The Last Ten Kilometers Project (L10K)

Baseline Household Health Survey Summary Report

Research & Training Institute, Inc.

The Last Ten Kilometers: What it Takes to Improve Health Outcomes in Rural Ethiopia

The Last Ten Kilometers: What it Takes to Improve Health Outcomes in Rural Ethiopia is a Bill and Melinda Gates Foundation funded project implemented by JSI Research & Training Institute, Inc. in four regions of the country—i.e. , Amhara, Oromiya, Southern Nations, Nationalities and People's (SNNP) and Tigray Regions—covering a population of about 13 million. The Last Ten Kilometers Project aims to strengthen the bridge between households, communities, and the health extension program of the Ethiopian Government by mobilizing families and communities to more fully engage to improve household and community health practices, ultimately leading to improved key reproductive, maternal, neonatal and child health (RMNCH) outcomes and contribute towards achieving millennium development goals (MDGs) 4 and 5 (i.e., decrease child and maternal mortality rates).

Recommended Citation

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Abstract

The Last Ten Kilometers (L10K) Project in collaboration with the Regional Health Bureaus of Amhara, Oromiya, SNNP and Tigray regions conducted a baseline household and community survey to benchmark the reproductive, maternal, neonatal and child health (RMNCH) outcome indicators and identify critical areas for intervention. The survey which was conducted during the period December 2008–January 2009 gathered information from 204 communities or kebeles and 6,277 women using a two-stage cluster sampling methodology. This report presents the survey results that describe the availability, perceived quality, awareness, knowledge, access and utilization of RMNCH services in the L10K project areas. Implications of the survey findings for the health sector development program of the Ethiopian Government are discussed.

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DISCLAIMER

The views expressed in this publication do not necessarily reflect the views of the Bill and Melinda Gates Foundation.

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ACKNOWLEDGMENTS

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The implementation of the baseline survey would not have been possible without the support of the Regional Health Bureaus (RHBs) of Amhara, Oromiya, Southern Nations, Nationalities and People's Region and Tigray. The involvement of the RHBs from the inception of the baseline survey, and especially for providing us with staff from within the regions to be trained as interviewers and supervisors to conduct the survey, has been pivotal to maintain data quality. We thank the interviewers and the supervisors for their hard work, their dedication, and for being able to finish the field work on schedule.

Certain organizations played a significant role in the logistics support for this survey. The Integrated Family Health Program (IFHP) and L10K implementing partners, mainly Amhara Development Association (ADA), Fayyaa Integrated Development Association (FIDA), Oromiya Development Association (ODA), and Relief Society of Tigray (REST) provided four-wheel vehicles for the field operations of the survey. UNICEF provided testing kits to determine the iodine content of household salt.

We would also like to acknowledge the collaboration that we have had with the IFHP in conducting the survey in Tigray. The L10K project and IFHP were able to pool resources together enabling us to conduct a survey that provide regional estimates for the region.

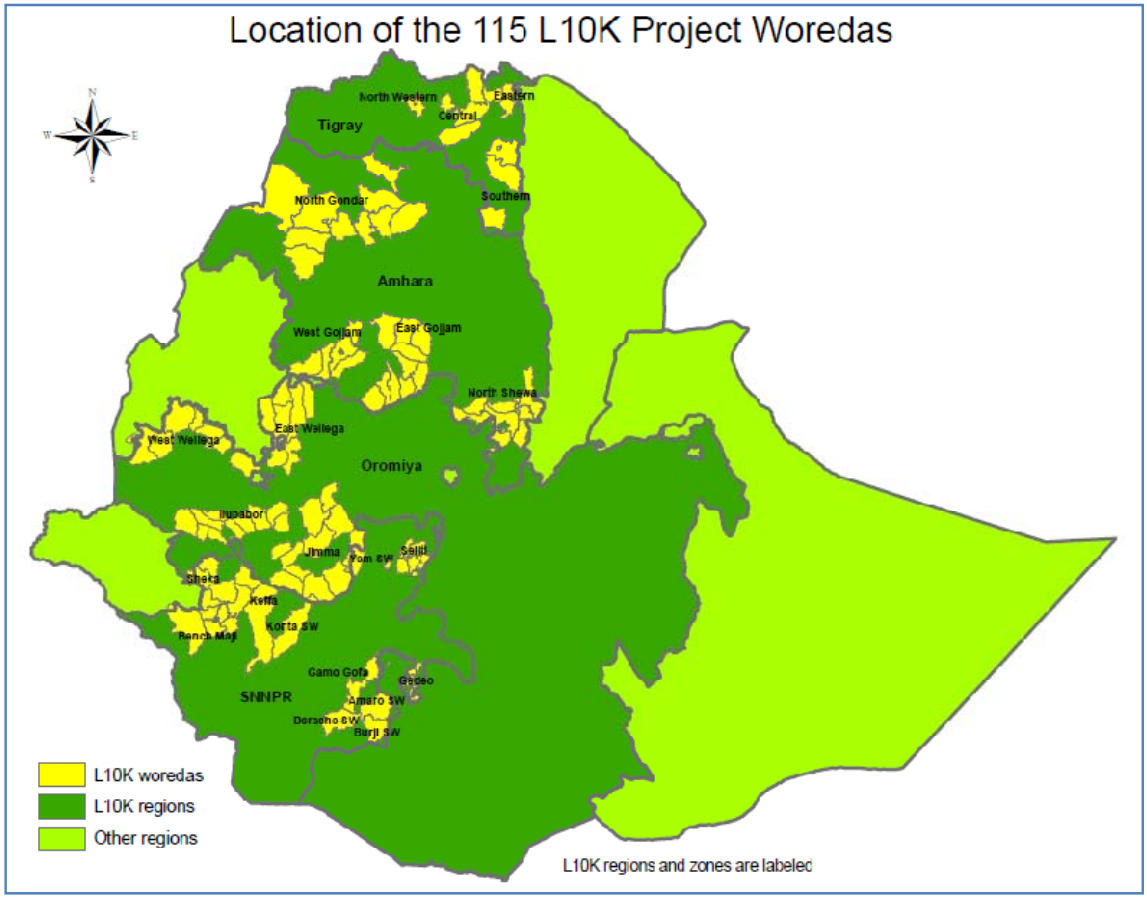
The contribution of certain individuals in conducting this survey has been noteworthy. Dr. Patricia Davis and Ato Girma Kassie provided valuable input to finalize the survey tools. Ato Kassahun Mengistu and Ato Araya Abreha validated the translating of the survey tools into Oromifa and Tigregna, respectively, and facilitated the survey training in those regions. Ms. Agnes Guyon, Ms. Mary Carnell and Ms. Mary Taylor provided valuable comments during the different stages of this survey.

The contribution of the central and regional L10K teams in all the steps of organizing and implementing the baseline survey has been the cornerstone to its success. We would like to appreciate our L10K team for their perseverance; hard work, enthusiasm and the can do mentality in the undertaking of this survey and beyond.

Lastly, we would also like to thank the women, including the health extension workers who took their time to respond to the questionnaire and share with us a glimpse of their realities and providing us with invaluable information that will be key not only for L10K but for all partners and stakeholders supporting the Government of Ethiopia's health extension program.

INTRODUCTION

The Government of Ethiopia (GOE) embarked on the Health Extension Program (HEP) in 2005 to improve access to and equity of basic health services to the rural population through expanding physical health infrastructure (i.e., establishing a health posts) and training and deploying a cadre of female Health Extension Workers (HEWs). To date, the government has constructed over 11 thousand health posts and trained over 30 thousand HEWs. The HEP is based on the concept that providing the right knowledge and skills to households will lead to adoption of positive behaviors and ultimately improved community health outcomes. The HEWs identify, train and support model families and also work with their communities, including voluntary Community Health Workers (vCHWs), to produce better health and



improve health outcomes.

The Last Ten Kilometers (L10K) Project, which is implemented by JSI Research & Training Institute, Inc. (JSI R&T), with funding by the Bill and Melinda Gates Foundation, works 115

woredas[1] in four regions in Ethiopia; namely Amhara, Oromiya, Southern Nations, Nationalities and People's (SNNP), and Tigray Regions (this covers a population of about 13 million) in support of the HEP. Specifically, the project aims to strengthen the bridge between households, communities, and the Government's HEP primarily by mobilizing families and communities to more fully engage to improve household and community health practices, ultimately leading to improved key reproductive, maternal, neonatal and child health (RMNCH) outcomes and contribute toward achieving millennium development goals (MDGs) 4 and 5 (i.e., decrease child and maternal mortality rates). In so doing, L10K provides technical support and grants programs to strengthen the capacity of existing local organizations, woredas, kebeles[2], and households in the intervention areas to fully contribute to improving Ethiopia's RMNCH goals.

The L10K project implements a variety of innovative strategies to achieve its sub-goal, or the proof of concept, i.e., to improve the quality and increased demand, access and utilization of high impact RMNCH interventions. The project is mandated to document the learning and effectiveness of its innovative strategies in achieving its sub-goal and objectives in order to disseminate the findings among local, regional, national and international stakeholders and likeminded organizations that are interested in community solutions to achieving MDGs 4 and 5. It will implement M&E strategies including special studies to document the effectiveness of the L10K strategies. To set benchmarks and assess achievement of its sub-goals, the L10K project in collaboration with its partners, conducted a baseline household health survey in its project woredas of Amhara, Oromiya, SNNP and Tigray regions to measure changes in key RMNCH knowledge and behavioral outcome indicators and generate useful information for intervention. The survey was fielded during the period December 2008-January 2009. The baseline survey was conducted in collaboration with the Federal Ministry of Health (FMOH), the Regional Health Bureaus (RHBs), and the L10K implementing partners (i.e., 1st tier grantees). This report presents a summary of the baseline findings. For a more comprehensive and detailed description of the survey methods, results and conclusions please see full report[3].

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[1] A woreda is a district, the second lowest administrative unit. The L10K project woredas encompasses 30 woredas in Amhara, 35 in Oromiya, 30 in SNNP, and 15 in Tigray. Other than the five urban woredas in Tigray, all the L10K woredas are rural.

[2] A kebele is the lowest administrative unit with an average population of about 5,000 people

[3] The Last Ten Kilometers Project. 2009. Baseline Household Health Survey: Amhara, Oromiya, SNNP and Tigray. JSI Research & Training, Inc., Addis Ababa, Ethiopia.

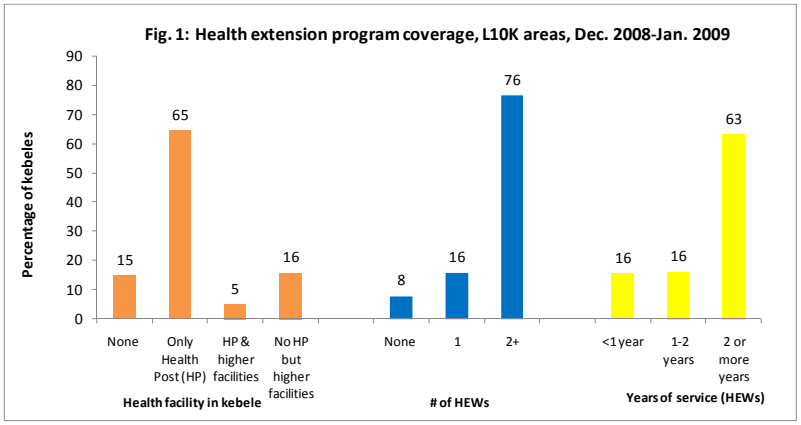
METHODOLOGY

A two-stage cluster sample method was employed to select kebeles (as clusters) to be included in the survey from the 115 L10K project woredas. During the first stage, 204 kebeles were selected from the 4 regions using probability proportional to size (PPS). During the second stage a parallel sampling was conducted to interview 6,277 women from the selected kebeles that included representative samples of 4,080 women in reproductive age (i.e., 20 per kebele), 2,448 women with children 0 to 11 months (i.e., 12 per kebele), and 2,040 women with children 12 to 23 months (i.e., 12 per kebele. The survey used pre-coded questionnaires to collect information regarding basic household and demographic characteristics, knowledge and behaviors related to RMNCH, access to the services provided by the health extension program. The survey questionnaires were administered in three local languages—Amharic (in Amhara and SNNP), Oromifa (in Oromiya) and Tigregna (in Tigray). Kebele-level information on health service availability and type, number of HEWs in the kebele, and the duration of service of the HEWs were some of the indicators that were collected via community questionnaire by interviewing HEWs and key informants. The whole survey including the training period took about a month (from December 8, 2008 to January 17, 2009).

FINDINGS AND ITS IMPLICATIONS

Health extension program coverage

At least one type of health facility was reported to be available in about 85% of the kebeles in the L10K areas; health posts were available in 70% of the kebeles; and higher facilities including health stations, health centers and hospitals were reported from 21% of the kebeles (Figure 1). About two-thirds of the kebeles only had health posts at the time of the survey and 5% had both health posts and higher facilities. Health extension workers were reported to be present in about 92% of the kebeles; 76% of the kebeles served with two or more HEWs; while 82% of the HEWs were serving in the community for at least one year. By the end of this year, the coverage of the health extension program is expected to be universal.

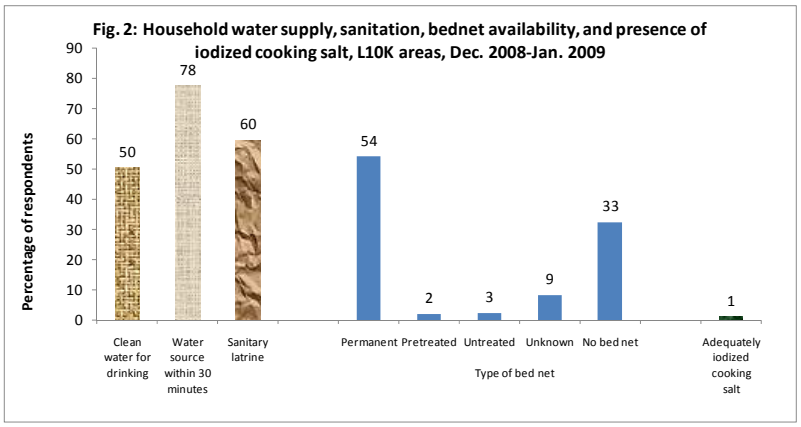


Household water supply and sanitation

More than three-quarters of the respondents were within 30 minutes from the source of drinking water supply (Figure 2). However, only 50% of the respondents were from households that had access to clean water supply (i.e., piped water or covered well or protected spring). Furthermore, treating water before drinking is rarely practiced in the intervention areas (only 7%; analysis not shown). Indeed, availing clean water to rural community has always been a development agenda and cannot be achieved within a short span. As a short term remedy, health education efforts should focus on the most viable and cost effective way of treating drinking water at household level.

Recently, there has been a huge emphasis on the promotion of pit latrine construction in rural areas—60% of the respondents were from households with toilet facilities. While maintaining the current impetus is critical, efforts should be put in place to maintain the already constructed latrines and monitor their quality. Encouraging latrine use should also constitute among the priority intervention efforts.

Sixty-seven percent of the respondents were from households with at least one bed net; and about 40% of those owning a bed net reported sleeping under it—which is more than 10 folds increase in household ownership and use of bed nets observed in 2005 Demographic and

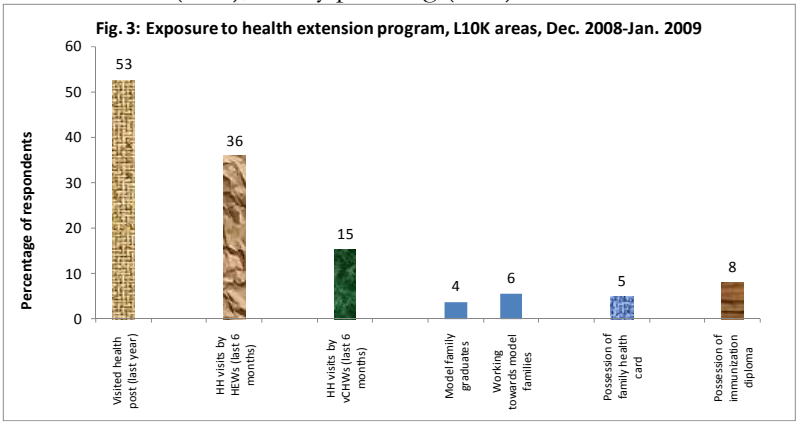


Health Survay (DHS) and claimed as the major contributing factor towards the decline in malaria incidence in Ethiopia. However, to achieve universal coverage bed net use should be promoted by the HEP.

The Ethiopian government has very recently adopted a long awaited policy to ensure that all cooking salt available in the markets is fortified with iodine. However, the L10K baseline survey was conducted before the policy was adopted. Only 1% of the women in reproductive age in the L10K areas were from households with adequately iodized cooking salt.

Exposure to the health extension program

A little over half of the women (53%) in the L10K areas said they had visited a health post at least once last year (Figure 3). The major reasons for visiting the services, as reported by the women, included child immunization (60%), family planning (35%), and antenatal care (20%) and to seek treatment for malaria (15%) (analysis not shown). The HEWs spend 75% of their time conducting household-level activities; however, only about 36% of the women reported being contacted by the HEWs in the 6 months prior to the survey. The major reasons for the contact included promotion of pit latrine construction (59%), personal hygiene (54%), latrine use (52%), safe water use (20%), immunization (19%), family planning (17%) and child nutrition (10%; analysis not shown). Health messages on pregnancy and neonatal care, referral and treatment practices for sick children, HIV/AIDS, and others are less likely to be dealt with by the HEWs.



One of the components of the HEP is the promotion of model families in the community. For a household to graduate as a model family, one has to go through a number of steps and perform activities, which are part of the primary health package of the HEP. Model families are believed not only to change their own behaviors, but also influence their neighbors and thereby the larger community for improved health outcome. The proportion of households in a kebele that were model families or working towards becoming a model family ranged between zero to 70%; on average, only 4% of the respondents reported their family graduated as a model family—while about 6% more are working towards becoming a model family.

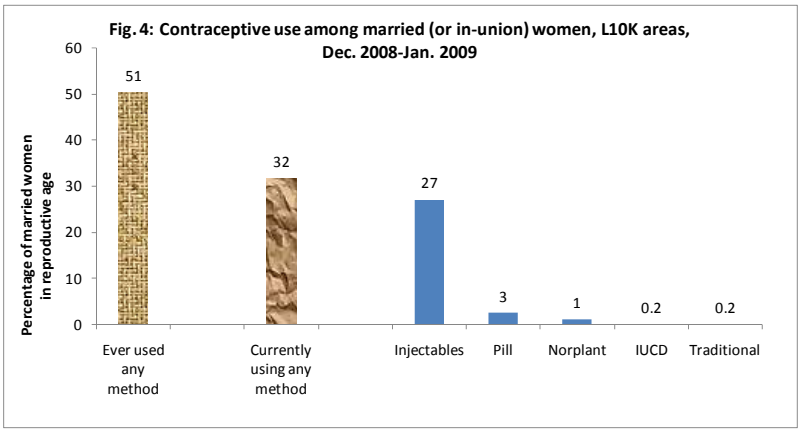
The vCHWs, who are model family members, assist the HEWs to provide HEP services in their neighborhood. The vCHWs include recently recruited vCHWs by the health extension program (HEP); the community-based reproductive health agents (CBRHAs) and the community health promoters (CHPs) who are operating in rural communities through previous support from development partners. Only 15% of the respondents reported being contacted by vCHWs during the 6 months preceding the survey. The information received from vCHWs by women mainly revolved around child immunization (62%), promotion of pit latrine construction (47%), personal hygiene (40%), latrine use (36%) and family planning (19%) (analysis not shown). Maternal and neonatal health care were rarely addressed by the vCHWs.

Exposure to behavioral change communication (BCC) materials at the household-level introduced by Essential Health Services in Ethiopia (ESHE) project—mainly family health card and immunization diploma—were 5% and 8%, respectively. However, only three of 115 L10K woredas were previously supported by the ESHE project.

Family planning, maternal, neonatal and child health

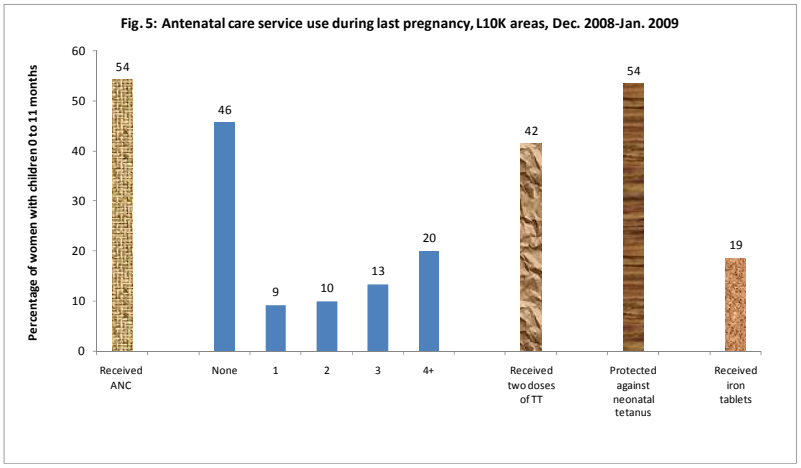
There is a recent paradigm shift from attention to the individual child or mother to focus on the continuum of care from before pregnancy, through to pregnancy, childbirth, & newborn, the postnatal period, and on to early childhood (health, nutrition and illness). The survey did not collect information on referral linkages—an important component of the continuum of care framework. The survey results are limited to the other facets of the continuum of care, which includes, family planning, antenatal care, delivery, postnatal and newborn care, child immunization, child health and child illnesses.

Family planning: fifty-one percent of the married women ever used a contraceptive and 32% of them are currently practicing family planning; the vast majority of the contraceptors are using injectable contraceptives (Figure 4)



In Ethiopia family planning use has evolved quite gradually and the recent unprecedented increase in contraceptive use (from 15% in 2005 DHS) is largely attributable to the health extension program. Injectables have emerged as the most widely practiced method constituting over 85% of the current use. Long acting and permanent methods are rarely practiced despite the reported high need for spacing and limiting births among women (46% and 40%, respectively; analysis not shown). Therefore, family planning programs should improve method mix with proper emphasis to long acting and permanent methods by assessing women's fertility preferences and contraception choices. Referral linkages between health posts and higher health institutions, especially for clinical methods, should be strengthened. Improving community awareness concerning the various methods and dispelling misconception surrounding family planning, including long acting and permanent methods should also constitute among the priority interventions. More work also needs to be done to generate new demand amongst those women (and men) who are currently not contracepting.

Antenatal care: fifty-four percent of the women with children 0 to 11 months received antenatal care (ANC) during most recent pregnancy, only 20% had four or more ANC visits; 42% received at least two doses of tetanus toxoid injection (TTI); while 54% had neonatal tetanus protected birth (Figure 5)

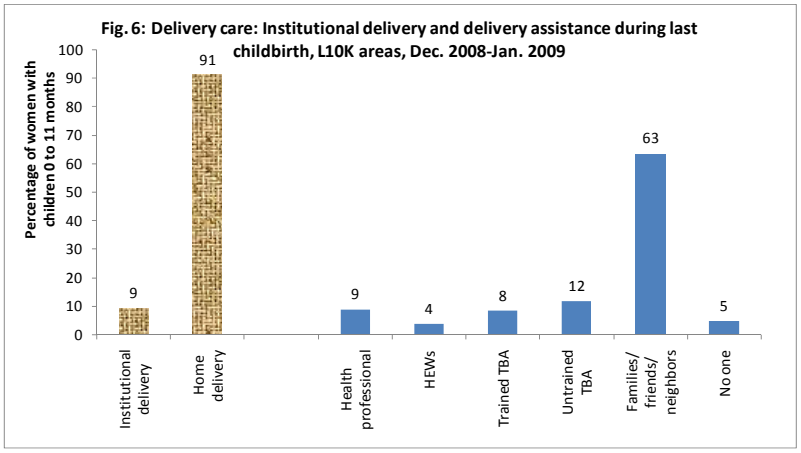


Although the recorded ANC use rate represents an improvement from the 2005 DHS (which were 28%, 12%, 28% and 32%, respectively, for the above mentioned antenatal care

indicators), it is yet far off the universal coverage. Besides, only 20% of the women received the recommended 4 or more number of visits. Efforts to increase ANC service use by educating women on its benefit should always remain a priority intervention. Early initiation of ANC and the need for an adequate number of visits should also be emphasized. The HEW and vCHW household visits should emphasize pregnancy care issues. The content of antenatal care is vital in evaluating its quality and value. This survey unearthed the presence of considerable missed opportunity concerning the various contents of ANC including urine and blood testing, iron supplementation, TTI, among others. It is critical that health facilities and providers are equipped properly in order to respond to the growing need for ANC and ensure that pregnant women attending ANC receive all the necessary services.

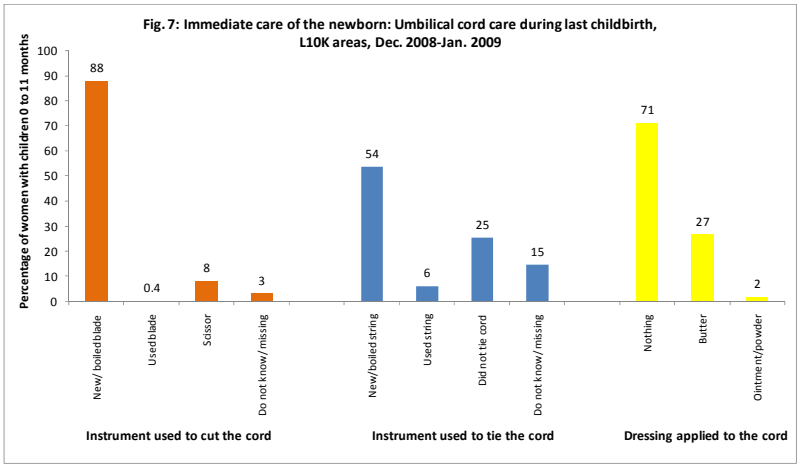
Delivery care: Most of the childbirths are taking place at home (91%) and are not assisted by skilled birth attendants; only 9% of them are attended by health professionals and only 4% by the HEWs (Figure 6)

Access to institutional delivery and delivery by skilled birth attendants has remained a major challenge to the vast majority of rural women in Ethiopia. Efforts to train and equip HEWs on basic but critical delivery care services should constitute a priority intervention. As part of the ANC services, identifying pregnant women early during pregnancy as well as identifying high-risk pregnancies and consulting women on birth preparedness and delivery arrangements are important steps to mitigate the problem. The vCHWs could potentially be an asset for HEWs for early identification of pregnant women in their community.



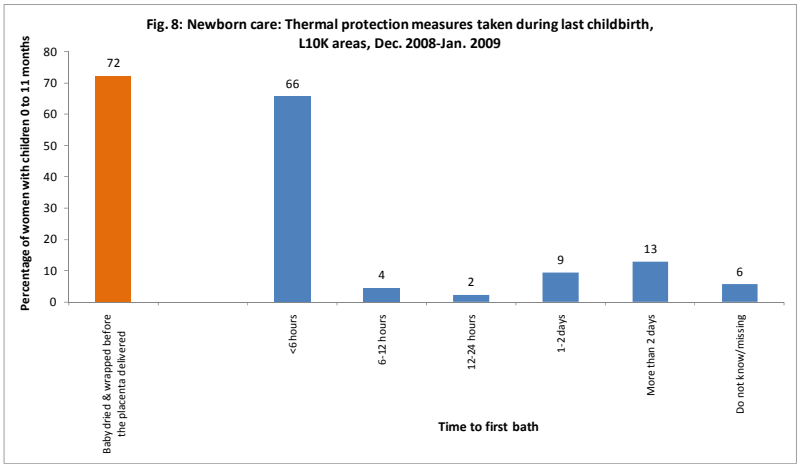
Newborn care (care of the umbilical cord): eighty-eight percent used new blade to cut the umbilical cord; 54% used new/boiled string to tie the cord, 25% left the cord untied; 71% did not apply any dressing to the umbilical cord, 27% applied butter (Figure 7)

It is highly recommended to use a sterile instrument to cut the umbilical cord and this survey found that the vast majority of the newborns had their umbilical cord cut with a new/boiled blade. Health messages should continue emphasizing on the use of sterile instruments to cut the umbilical cord in order to achieve universal coverage. The findings that only about 54% used 'sterile string' to tie the cord and 25% left the cord



untie can be causes for great concern. It is therefore imperative that women and traditional birth attendants are well informed to tie the cord with sterile string before cutting it to avoid potential life threatening bleeding from the umbilical cord. In some cultures, especially in parts of Amhara and Tigray, the dressing of the umbilical cord with butter appeared to be somehow common, as also revealed by this study (analysis not shown). There is a need to dispel such practice by educating the public, community leaders as well as traditional birth attendants on its negative aspects.

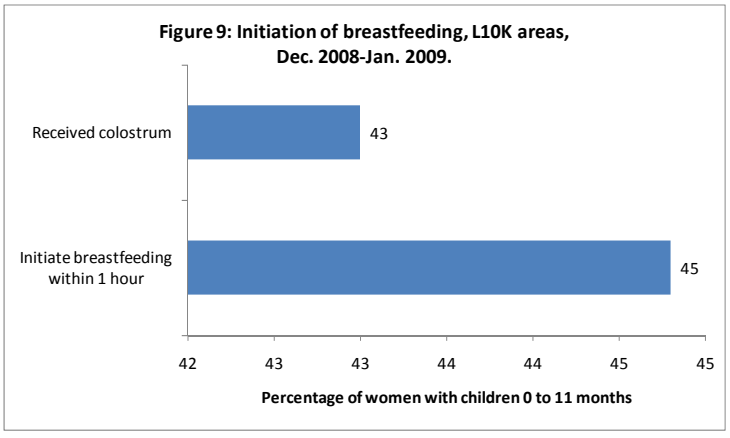
Newborn care (thermal protection): seventy-two percent of the newborn babies were dried and wrapped before the placenta delivered; 66% were bathed before 6 hours of birth (Figure 8)



This survey revealed a good practice in terms of initiating thermal protection before the placenta delivered. Effort to make these good practices universal through BCC campaigns is highly recombined. However, bathing the newborn soon after birth causes a drop in the baby's body temperature and is not necessary, and that World Health Organization (WHO) recommends delaying bathing for at least 6 hours or preferably for 2 or 3 days. Contrary to the recommendation, early bathing appeared quite common in the four regions. This calls for health communication efforts to educate mothers, care takers, traditional birth attendants and elders on the negative aspects of early bathing of newborns and encourage them to delay bathing to recommended hours or days.

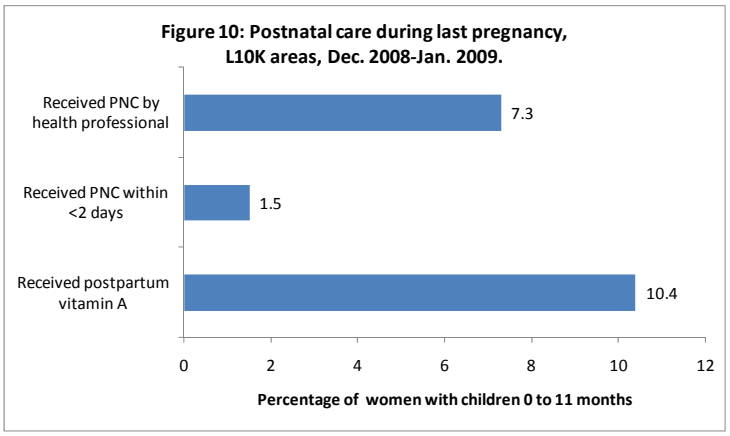
Newborn care (initiation of breastfeeding: forty-five percent of the mothers initiated breastfeeding within an hour of birth, 43% fed colostrums (Figure 9)

Early initiation of breastfeeding within an hour is highly recommended. This is less practiced in the L10K areas, however. The feeding of the first breast milk (colostrums) is also low. As part of newborn care intervention and essential nutrition action, mothers should be encouraged to initiate breastfeeding early and to feed the first milk, and also to continue exclusive breastfeeding up to 6 months.



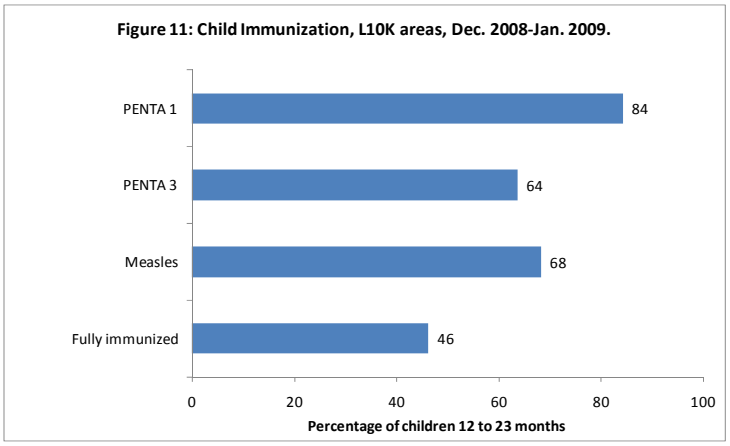
Postnatal care: only 1.5% of the women with children 0 to 11 months reported receiving postnatal care (PNC) within 2 days following their last childbirth, 7% within 45 days; postpartum vitamin A coverage was only 10% (Figure 10)

As most deliveries are happening at home, postnatal check-ups within few days after delivery are critical for the mother and the newborn. In the L10K areas, postnatal care is virtually non-existent. Also, the HEWs rarely involved in the provision of the service. While educating women on the importance of early postnatal care and creating demand for the services is a priority intervention, it is equally important to strengthen the health post and the HEWs to respond to the demand. Of equal importance is also the early identification of pregnant women by HEWs with support from vCHWs for both pre and post natal care.



Child immunization: eighty-four percent of the children age 12-23 months received PENTA 1 vaccine, 64% received PENTA 3, 68% received Measles vaccine, 46% are fully immunized (Figure 11)

The finding that the first dose of pentavalent vaccine (PENTA 1) reached 84% signals a considerably high access to expanded program for immunization (EPI) services to rural population. In contrast, continuation of immunization (PENTA 1 to PENTA 3) falls short; i.e., 26% drops out of the immunization service. Measles vaccine coverage, one of the MDG indicators, was also low. The major reasons for dropping out or not immunizing their child are women's business, unawareness to return for the second or third time, unawareness of the immunization place or time or both, and unawareness of need of immunization were among the major reasons for dropping out or not completing immunization (analysis not shown). Lessening these demand side barriers calls for community mobilization and behavioral change efforts. The vCHWs could assist the HEWs for defaulters tracing—which should be the mainstream strategy to minimize the dropouts. Measles immunization should be strengthened via the routine program as well as through campaigns.

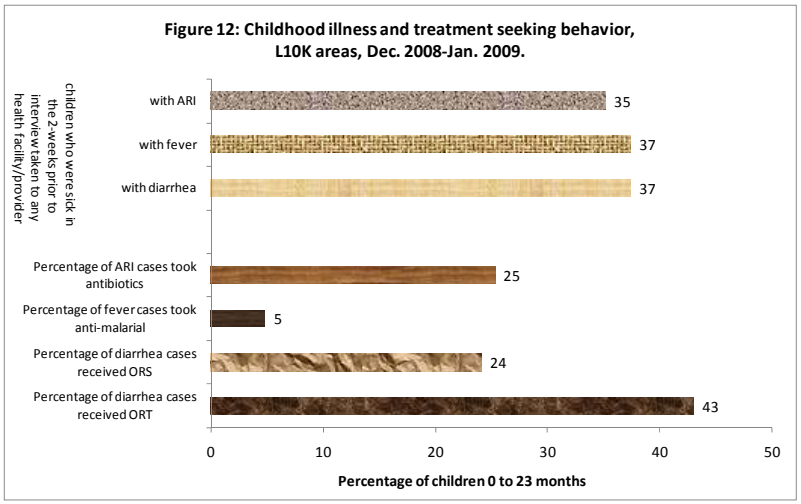


Child nutrition: eighty-seven percent of the children 6-23 months received Vitamin A in the previous 6 months; and 64% were exclusively breastfed until six months of age or later (analysis not shown)

This is an encouraging finding and signals the effectiveness of the Expanded Outreach Service (EOS) in the regions. Currently, UNICEF is in the process of handing over the EOS to the HEP and that evaluating the efficiency of the transition and documenting best practices is an

important operational research agenda. The HEP should continue the promotion of exclusive breastfeeding until six months of age.

Childhood illness and treatment seeking behaviors: thirty-seven percent of the sick children in the 2-week prior to interview were taken to health facilities for treatment; 43% of the children with diarrhea in the 2-week prior to the survey received oral rehydration therapy (ORT) (Figure 12)



Most women included in this survey were not sufficiently aware of the major danger signs of newborns and under 5 children that indicate treatment in health facilities (analysis not shown). Limited physical and financial accesses as well as competing time demand are also among the barriers to seeking care for sick children in health facilities. Improving mothers' and care takers' awareness of the danger signs of childhood illnesses and encourage them to seek care for sick children are critical. Most mothers (52%) took their sick child to the health center (analysis not shown). It is equally important to strengthen the health post with equipment and supplies, improving HEWs' skills in the management of childhood illnesses and the referral linkages with higher facilities. Practice of oral rehydration therapy for diarrhea among children is still less than optimum. Mothers and caretakers should be equipped with the knowledge and skills required for the home management of childhood illnesses. From the supply side, the program needs to ensure the continuous supply of oral rehydration solution (ORS) through different outlets.

CONCLUSION

The conclusion drawn from findings of this survey is that reproductive, maternal, newborn and child health care lie within individuals, families, households, communities and health institutions. Therefore, addressing the implications of the survey findings certainly demands interlocking intervention efforts targeted at all levels—individuals, families, households, community, health workers and health institutions. Over 70% of the kebeles included in this survey are served with health posts and more than 90% have at least one HEW. The synergy among these health resources, if well coordinated and managed, can advance rural health to the desired level. Below are cross-cutting recommendations that need to be considered in addition to the survey findings and its implications put forward in the previous section.

- Targeted intervention is warranted towards improving women's access to safe and clean delivery, essential newborn care and postnatal care services across the four regions. This survey found considerably wide gaps in these areas and indeed past intervention efforts to mitigate these critical health issues have been weak and staggering in the country.

- Promote the model family at a household level and increase community awareness and participation in the program. Ensure that women are well aware of the model family and participate actively in the program.

- Communities, and particularly vCHWs have untapped potential to support the HEWs work in promoting primary health in rural Ethiopia. The health extension program should actively involve vCHWs to implement community mobilization and behavioral change activities at household and community levels.

- The HEWs' health promotion efforts appeared to give more emphasis to the construction of pit latrines and personal hygiene. Although the achievements registered in these areas are commendable, it is also relevant to give due attention to the promotion of maternal, newborn and child health in the rural communities.

- The health posts need to be equipped to respond to the growing demand for services. Strengthening the logistics management system that includes vaccines, supplies and ensuring cold chain management and maintenance, contraceptive commodities, iron tablets, ORS and other essential drugs, etc is. critical.

- Referral linkages between health posts and higher institutions should be further strengthened.

- Equip HEWs with skills and improve their confidence in providing safe and clean delivery as well as postnatal care. Concomitantly, Health Posts should have the necessary equipments and supplies to deliver these services.

- BCC materials such as the family health card and Immunization certificate have proven to be effective in inducing good household health practices in relation to maternal, newborn and child health. Ensuring families have access to such materials and utilize them properly is important.

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