issues influencing prioritization of MCH

Findings from this study demonstrate that decision-makers, both community leaders and WHOs, prioritize malaria and other communicable diseases above other health issues, such as MCH, because of the frequency and severity in which these diseases occur. Malaria is endemic in the Amhara region (Tilaye & Deressa, 2007b), which has made it a target for donor funded malaria interventions. Malaria campaigns have helped to make the disease and its effects highly visible to the people in the community, as bed nets and malaria tablets are commonly known by community members as preventive (Tilaye & Deressa, 2007a).

Maternal and neonatal morbidity and mortality on the other hand, are not as readily visible, since obstetric emergencies occur less frequently and the issue is more complex. The complexity of the issue may make it more difficult to effectively communicate clear and coherent messages. Without clear messages, the issue does not have visibility. The low prioritization of MCH by both groups of decision-makers, particularly maternal obstetric health, is likely influenced by this

invisibility. To address this, the Ethiopian government and MaNHEP should invest in community dialogues to increase conversations about maternal and neonatal health. The Ethiopian MOH needs to prioritize maternal and neonatal health with the same ferocity as it does malaria, working with partners to create a prevention campaign aimed at reducing maternal and neonatal mortality.

In addition, prioritization of maternal health by community leaders is influenced by community perceptions regarding pregnancy. The belief that a pregnancy will be "normal" or that difficult pregnancies are inherited, gives community leaders the illusion that pregnancy is not a health issue but a normative process that all women go through. This means that communities don't view pregnancy as an issue that requires prevention and planning. This thought also seems to influence service utilization, for why would you call a health worker to assist with a delivery if delivery is a normal process rather than a medical one?

Prioritization of MCH is of a greater concern for community leaders if they have personal experiences dealing with maternal and neonatal loss. Woreda health officials acknowledge the importance of MCH and the role mothers have in creating healthy families; however, their distance (both in terms of geographic location and socio-economic status) from these women may prevent prioritization of MCH. Both decision-maker groups spoke of child health mostly in regards to vaccinations and largely ignored neonatal health. This may have been because of the way questions were written in the interview guide in which the majority of questions in the MCH knowledge portion of the guide were about pregnancy and childbirth.

Data from this report indicate that both groups of decision-makers have generally supportive attitudes towards MCH as well as the health extension program (HEP). The data shows that despite having other priorities, these decision-makers value the lives of women and children and want the health system to invest in interventions that focus on MCH. Both groups admire the work of the HEWs and feel that the health extension program has improved the lives and health of people in the rural communities. Both groups also recognize that traditions surrounding pregnancy and delivery and delaying access to care can contribute to maternal morbidity and mortality. Recognition of a problem is often the first step in creating change. This recognition and positive attitude towards MCH and the HEP is encouraging as it shows that both groups are supportive of the program and want it to be sustainable. However, it is important to recognize that a positive attitude does not result in action or sustainability. The Ethiopian government and MaNHEP should channel this positive attitude, engaging these decision-makers in activities to improve MCH outcomes.

Community leaders want their wives and daughters to be able to access care during an obstetric emergency, yet they feel that the resources are not in place for this to occur. While the community leaders are very supportive of the work of the HEWs, they are critical of the health system and of the things that HEWs are still unable to do, such as assist with deliveries. The community leaders state that the health system has not provided the HEWs with the training and tools to provide care during a home delivery. These barriers prevent the community leaders from trusting the health system and the HEWs. The WHOs are also aware of the current

failings of the health system, citing the same problems as the community leaders. Our findings suggest that these barriers make it difficult for both groups of decision-makers to endorse the use of HEWs or health facilities for deliveries. This highlights the importance of prioritizing health infrastructure development, as many of the current barriers can ultimately be addressed only by improving elements of the health system. While the Ethiopian infrastructure is getting stronger, health activities should focus on providing skilled attendance in the home. This is where it becomes crucial to provide training to the HEWs and to work on improving the referral system in the Amhara region. In order for the communities to trust the HEWs as skilled attendants, the HEWs should be trained in delivery skills and have support from the health facilities to streamline referrals; the health facility must have the staff and supplies to assist with the birth.

Decision-maker perceptions regarding the ability to improve MCH

Our findings demonstrate that both decision-maker groups prioritize MCH; however, neither group mentions specific actions that they could take to improve the health of women and children in their communities. Rather, both groups look to outside sources to address maternal and child health issues. Community leaders expect that the Ethiopian health system will provide the necessary solutions, while the WHOs look to donor partners. Decision-makers look to others because the perception is that they lack the control to influence maternal and neonatal morbidity and mortality in their communities; the locus of control lies elsewhere.

The community leaders express frustration because they are unable to assist with an obstetric emergency. Their perception is that they lack the ability to change

the two things influencing maternal morbidity and mortality, medical skills to help with an emergency and the power to change the health system infrastructure. The WHOs state that they know nothing about the MCH budget and that they have no control over the allocation of resources for MCH activities. Their perception is that those in control of the resources are the ones who need to be taking action. This perceived lack of control prevents decision-makers from taking specific action themselves; they have a low perception of self-efficacy and feel that what needs to be done is out of their locus of control. What is encouraging however is that the self-efficacy of these decision-makers can be fostered. To foster self-efficacy, these decision-makers need specific suggestions to make a difference in their communities, e.g. community leaders can be responsible for setting up an emergency fund and WHOs can be responsible for helping to coordinate HBLSS trainings. Providing these decision-makers with concrete tasks can demonstrate that there are ways in which they can address the problems related to maternal and child health. Research has shown that improved self-efficacy can lead to personal empowerment and change, (Bandura, 1994) which is one goal of behavior change communication.

Lessons learned from the research in Ethiopia is that although decision-makers are somewhat knowledgeable about the maternal health issues in their communities and consider MCH a priority, prioritization of the issue does not result in action. There are important barriers which prevent these decision-makers from taking action within their communities. Both decision-maker groups need help to gain self-efficacy; they need concrete ways in which they can be involved in creating

solutions to the problems faced in their communities as this can promote accountability and ownership. With the right intervention, these two groups can positively influence MCH outcomes in their communities. Two separate interventions are needed, as each set of decision-makers face a unique set of barriers.

The community leaders, as prominent figures in their communities, have the capability to create change by modeling helpful behaviors and by advocating for changes in traditional practices, overcoming delays in care and routinely providing funds for emergencies. These individuals have influence and if given support can be effective mobilizers (USAID, 2009). The WHOs also have the potential to be important change agents for rural Ethiopian communities. The WHOs are somewhat aware of what is happening in the communities, they recognize the difficulties people face when trying to access care, however, the majority of WHOs would benefit from further exposure to community life. The WHOs would benefit from increased interaction and communication with HEWs and community members, and would benefit from participating in community health meetings. The WHOs would then be in a better position to articulate what is happening on the ground and advocate for the improvements to be made to zonal, regional and national health officials.

Our regional findings also suggest that there are broader, more macro issues that need to be addressed by key decision-makers in the Ethiopian health system, e.g. the government health facilities do not have the drugs or supplies to provide care and that investments should be made to strengthen management. The Health

Extension Program needs strengthening if it is to continue to have the support of the community and the WHOs. Both groups advocated for more and improved trainings for the HEWs, especially training on delivery services. The WHOs recommended that the HEWs receive practical training to recognize the signs of an obstetric emergency and about the skills necessary to assist with deliveries. They also report that the HEWs should to be provided with birth kits and a sustainable supply system for the provision of drugs and delivery supplies, as this will help the HEWs function at maximum capacity. As previously mentioned, the government health facilities should improve the drug procurement system, as the government facilities are often without drugs and priority should be placed on staffing the facilities with trained health workers. These changes will only reinforce positive attitudes towards the HEWs and help substantiate their referrals; this in turn will improve utilization of the health system.

Another theme that emerges from the data is the reliance on donor funding for MCH activities. The Woreda Health officials state that MCH programming and trainings are not sustainable without donor funding. Countries that are heavily saturated with external aid, like Ethiopia, often tend to be reliant on donors to fund many of their programs (Shiffman & Okonofua, 2007). The Ethiopian government does not currently allocate funds for many donor provided activities and trainings, which means that these programs are not incorporated into the health system development plan and are not budgeted for (Reformplus, 2006). Subsequently, when the program ends, so do these activities. This method of programming is not sustainable.

Creating a sustainable program

One way to create a sustainable program is to mobilize communities to engage in collective social reform (Winskell & Enger, 2009) as it is believed that solutions which come from the community are more sustainable. If Ethiopian communities can collectively agree to change some of the social norms surrounding pregnancy and delivery, such as having a skilled attendant at birth or recognizing danger signs and seeking help immediately, it is more likely that these changes will be sustainable. This type of social reform needs to come from the community but cultivation can stem from the work MaNHEP is doing with their HBLSS training.

Externally driven programs and donors should acknowledge the reliance on donor funding for trainings and create programs with this reliance in mind. Ideally, donors would work with host governments before the start of a program to devise a way to sustain the program once the donor funding is gone and to be cognizant that the demand for training has to be bottom up rather than top down. Both parties should acknowledge that continued donor funding of trainings is not sustainable and that a plan needs to be made to adopt the training if the host government believes it to be effective and integral to their health planning. Sustainability is not just about buy-in from the "right" decision-makers. While buy-in is important, plans need to be put in place to allow for programs to continue.

Recommendations for MaNHEP

The findings from this study suggest that MaNHEP can effectively utilize both groups of decision-makers to improve MCH in the target woredas. MaNHEP should include community leaders in the HBLSS trainings. My recommendation is to

engage community leaders in a dialogue about traditions surrounding pregnancy and delivery and delays in accessing care. MaNHEP is in a position to help build the collective efficacy of these communities by helping to stimulate concrete solutions to improve maternal and neonatal health outcomes, for example to engage in open dialogues about pregnancy, go for antenatal care, be able to recognize dangers signs, prepare for an emergency and/or create an emergency fund. MaNHEP has a unique opportunity to build sustainability at the community level and indeed has the responsibility to do so, if the Bill and Melinda Gates Foundation's investment is to bare fruit.

The WHOs are also important decision-makers and MaNHEP should coordinate with these individuals in creating plans and programming. The WHOs are responsible for the health and well being of the people in their woredas and they want to be involved in programs that take place in their communities. MaNHEP should work with the WHOs to implement the HBLSS program and encourage the WHOs to help facilitate communication between HEWs and other health workers. Doing this will strengthen communication and support between these health workers and help create a stronger referral system, which will benefit the communities, HEWs and those working in the health facilities.

Limitations and delimitations

There are several limitations to the study of note. First, the study relied upon HEWs and health officials to identify and recruit community leaders rather than asking community members to identify those who they view as leaders in the community. Since only a few women were identified by the HEWs and health officials for the

focus groups, we were unable to create separate male and female groups which may have affected the willingness of some participants to comment on certain topic areas. However, those selected for the focus group discussions were prominent people in the community, and it is likely that community members would have chosen them in any case. Second, the researchers were unable to interview every woreda health office head and MCH specialist, as these individuals were often traveling, the position was unfilled, or the position did not exist. Third, the researcher had planned to have two research assistants trade translated transcriptions to do a data quality check every five pages (this consisted of listening to the audio recording and reading what had been transcribed by the other researcher). Due to time constraints and limited resources this data quality check did not happen. Lastly, this research cannot be generalized beyond the Amhara region, as the researcher was unable to interview key decision-makers in other regions of Ethiopia.

Conclusion

In conclusion, we recommend that the Ethiopian government and the Maternal and Neonatal Health in Ethiopia Partnership (MaNHEP) utilize community leaders and woreda health officials, two key decision-maker cadres, to help improve maternal, neonatal and child health at the community level. These decision-makers do need to be inspired to further prioritize maternal, neonatal and child health; however, their current positive attitudes towards MCH and the health extension program are something to build upon. Each group needs support to build their self-efficacy; they need help to identify concrete ways in which they can take ownership over the

problems that are associated with maternal morbidity and mortality in their communities. If these groups can be effectively mobilized, they can serve as mobilizers themselves, helping to spark collective social reform. Creating change at the community level is a way to make the program sustainable; however, the HBLSS training should be adopted by the Ethiopian government and integrated into the HEW training curriculum, in order for the program to truly be sustainable. This program has the opportunity to improve the lives of women and children in rural communities in Ethiopia; the key is to involve important decision-makers to improve the likelihood of community and country ownership over the program.

Appendix

Appendix A. Woreda Health Official Guide

In-Depth Interview Guide: Stakeholder

Hello. Thank you very much for agreeing to talk to us today. We are going to be talking with you about your top health priorities, issues regarding maternal and child health and your opinion of the work of the HEWs. If at any point you feel that you cannot continue with the interview, please let us know and we can end the session. We anticipate that the interview will take about 1 hour to complete. Do you have any questions before we begin?

Survey Consent
INTERVIEWER READ: "Would you like to give your consent to participate in the interview?" Yes No
Name of interviewee _____
Title _____
Date of interview (Day, Month, Year): [_ _ - _ _ - _ _ _ _]
Location of interview: [_____]
Time the interview begins in military time: [_ _ _ _]

Okay, let us begin.

PRIORITIZATION AND APPLICATION OF RESOURCES

1. What health issues are most important in your area and why?

Probe: What makes them more important than others?

2. At the community level what kind of contributions can be made to improve available health services?

3. Can you talk about the current budget for maternal child health projects? How much money is reaching the regional, zonal and district levels?

4. The MaNHEP project is providing funds for the use of misoprostol for Front Line Health Workers and families to prevent too much bleeding. How do you feel about funding misoprostol once the project comes to an end?

MATERNAL CHILD HEALTH KNOWLEDGE

5. Where do women give birth?

6. Who assists women with childbirth?

7. In what way do the women need assistance?

8. Are women with complications able to quickly access the care they need?

Why or why not?

Probes: Is transportation a barrier for getting care? Why? Is lack of funds a barrier to getting care? Why? Is lack of knowledge a barrier for getting care? Why?

9. What would be the most effective way to increase use of health facilities during childbirth?

Probes: Who can help make that change? What else needs to be changed in the current system to increase service use?

ATTITUDES TOWARDS HEALTH EXTENSION WORKERS (HEW)

10. What do HEWs do in the community to help mothers and babies?

11. How do you feel about the work HEWs do with mothers and babies in the community?

Probes: How important is the role of HEWs in the health system. What is the quality of the care HEWs provide? Do you think someone else could provide better care? Why? What do you think about the payment HEWs receive?

12. What is the quality of the training HEWs receive for maternal and neonatal health?

13. How cost effective is this training of HEWs?

14. What do you think about future contributions for these trainings from the government without funding from donors?

15. How sustainable is the maternal and neonatal health training of HEWs?

Interviewer: Thank you very much for taking the time to answer out questions about your _____. Do you have anything you would like to share with us that we may have left out? Is there anything else that you would like to tell me about your experience? Thank you very much for your time.

(Adapted from the IMMPACT ToolKit, Module 4, Tool 4, 2007)

Appendix B. Community Leader Guide

Focus Group Guide: Community leader

Hello. Thank you very much for coming in to talk to us today. We are going to be talking with you today about some issues regarding health in your community. We would like to learn about your knowledge of health issues, your opinion of the Health Extension Workers (HEW) and what your priorities are for the well-being of the community. Your participation in this focus group is completely voluntary and we want to assure you that everything that is said here today will be confidential. We will not be sharing your name with anyone. If at any point you feel that you cannot continue with the focus group discussion, please let us know and we can end the session. During the discussion, _____will be taking notes to make sure we get down much of what you are saying. In addition we will be tape recording the session so that we don't have to worry about missing any of the important information you are giving us. I am going to test the tape recorder now, to see that it works. (Turn the tape recorder on, invite everyone to say something and then play it back). The information from this discussion will only be used for this research project and the tape recordings will not be available to anyone outside of the research team.

Is this okay with everyone?

It is also very important that only one person speaks at a time but please feel free to speak if you have something to say. Remember, we want to hear from everyone and we value all of your opinions. We want to encourage you to speak up if you have a different opinion from someone else but also please respect what each person is saying.

We anticipate that the focus group will take about 1 hour to complete. Do you have any questions before we begin?

Survey Consent
INTERVIEWER READ: "Would you like to give your consent to participate in the interview?" Yes No
Date of interview (Day, Month, Year): [_ _ - _ _ - _ _ _ _]
Location of interview: [_____]
Time the interview begins in military time: [_ _ _ _]

Okay, let us begin.

PRIORITIZATION and Application of resources

1. What health issues are the most important in the community and why?

Probe: what makes them more important than others?

2. What does the community do to improve the quality and access to maternal health services?

3. What resources exist in the community to help women access health facilities for .an obstetric emergency?

Probe: Are there any emergency funds for this? What do you think about collecting emergency funds before a mother has a problem?

MATERNAL AND CHILD HEALTH KNOWLEDGE

4. What factors influence a women's use of health services during childbirth?

Probe: how do costs, lack of knowledge or travel distances limit the use of services.

We have heard that farmers do not want to pay to take their wives to the health facility. Can you tell me about this?

5. What is the most effective way to increase use of health facilities during childbirth?

Probe: who can help make that change?

6. Are births in the community registered anywhere?

Probe: If so, who registers the births?

7. Are deaths of mothers and babies in the community monitored?

8. Do community leaders generally know which women are currently pregnant/expecting a child?

Pro/be: when would a mother share this information with the community?

Obstetric Emergencies

9. What types of complications do women have in late pregnancy, labor, delivery and the period immediately after birth?

How serious are these problems? What can happen to a woman who has one of these problems?

10. In the past, when women have experienced serious complications during pregnancy, delivery or after delivery, what has the community done?

Probes: Has the community assisted in transporting the woman to the health facility? Has the community contributed funds?

11. Are women with complications able to quickly access the care they need? Why or why not?

Probe: is transportation a barrier for getting care? Why? Probe if lack of funds is a barrier of

getting care? Why?

12. What quality of care do women with complications receive when they reach a health facility?

ATTITUDES TOWARDS HEALTH EXTENSION WORKERS (HEW)

13. What services do HEWs provide in the community for maternal and neonatal health?

Probe: How important is this role to the community? What is the quality of the care HEWs provide? Do you think someone else could provide better care? Why? What do you think about the payment HEWs receive?

14. How acceptable are HEWs to you and the people in your community as primary health care providers?

Moderator: Thank you very much for taking the time to answer out questions about your community. Do you have anything you would like to share with us that we may have left out? Is there anything else that you would like to tell me about your experience? Thank you very much for your time.

(Adapted from the IMMPACT ToolKit, Module 4, Tool 4, 2007)

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