

Literature Review

Prepared for the Message and Materials Development Workshop

Addis Ababa, Ethiopia

January 2011



Photos: PATH/Mike Wang; PATH; Philippe Blanc; Aurelio Ayala III

Infant & Young Child Nutrition Project

This document was produced through support provided by the United States Agency for International Development, under the terms of Cooperative Agreement No. GPO-A-00-06-00008-00. The opinions herein are those of the author(s) and do not necessarily reflect the views of the United States Agency for International Development.

IYCN is implemented by PATH in collaboration with CARE;
the Manoff Group; and University Research Co., LLC.

1800 K Street NW, Suite 800
Washington, DC 20006 USA
Tel: (202) 822-0033
Fax: (202) 457-1466
Email: info@iycn.org

Contents

Acronyms	iv
Introduction	1
Literature review	3
Nutrition of young children and women in Ethiopia	3
Child nutrition	3
Maternal nutrition	4
National Baseline Survey.....	4
Land ownership and food security	5
Antenatal care	5
Child care and nutrition	6
Maternal nutrition	7
Adolescent girls	7
Behavioral assessment on prevention of mother-to-child transmission of HIV	7
Beliefs and practices during pregnancy and lactation: findings from Dilla.....	10
Infant and young child feeding practices in Ethiopia: findings from formative research in selected communities	11
Community assessment in selected Essential Services for Health in Ethiopia focus woredas: Amhara, Oromia and SNNP regions.....	13
Poisonous milk and sinful mothers: the changing meaning of breastfeeding in the wake of HIV epidemic in Addis Ababa, Ethiopia	16
Ethiopia adolescents’ attitudes and expectations deviate from current infant and young child feeding recommendations	17
Other findings	17
Sources of health messages.....	17
Target audiences for infant and young child feeding messages	18
Health workers	18
Community health workers.....	19
Behavior identification and analysis	20

Acronyms

AED	Academy for Educational Development
AFASS	acceptable feasible affordable sustainable and safe
ANC	antenatal care
ARV	antiretroviral drug
CHW	community health worker
ESHE	Essential Services for Health in Ethiopia
PMTCT	prevention of mother-to-child transmission of HIV
SNNP	Southern Nations, Nationalities and People's
UNICEF	United Nations Children's Emergency Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Introduction

Many studies have been conducted in health and nutrition in Ethiopia over the last few years. The studies show that Ethiopia is one of the countries with the highest levels of malnutrition in Sub-Saharan Africa. Malnutrition is particularly prevalent among children under five years of age, and pregnant and lactating women. Malnutrition occurs primarily because of inadequate food intake and poor dietary diversity. The root causes of malnutrition in the country include endemic food shortages in many parts of the country, a limited variety of food to choose from, and widespread poverty—which has made it difficult for most families to access the food they need. Other factors contributing to malnutrition include the disease burden, use of unsafe water, poor sanitation, low uptake of primary health services and low levels of maternal education.

Only 51 percent of Ethiopian households use water from improved sources (i.e., piped, borehole, protected well, protected spring, collected rain water or bottled water), 27 percent have improved toilet facilities (i.e., flush toilet, pit latrine or composting toilet) and a relatively small proportion of the population utilizes the primary care services that could improve the overall health and nutritional status of the population.

Only 4 percent of girls aged 13-17 receive iron supplementation and 13 percent take deworming tablets. Only 17 percent of women had received iron tablets during their last pregnancy, a quarter of women had received the recommended tetanus toxoid immunizations and 9 percent had taken deworming medication.

Studies in Ethiopia and elsewhere show that better educated parents—especially mothers—tend to bring up healthier and better nourished families, compared to less educated parents. The fact that nearly 60 percent of Ethiopian fathers, mothers and caregivers have had no schooling, and only 23 percent have had primary level education has had a significant negative impact on the health and nutritional status of the people.

Moreover, by 13-17 years of age, most adolescents have already formed attitudes that form the basis of inadequate nutrition. Only 11 percent of people in this age group believe that a child under the age of five can survive on exclusive breastfeeding and 26 percent agree that at six months, a baby can eat food from animal sources. The adolescents absorb the attitudes from the adults and the feeding habits they see practiced in the communities in which they live.

Traditional beliefs and inadequate health and nutrition education have contributed significantly to the current situation. Studies show that many of the health workers and community service providers—entrusted with the task of disseminating information for improving eating habits—are instead disseminating inaccurate information laden with cultural myths.

This paper reviews recent health and nutrition literature from Ethiopia—with a focus on the nutrition and care of children, women and adolescent girls. A summary of these findings as they relate to key behaviors is included in Table 2. IYCN staff in Ethiopia used this paper to inform the message and materials development workshop held in September 2010.

About the Infant & Young Child Nutrition Project

The IYCN Project is the United States Agency for International Development's flagship project on infant and young child nutrition. Begun in 2006, the five-year project aims to improve nutrition for mothers, infants, and young children, and prevent the transmission of HIV to infants and children. IYCN builds on 25 years of the United States Agency for International Development leadership in maternal, infant, and young child nutrition. Our focus is on proven interventions that are effective during pregnancy through the first two years of life.

Literature review

Nutrition of young children and women in Ethiopia

Macro International, 2008. Based on the Ethiopia Demographic and Health Survey, 2005 developed by Ethiopia Central Statistical Agency and ORC Macro, Calverton, Maryland, USA.

In 2008, Macro International—the lead agency in developing Demographic and Health Surveys worldwide—helped to develop a booklet entitled *Nutrition of Young Children and Women in Ethiopia*. The purpose was to consolidate and expand upon the elements of nutrition in the Ethiopia Demographic and Health Survey, in order to make the information more user-friendly and readily available.

Child nutrition

According to the document, breastfeeding is virtually universal in Ethiopia. Only one percent of the women do not breastfeed their babies. About half of all infants under six months of age are exclusively breastfed in line with recommendations of the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF), 15 percent of infants are fed on a combination of breastmilk and water, 17 percent are fed on breastmilk and other kinds of milk, and 14 percent of infants are fed on solid foods in addition to breastmilk.

About 38 percent of under-five children in Ethiopia are underweight, 47 percent are stunted and 11 percent are wasted. About 54 percent of the children are anemic: 21 percent mildly anemic, 28 percent moderate anemic and 4 percent severely anemic. Anemia rates are highest in the Somali and Gambela regions (86 and 62 percent, respectively), and lowest in Addis Ababa (38 percent). Only 19 percent of under-five children live in households that use salt fortified with an adequate amount of iodine. The use of iodized salt is lowest in Addis Ababa (12 percent) and highest in Dire Dawa (53 percent). Only 46 percent of under-five children receive vitamin A supplementation, the highest proportion being in Tigray (65 percent) and the lowest in Benishangul (27 percent).

According to the document, the key factors contributing to undernutrition among children in Ethiopia are poverty, household food insecurity and low levels of maternal education. 79 percent of mothers of under-five children have never attended school, 19 percent have some primary education and only 4 percent have studied at the secondary level or higher. Children, whose mothers have not had any education, are twice as likely to be stunted and wasted and thrice as likely to be underweight, than children, whose mothers have been educated at the secondary level or higher.

The low nutritional status among children has compromised the health of the children in Ethiopia, exposing them to poor health and early death. Ethiopia’s infant mortality rate (77 per 1000 live births) and under-five mortality rate (123 per 1000 live births) are among the highest in Sub-Saharan Africa. The document identifies the following as the factors contributing to the high

mortality rates among children in Ethiopia—as in other Sub-Saharan African countries: respiratory infections, diarrhea, malaria, measles and other infections. Five percent of all deaths occurring among children under the age of five are directly related to malnutrition.

Maternal nutrition

A woman's nutritional status affects her capacity to successfully carry her pregnancy to term, deliver children and care for her children. 27 percent of women in Ethiopia are undernourished with a BMI of less than the 18.5 cutoff point and only four percent are obese with a BMI of more than 25.0. These figures put Ethiopia among sub-Saharan countries with the highest proportion of malnourished women.

Twenty percent of mothers of under-five children have a body mass index (BMI) of less than 18.5, varying between 47 percent in Gambela and 14 percent in Addis Ababa.

Six percent of women in Ethiopia report varying levels of night blindness during pregnancy, while 22 percent of women who had given birth in the past five years reported having one form of night blindness or another during their previous pregnancy. Symptoms of night blindness may suggest vitamin A deficiency.

Overall, 27 percent of women in Ethiopia suffer varying levels of anemia. 17 percent of women suffer mild anemia, 8 percent moderate anemia and 1 percent severe anemia.

Maternal malnutrition decreases with increasing levels of education. As a case in point, 27 percent of all women with no education are malnourished compared to 19 percent of women who have been educated at the secondary level or higher. Additionally, 25 percent of mothers of children under the age of five with no education are malnourished compared to 15 percent of mothers of children under the age of five who have been educated at the secondary level or higher.

Malnutrition among women also decreases with increasing family wealth. While 30 percent of all women in the lowest wealth brackets are malnourished, only 20 percent are malnourished in the highest wealth bracket.

National Baseline Survey

Ethiopia Health and Nutrition Institute, 2009/10.

In February 2008, the Government of Ethiopia approved the country's first National Nutrition Strategy. To operationalize the strategy, the Federal Ministry of Health—with the support of partners—developed the National Nutrition Program. In May and June of 2009, the Ethiopian Health and Nutrition Research Institute conducted the National Baseline Survey to establish the benchmarks against which to measure future achievements of the National Nutrition Program. The survey covered the whole country and targeted children below 59 months of age, mothers aged 15-49 with a live birth in the past two years and adolescent girls aged 13-19. Study topics included child health, maternal health, the health of adolescent girls, food security, and water and sanitation.

Land ownership and food security

The study found that only 57 percent of households used improved water sources (i.e., piped, borehole, protected well, protected spring, collected rain water or bottled water). More people in urban areas (87 percent) used water from improved sources than in rural areas (43 percent). More than 74 percent of rural households travelled one hour or less to obtain water while 49 percent of urban households travelled a similar distance to obtain water. A relatively small proportion of households (30 percent) boiled or treated water before drinking. 30 percent of households bleached the water, 32 percent strained the water and 21 percent boiled their water.

Only 27 percent of the households use improved toilet facilities (e.g., flush toilets, pit latrine or composting toilet). Most households with improved toilet facilities (52 percent) are in urban areas while 18 percent are in rural areas. 56 percent of rural people had no toilet facilities at all. People who did not have access to toilet facilities in urban areas either dumped the waste on the streets or burnt it. In rural areas, people deposited human waste in their compounds, dumped it in the streets or buried it in the ground.

62 percent of the households own agricultural land, 36 percent of them owning less than one hectare. 35 percent of those who own land have less than 0.5 hectare under cultivation. While most urban households (89 percent) relied on purchasing their food, most rural households (72 percent) produced their own food from the land. A quarter of all households reported food aid or donations as their main source of food.

65 percent of households were classified as food secure and 35 percent as living with varying levels of food insecurity—21 percent mild, 13 percent moderate and 1 percent severe.

Antenatal care

59 percent of women who had been pregnant within the previous two years had received antenatal care (ANC) services from a trained provider—ranging from 89 percent in urban areas to 48 percent in rural areas. However, a majority of the women (64 percent) attended ANC fewer than the four times recommended by the WHO. A greater percentage of women with secondary level of education and higher (86 percent) attended ANC than those who had lower levels of education.

Only 17 percent of women reported taking iron tablets during their last pregnancy and one quarter received the recommended two tetanus toxoid immunizations. The uptake of deworming tablets among women was also very low (9 percent) and only 12 percent increased their food intake during pregnancy.

The study found that nationally, 46 percent of women delivered their babies at home while another 46 percent delivered at government health facilities. In rural areas, up to 96 percent of the women delivered at home. In both rural and urban areas, most women deliver with the help of untrained birth attendants. Urban dwellers were more likely to deliver under the care of a doctor (28 percent) or nurse (34 percent) than rural people, who usually delivered under the care of relatives and friends (37 percent) or untrained traditional birth attendants (33 percent). More

women with secondary level of education delivered under the care of doctors (39 percent) and nurses (43 percent) than women with less education.

Child care and nutrition

Only 29 percent of children aged 6-23 months are fully immunized for their age, while one quarter of them have not been immunized at all. 21 percent of children had had a bout of diarrhea in the two weeks prior to the survey. Of these, 24 percent were treated with oral rehydration salts, while 26 percent received the government-recommended sugar-salt solution. Only seven percent increased their fluid intake and one percent received increased food intake.

Virtually all children born within the previous two years (97 percent) had been breastfed at one point or another. 46 percent were breastfed during the first one hour of birth and 60 percent received colostrum. 51 percent of children from birth to 5 months of age were exclusively breastfed. The rate of exclusive breastfeeding was higher among younger children under two months (70 percent) than older children aged 4-5 months (36 percent). A large proportion of mothers introduced their babies to complementary foods late. Only 43 percent of children aged 6-8 months were receiving soft, semi-solid or solid foods in addition to breastmilk.

Of children aged 6-23 months and still breastfeeding, only 29 percent were given complementary foods with minimum and adequate dietary diversity. Older children (36 percent), children living in urban areas (40 percent) and children whose mothers have higher education (46 percent) were more likely to receive an adequate mix of foods.

More children aged 6-23 months, who were not breastfeeding, tended to receive an adequate mix of foods (38 percent) than those who were breastfeeding (29 percent). Non-breastfeeding children who either lived in urban areas (47 percent) or had more educated mothers (65 percent) were more likely to receive an adequate mix of foods than those living in rural areas with less educated mothers. Only five percent of the households used salt with an adequate amount of iodine.

Additionally, 43 percent of children aged 6-23 months had received vitamin A supplementation. 34 percent of children aged 6-59 months were underweight—22 percent in urban areas and 37 percent in rural areas. Afar (19 percent) and Tigray (17 percent) had the highest proportion of underweight children.

38 percent of all children were stunted, compared to only 15 percent of children of mothers who had been educated at the secondary level and above. Rural areas had more stunted children (41 percent) than urban areas. The regions with the highest prevalence of stunting were Amhara (45 percent), Tigray and Afar (44 percent each).

12 percent of children were wasted—13 percent in rural areas and 9 percent in urban areas. Wasting was higher among children of mothers defined as thin according to their BMI (17 percent) and mothers with no education (13 percent). The regions with the highest prevalence of wasting were Afar (17 percent) and Somali (17 percent).

Maternal nutrition

32 percent of women reported having difficulty seeing in dim light—more of them in rural areas. This could suggest the presence of vitamin A deficiency. Only 18 percent of the women had received vitamin A supplementation within two months of their last delivery.

Women who were not pregnant were interviewed to assess their BMI. 29 percent of them were thin and had BMI levels below 18.5. More rural women (32 percent) had BMI levels less than 18.5 compared to urban women (21 percent). Women with no education were more likely to be thin (31 percent) than those with higher education (17 percent).

38 percent of women respondents had eaten meals with at least 1-2 food groups the previous day, 49 percent had eaten food from 3-4 food groups and 13 percent had eaten food from 5 or more food groups. Women with higher education and those living in urban areas were more likely to eat mixed foods from more food groups than women with less education or living in rural areas.

Adolescent girls

The study found that 23 percent of girls aged 13-19 were stunted. Stunting was more prevalent among girls aged 13-14, and among those living in the rural areas. 14 had low BMI for their age and only 4 percent had received iron supplementation. 13 percent had received deworming tablets in the past six months. Most of those who did not take iron tablets said that it was not necessary to take them (47 percent), while 27 percent said they did not take the tablets because there were no supplies. Only 13 percent had received deworming tables in the past six months.

Three-quarters of the girls in the sample were consuming less than three meals a day and one-third had skipped a meal in the previous two weeks. 28 percent of the girls had consumed food with inadequate dietary diversity (i.e., less than four food groups) the previous day. Food shortage was given as the main reason for taking less food than recommended.

Behavioral assessment on prevention of mother-to-child transmission of HIV

Yared Amare and Kassahum, 2003. Edited by Gillian Lyon-Powers and Joan Schubert for AED LINKAGES.

In 2003, the Academy for Educational Development (AED) LINKAGES project conducted a qualitative study in Addis Ababa, Gondar and Jimma to investigate the knowledge, attitudes and practices that influenced mother-to-child transmission of HIV. Respondents included HIV-positive mothers, health workers and various cadres of community health workers.

The study found significant support for ANC attendance among all respondents. However, some mothers—especially in Gondar—thought that ANC attendance was only necessary for pregnant mothers who were sick or had had a difficult delivery in the past. Most mothers interviewed had attended ANC during pregnancy, but many had started attending late. The most frequently mentioned benefits of ANC attendance were to determine the position of the fetus, detect abnormalities early, and to avoid prolonged labor and delivery complications. Others said that some women failed to attend ANC clinics because they did not understand the importance of ANC, or that they were busy with other chores and/or health facilities were too far away.

Both mothers and health workers showed an inadequate level of basic knowledge on HIV and AIDS. Some of them did not know the difference between HIV and AIDS, and many did not know all the three modes of mother-to-child transmission of HIV. Although many of the respondents could name the modes of HIV transmission, some included incorrect modes—such as mosquito bites. Married couples were rarely mentioned as people at risk of being infected with HIV, and the use of condoms was hardly mentioned as a method of prevention against HIV infection during pregnancy.

Although many knew that the only reliable way of determining whether a person was HIV-positive or not was to take an HIV test, some believed that it was possible to identify such a person by looking at their physical condition. Most respondents in Addis Ababa and Gondar knew the benefits of HIV testing during pregnancy. However, not all knew a person who had been tested for HIV, suggesting a relatively low testing rate. Most respondents knew where to go for an HIV test. However, most said they need not consult anybody before taking an HIV test and most would not share test results with anybody except their spouses.

The study found that breastfeeding was virtually universal in all the three study sites. In Addis Ababa and Jimma, breastfeeding started soon after delivery, while in Gondar it could be delayed for up to two or three days. Most mothers breastfed their babies for the first 4-6 months, but it was common to give cow's milk, formula, fenugreek water, plain water, butter and the *tenadam* herb alongside breastmilk, thereby not complying with the WHO/UNICEF exclusive breastfeeding recommendations. Complementary feeding usually started between 3-4 months, and mothers weaned their babies between one year (Addis Ababa) and two years (Jimma and Gondar).

Most women interviewed—especially in Gondar and Jimma—believed that HIV-positive mothers who became pregnant always gave birth to HIV-positive babies, and that there was not much anybody could do to protect the baby from being infected. Many respondents thought that mother-to-child transmission through breastmilk was rare, but most could not advise HIV-positive mothers to breastfeed their babies. Respondents had inadequate knowledge on prevention of mother-to-child transmission of HIV (PMTCT) and did not know much about the benefits of antiretroviral drugs (ARVs).

Both men and women said they would be supportive and caring to their HIV-positive pregnant relatives, friends and spouses, although they would avoid sexual intercourse with them if they had discordant results. HIV-positive respondents said they were treated in varying ways by the community and by their family members. While some were well accepted and supported, many others were ridiculed and rejected. Some HIV-positive respondents felt that their family members and the community treated them well if they thought they were infected through no fault of theirs. However, they felt that their families and the community withdrew support if they felt that they had put themselves at risk. Often, the quality of treatment diminished over time, as family members and friends supporting HIV-positive people became fatigued. Children from homes with HIV-positive parents were discriminated against in the community. HIV-positive mothers said that at health facilities they were treated with sympathy and in a supportive way. However, they did not receive personalized attention.

Most health workers interviewed believed that HIV infections, AIDS and mother-to-child transmission of HIV were common in the communities in which they worked. Most of them also knew the modes of mother-to-child-transmission of HIV. However, untrained health workers had inadequate information about PMTCT.

Health workers reported counseling mothers on infant and young child feeding options. Most of them believed that most of the mothers could not practice replacement feeding that met the acceptable feasible affordable sustainable and safe (AFASS criteria); so they encouraged them to breastfeed exclusively.

However, this was not the case with the various cadres of community health workers (CHWs), including home-based care providers, who supported mothers at the grassroots level. In this group, the study found only moderate levels of knowledge about the different modes of HIV transmission and prevention of HIV transmission. Knowledge levels were even lower among traditional birth attendants. Traditional birth attendants and CHWs promoted exclusive breastfeeding for only four months, as well as recommended nutritionally inadequate replacement foods.

Household observations revealed that all the nine households observed gave cow's milk, porridge and gruels to their babies as pre-lacteal or complementary foods. They diluted cow's milk with water and also gave water on its own to "reduce abdominal cramps".

The nine families observed were then guided to prepare appropriate infant foods that met the AFASS criteria and provide these foods to their babies. Most of the mothers involved in the trials were convinced of the value of the recommended infant feeding methods. Follow-up studies showed that many of them had made an effort to practice what they had learnt. However, the following were identified as difficulties in sustained implementation of the recommended feeding methods:

1. Inconvenience in feeding a baby by cup at night.
2. Difficulty and expenses associated with obtaining fruits locally.
3. Expenses associated with purchasing infant formula.
4. Opposition among women regarding expressing breastmilk.
5. Dilution of milk sold on the market, which is not good enough for the baby.

The market survey conducted during this study found that the complementary foods that could be given to babies were too expensive for most families. Only a few foods which could be produced in the households—such as eggs and potatoes—were readily available to most families, thereby making it difficult for families to give their children an adequate variety of foods. Feeding cups were found to be cheaper on the market than feeding bottles. This is a finding that could be used to promote cup feeding.

Beliefs and practices during pregnancy and lactation: findings from Dilla

Jamma and South Gondar, by Yared Amare for AED Linkages, 2004.

In 2004, AED LINKAGES conducted formative research in women's nutrition, breastfeeding and HIV and AIDS in Dilla, Jimma and Gondar to investigate relevant local beliefs, perceptions and practices among pregnant and lactating women, community members, health workers, and community service providers. The study also involved households in infant feeding trials to assess the feasibility and acceptability of the recommended practices.

The study found that communities recognized that pregnant and lactating women had increased nutritional needs, and that they should eat an enhanced diet. However, they continued to feed the women on the same diet eaten by the rest of the family, without enhancement. The diet lacked animal products, fruits, vegetables, fat and oils, and honey. The diet was deficient either because the required ingredients for an adequate diet were difficult to obtain locally, or were too expensive to afford. Religious fasting—practiced by both Christians and Muslims—also contributed to undernutrition among pregnant and lactating women. Additionally, pregnant women ate sparingly to avoid delivering a big baby that could potentially be difficult to deliver.

Most respondents—including health providers—believed that the amount of breastmilk a lactating mother produced depended on the nutritional adequacy of the food eaten. Most believed that the quality of milk produced by a lactating woman also depended on the quality of the woman's diet, and a malnourished woman could not produce enough milk to support exclusive breastfeeding for six months. Respondents considered meat, cabbage, false banana, fruits, milk and fluids to be the nutritious foods that could increase milk production. Although there is no scientific evidence to support this belief, the belief is widespread and is propagated throughout the community by the general population, and even health providers and CHWs.

Most respondents—including health providers—also believed that frequent and longer breastfeeding sessions could not help a mother to produce more milk. Instead, they said that breastfeeding for prolonged periods can harm the health and welfare of a mother—especially if the mother is not well-nourished. Furthermore, many do not believe that emptying both breasts during each feed can contribute to the production of more breastmilk.

Most women believe in the “evil eye” and are afraid to breastfeed their babies in public. Those who breastfeed in public cover their babies to shield them from the “evil eye”.

None of the health providers interviewed during this study had received training in infant and maternal feeding. As a consequence, during counseling, they gave inaccurate information based on local misconceptions and cultural beliefs, including discouraging HIV-positive women from breastfeeding—even if they cannot provide an alternative feeding method that meets the AFASS criteria.

41 out of the 51 households involved in trying out appropriate maternal feeding practices and 16 out of the 31 households who tried infant feeding practices had positive reactions to these practices and hoped to apply them in the future. This is a good sign that the practices could take root in the community, if promoted. The factors working against sustained application of the

recommended feeding practices include the perception that applying the practices takes a long time and are tiring. Moreover, people are convinced by established cultural practices and lack interest to try out new practices.

During this study, six HIV-positive women in Dilla were interviewed on topics such as perceptions of their health status, breastfeeding, and how they had maintained their health the previous year. Although most of them believed that HIV-positive women needed to enhance their nutritional intake, none of them had taken any specific steps to improve their nutrition since they learnt of their HIV status. While half of the respondents felt that breastfeeding could harm the health of an HIV-positive mother, others disagreed. All community service providers interviewed believed that HIV-positive mothers should not breastfeed for fear that their babies could get infected with HIV through breastmilk. They advised such mothers not to breastfeed.

Infant and young child feeding practices in Ethiopia: findings from formative research in selected communities

Yared Amare for AED LINKAGES, 2003.

In a paper entitled *Infant and young child feeding practices in Ethiopia – findings from formative research in selected communities*, AED LINKAGES reports the results of a study to investigate attitudes and practices relating to infant and young child feeding in ten communities in Oromia, West Hararghie, East Shewa, East Wollega, South Wello, Hadiya, Wolaita, Borena, Somali and Arba Minch. The population sample included pastoralists, crop farmers, and rural and urban communities. The study was carried out in collaboration with CARE, Catholic Relief Services, Pathfinder, Save the Children USA, Concern Worldwide, and the Health Research Centers in the Southern Nations, Nationalities and People's (SNNP) region of Ethiopia.

The study found that parents desired good health for their children. They derived great pleasure in seeing their children interact with other children and grow up healthy, gaining in height, weight and knowledge. They had high aspirations for their children whom they hoped would receive a good education and succeed in their professions. Parents strove to take their children to school and provide them the best food and care they could afford. They believed that their children would succeed better if they were breastfed, ate a balanced diet, lived in a clean environment and had God's blessings. In their opinion, other factors determining the success of a child included the economic status of the family, the domestic harmony prevailing in the home, the size of the family, maternal health and nutrition, maternal knowledge and experience in child care, the child's immunization status, the standard of sanitation, access to assistance in the house, the father's status in society, how hardworking the father was, and the support the latter gave to his wife in caring for the family.

The study also found that minor children's diseases were commonly treated at home and children were taken to the health facility or tradition healer only when the condition of the child was considered serious. Taking children for treatment was found to be primarily the responsibility of mothers, although fathers do participate where the facility for treatment is far away or the cost of transport and treatment are high. Neighbors were often consulted in the process of deciding where the child would be treated.

Some of the difficulties in achieving optimal child care included the heavy workload of mothers, frequent sicknesses of children, the nature of children to be prone to accidents, scarcity of food in many homes, frequent pregnancies, distance to health facilities, and lack of vaccinations.

Most women in the study areas (except in urban Arba Minch) delivered at home. All communities believe that pregnant and lactating mothers require a nutritious diet. However, notwithstanding the fact that they make efforts to allow them time to rest and provide them with “special” foods such as porridge, their efforts fall far short because of poverty and lack of resources to provide the needed foodstuffs. Nutrition during pregnancy is further compromised by the belief that if a mother eats certain foods, she carries a large baby, thereby making delivery difficult.

Breastfeeding of babies is virtually universal in the study communities, but exclusive breastfeeding of the kind that meets WHO/UNICEF standards is rare. Mothers commonly give their babies other substances such as water with sugar, butter or yeast, in addition to breastmilk. Mothers and mothers-in-law are the main promoters of pre-lacteal foods. The study also shows that the same older women can be used to break the cycle of mixed feeding and promote exclusive breastfeeding—if trained and incorporated into infant feeding programs. Other recommended infant feeding practices, such as early initiation of breastfeeding, feeding the colostrums and breastfeeding on demand were not faithfully adhered to by most mothers. For example, in South Wello, breastfeeding can be delayed for up to three days.

The introduction of complementary foods occurs at different times in different communities and can occur any time from birth to six months. The most commonly given complementary foods are cow’s milk, porridge and gruels. Mothers are willing to add other proteins and energy foods, but most households are too poor to afford the proteins. Bottle-feeding is common, especially in urban areas. It is seen as an easy way to feed a child, in order that the mothers can have more time to attend to other chores.

In many communities, transition to an adult diet commences at the age of one year, while in other communities, it is delayed up to the third or four year. The frequency of giving complementary foods averages 3-5 times a day. The complementary foods given in these communities are uniformly nutritionally inadequate. Most families do not have the resources to acquire the needed foods. Mothers continue to feed sick children the same way they feed them when they are in good health. Moreover, the food for a sick child is prepared thin and the child is fed less frequently.

The water given to the children in most of the communities is drawn from unprotected sources and is not boiled before use, thus exposing children to diarrhea and other water borne diseases. Additionally, most communities wean their children off the breast at the age of two years or older.

The study also found radio to be the form of media most accessed by men, women, elders and health workers, as well as the most frequently consulted source of information related to health and nutrition.

Community assessment in selected Essential Services for Health in Ethiopia focus woredas: Amhara, Oromia and SNNP regions

USAID, LINKAGES and ESHE, 2006.

In the middle of 2006, the AED LINKAGES project carried out a community assessment in collaboration with the United States Agency for International Development (USAID)-funded Essential Services for Health in Ethiopia (ESHE) project to evaluate the changes that may have taken place in the community as a result of implementing the ESHE project. The project focused on health, nutrition, sanitation and childhood immunization. The study was conducted in three ESHE program regions: Amhara, Oromia and SNNP. The study locations were chosen on the basis of the fact that ESHE had had trained community health promoters in these locations for six months, or the locations had been served by community health workers for at least a year. The study did not anticipate finding significant behavioral changes in such a short time of intervention, but rather sought to identify any emerging trends since ESHE conducted regional baselines in 2004. The findings were also compared to the Ethiopia Demographic and Health Survey of 2000.

The study found overall improvement in the selected indicators. After one year of implementation in the Amhara region, there was a marked rise in immunization rates, vitamin A supplementation for children, early initiation of breastfeeding, and latrine construction and use. In the Oromia region, breastfeeding practices had improved, but latrine construction had not. There was limited progress in immunization and vitamin A supplementation in Oromia, more so because of deficiencies in the health systems, including long distances to health facilities. The SNNP region showed significant improvements in most indicators after two years of implementation—including immunization rates, vitamin A supplementation for children, construction of latrines and feeding of colostrum to infants after birth. However, there was little change in other breastfeeding practices.

The table below summarizes the trends identified by the study.

Table 1. Summary of findings from community assessment in Amhara, Oromia and SNNP regions.

Behavior/indicator	Oromia		Amhara		SNNP		Comment
	Region. Baseline 2004	Comm. Asses. 2006	Region. Baseline 2004	Comm. Asses. 2006	Region. Baseline 2003	Comm. Asses. 2006	
BREASTFEEDING 0-5.9 MONTHS							
Put your baby on the breast immediately after birth, even before the placenta is expelled to stimulate production of milk.	47%	77%	31%	60%	64%	50%	
Give the first yellow milk made especially for the newborn, as it will protect	50%	71%	54%	50%	40%	45%	

Behavior/indicator	Oromia		Amhara		SNNP		Comment
	Region. Baseline 2004	Comm. Asses. 2006	Region. Baseline 2004	Comm. Asses. 2006	Region. Baseline 2003	Comm. Asses. 2006	
your baby from illness.							
Feed your baby only breastmilk for the first six months—not even giving water—for it to grow healthy and strong.	45%	62%	75%	81%	41%	64%	
Breastfeed your baby on demand, at least 10 times day and night, to produce enough milk and provide your baby enough food to grow healthy.	77%	72%	91%	71%	72%	63%	Baseline based on BF 8 times. Comm. Asses. based on BF 10 times.
Feed your baby using a clean cup and spoon, but never a bottle as this may cause your baby to get diarrhea (bottle feeding decreased).	27%	15%	5%	2%	15%	7%	Very low implementation rate.
COMPLEMENTARY FEEDING							
Introduce complementary foods at 6 months of age—such as soft porridge 2-3 times a day—for your baby to grow healthy and strong.	58%	60%	43%	39%	61%	60%	
CONTROL OF VITAMIN A DEFICIENCY							
Find orange/yellow fruits and vegetables or liver to feed your child to keep healthy.	Under 10%	Under 10%	11% ESHE baseline	5%	27% ESHE baseline	30%	Very low.
When your baby is 6 months old, make sure it receives vitamin A supplementation every six months to keep it strong.	57%	56%	17%	86%	50%	84%	
Take vitamin A supplementation within 45 days of delivery for the baby's health and for strengthening postpartum vitamin A supplementation for women.	7%	4%	3%	10%	7%	6%	Fruits are difficult to come by.
WOMEN'S NUTRITION							

Behavior/indicator	Oromia		Amhara		SNNP		Comment
Topic/statement	Region. Baseline 2004	Comm. Asses. 2006	Region. Baseline 2004	Comm. Asses. 2006	Region. Baseline 2003	Comm. Asses. 2006	
Ensure that your wife who is breastfeeding has two extra meals a day to maintain her health and the health of the baby.	60%	17%	36%	33%	45%	38%	The question was badly framed and not understood well.
HYGIENE							
Mother: wash your hands with water and soap or ash after going to the bathroom, before preparing food, feeding a young child and before eating, so that you and your family do not get sick. Mother: wash your hands after cleaning your baby, so you do not pass on any illness.							
Hand washing before preparing last meal.	--	39%	--	55%	--	51%	
Hand washing after cleaning child.	--	41%	--	64%	--	51%	

BF=breastfeeding.

The study made the following conclusions:

- Promotion of good feeding practices can considerably improve infant feeding.
- Amhara showed better results in the selected indicators than Oromia and SNNP.
- There is a need to focus on promoting complementary feeding. This is now an area of focus in the second phase of ESHE.
- The consumption of vitamin A-rich foods and vitamin A supplementation is critically low and needs to be promoted.
- There is a need to emphasize improving maternal nutrition.
- The awareness of the family health card is low: 36% in Oromia, 38% in Amhara and 45% in SNNP. An even fewer number of parents keep these cards in their homes: 26% in Oromia, 37% in Amhara and 28% in SNNP.

Poisonous milk and sinful mothers: the changing meaning of breastfeeding in the wake of HIV epidemic in Addis Ababa, Ethiopia

Koricho *et al.*, 2010.

In 2009/2010, Koricho *et al.* conducted a study among HIV-positive mothers and their counselors in Addis Ababa, Ethiopia, to explore infant feeding choices, with emphasis on the perceived risk of HIV transmission through breastfeeding. The qualitative study included 22 HIV-positive mothers and ten health professionals working in two PMTCT clinics in Addis Ababa.

The study found the HIV-positive women to be extremely fearful of infecting their children with HIV through breastfeeding. They would rather not breastfeed to protect their babies from infection. Those who breastfed did so with great unease, and only because they could not afford any other feeding method. Health professionals working in PMTCT programs had the same fears and reservations. The reservations made health professionals recommend formula to most women, including to those women who survived by begging on the streets and who could not provide replacement feeding that met the AFASS criteria.

HIV-positive mothers had very strong negative feelings about their bodies and the act of breastfeeding their babies. Many hated their bodies and described them as dirty and infectious. They felt shame and guilt breastfeeding their babies and compared breastfeeding to “poisoning my child” or being involved in a sinful and criminal activity that involved “doing something bad to your own child.”

The HIV-positive mothers’ fears about the inappropriateness of breastfeeding seem to have been reinforced and probably triggered by the counseling they received from health professionals. In one of the two clinics studied, health professionals gave great emphasis to the possibility of mother-to-child transmission of HIV through breastmilk. They also discouraged HIV-positive women from breastfeeding and recommended replacement feeding instead. In most cases, they did not inform mothers about all WHO-recommended infant feeding options.

The second clinic in the study helped mothers choose an infant feeding method that met the AFASS criteria. Health workers in that clinic encouraged HIV-positive mothers to practice exclusive breastfeeding if alternative feeding methods available to them did not meet the AFASS criteria.

The study concluded that different health institutions in Ethiopia provided HIV-positive mothers with a varying degree of information on infant feeding. Even in the health facility that mentioned the AFASS criteria to the mothers, discussions were dominated by the possibility of mother-to-child transmission of HIV through breastmilk. The approach was more emotional than scientific, and dominated by the evil and sinfulness of exposing the baby to HIV infection through breastfeeding. The discussions stressed the need to save the baby from HIV infection over promoting child survival through breastfeeding.

Ethiopia adolescents' attitudes and expectations deviate from current infant and young child feeding recommendations

Hadley *et al.*, 2008.

In 2008, Craig Hadley and his collaborators from the Department of Anthropology at Emory University, USA, Population Studies and Training Center, Brown University, USA and the Department of Family Planning and Population Health at Jumna University, Ethiopia conducted an anthropological study to assess the extent to which young people in Ethiopia had formulated attitudes and expectations in the area of infant and child feeding behaviors. They worked with a population-based sample of 2077 adolescent girls and boys aged 13-17 years in Southwest Ethiopia. In a paper entitled *Ethiopia adolescents' attitudes and expectations deviate from current infant and young child feeding recommendations*, published in the National Institute of Health Journal in September 2008, the researchers found that by this age, the adolescents already had a high level of agreement about child feeding behaviors. Furthermore, they found that what the adolescents considered to be the “correct” ways of infant feeding deviated significantly from the current international recommendations.

The young people widely endorsed giving infants below six months of age, other fluids and foods in addition to breastmilk. Fewer than 11 percent of the girls in the sample agreed that a child aged five months should be exclusively breastfed and only 26 percent agreed that at six months, an infant can start consuming foods from animal sources.

Few differences were detected between the attitude a of girls and boys, and the responses of the adolescents were similar to those held by the adults in the community.

The study found that attitudes related to infant feeding form early in life, borrowing heavily from the practices of the communities in which they live. Thus, young people enter parenthood with inadequate information and pre-formed ideas, believing the sub-optimal infant feeding practiced in their communities to be the correct practices. This situation has the potential of perpetuating inadequate practices from generation to generation unless corrective measures are undertaken. The study recommends programs to educate adolescents on correct infant feeding practices.

Other findings

Sources of health messages

Recent studies in Ethiopia—including the studies reviewed above—have touched on sources of health messages, as well as on what can be done to improve health communication and behavior change communication. This section summarizes the findings from the various papers in this area.

In Ethiopia, CHWs include community-based Reproductive Health Agents, Community Health Agents, CRS agents, Health Action Committees, Bridge-to-Health team and program assistants of Save the Children. Studies have found that CHWs are the primary source of information for mothers on infant feeding practices. They deliver the information mainly during home visits and social functions such as funerals, weddings, women's monthly meetings, men's monthly meetings, funeral association meetings, religious meetings at churches and mosques, daily coffee

ceremonies, market meetings convened by officials at the *gott* and *kebele* levels, the *Jila* child naming ceremony at the age of one year (Borena), the weekly cooperative savings meetings (*Bussi* in Borena), and the *dua* or chat and coffee prayer circle held weekly when there is an illness or problem (South Wello). They also deliver information during traditional rituals and political meetings, and during work on employment generating schemes and during the local work group activities (*guza*). Grandmothers and mothers-in-law are also very influential in delivering messages related to pregnancy and infant and child nutrition. However, both grandmothers and mothers-in-law tend to disseminate the culturally tilted messages that perpetuate inappropriate feeding methods.

Other effective avenues for transmitting information related to HIV/AIDS, nutrition and PMTCT include health workers, the mass media (especially radio), anti-AIDS clubs in schools, non-governmental organizations, faith-based organizations, family members and friends, local leaders, and during vaccination and monthly growth monitoring gatherings at a clinic or in the community.

Target audiences for infant and young child feeding messages

In its studies, AED LINKAGES identifies the following key target audiences for infant and young child feeding and maternal nutrition messages: women, community members, health workers and community service providers. The project recommends dissemination of the following key contents: risk of mother-to-child transmission of HIV, risks associated with breastfeeding and replacement feeding, and nutritional needs of HIV-positive women.

Health workers

Studies in Ethiopia find that health workers have considerable information about HIV/AIDS and PMTCT. Those who have been trained have more information than those who are yet to be trained. All health workers are aware that HIV/AIDS is common in their communities and that mother-to-child transmission of HIV occurs frequently. They are aware of the modes of mother-to-child transmission and have information on PMTCT. They also believe that many Ethiopian mothers are not in a position to provide replacement feeding that meets the AFASS criteria. However, the risks of mother-to-child transmission of HIV through breastmilk leads then to recommend replacement feeding—even were this is inappropriate.

Many of the health workers do not possess up-to-date technical information about infant and maternal nutrition, and as a consequence, pass on to mothers the common misconceptions that are shared in the community. One of these misconceptions is the belief that woman who are not eating enough of the recommended foods cannot have enough breastmilk for her baby. Many promote breastfeeding for four, instead of six months; and some believe that it is fine to give babies younger than six months, water in addition to breastmilk. They miss out on opportunities to provide information at the appropriate time, as well as lack adequate skills for effective counseling. For example, they start providing messages on exclusive breastfeeding during the postnatal period, when it is already too late.

The studies identify the need for training health workers in communication and counseling, voluntary counseling and testing for HIV, infant feeding options, safe delivery and care, ANC integration, delivery, and postnatal services.

Community health workers

The various cadres of CHWs are moderately aware of the modes of mother-to-child transmission of HIV, as well as PMTCT. They know about HIV testing, including where patients need to go for the test. However, they have limited information on infant and maternal nutrition, and as a consequence, repeat the myths and misinformation that helps to perpetuate poor nutrition practices. Studies conclude that this cadre needs training in HIV/AIDS, infant and maternal nutrition, and communication and counseling.

Behavior identification and analysis

The following tables identify and analyze the main behaviors that need to be addressed in order to improve key practices in infant and maternal nutrition, with a focus on ANC attendance, maternal nutrition, breastfeeding, complementary feeding and weaning.

Table 2. Behavior identification and analysis.

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
ANC attendance	<ul style="list-style-type: none"> • Many pregnant women already attend clinics (89% in urban areas and 48% in rural areas). • Many start clinic attendance late and attend irregularly. • 64% attend less than the recommended 4 time during a pregnancy. 	<ul style="list-style-type: none"> • Some people believe that ANC attendance is only necessary if a woman is sick or is experiencing difficulties during pregnancy. • Other factors that work against clinic attendance include women's heavy workload, long distances to health facilities, husbands/partners discouraging women from attending, perception of poor services at health facility, low respect for health workers, low awareness of the benefits of ANC attendance, fear of being tested for HIV. 	<ul style="list-style-type: none"> • Some men and women acknowledge that attending ANC clinics has benefits: It helps a woman to know how the fetus is lying and makes it possible to catch abnormalities and complications early enough to intervene. • Government is in the process of improving services and this is beginning to show.

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
Maternal nutrition	<ul style="list-style-type: none"> • 29% of women who are not pregnant are below 18.5 BMI. • Among girls aged 13-17, 23% are stunted and on inadequate diet. • Pregnant and breastfeeding women eat an inadequate diet. Only 12% increase dietary intake during pregnancy. • Pregnant and breastfeeding women eat the same diet always eaten in the family in the same amounts. • The diet is low on animal products, fruits and vegetables. • Although some communities give a lactating mother special food, the food is often deficient in nutrients. 	<ul style="list-style-type: none"> • Poverty and food insecurity. • Fear of carrying a big baby who will make delivery difficult. Foods believed to make the baby big include fruits (especially papaya, avocado, banana and mango). • Some foods are avoided during pregnancy: milk is believed to cause the skin to become white and cabbages and beans make the skin black. Kale and bananas are believed to paste themselves onto the baby's body. • Only a few HIV-positive women report having received nutritional advice. • Most HIV-positive women do not take any specific measures to improve their diets. • Many people (including pregnant and lactating mothers) fast and both Islam and Christianity teach avoidance of certain foods. 	<ul style="list-style-type: none"> • Many communities know that mothers who have delivered should get special food and try to give them such food when they can. • Some people know that increased food intake helps the baby to develop well and strengthens the mother for delivery. • People know that a big baby is more likely to be a healthy baby who will grow well. • HIV-positive women express the desire for more information on infant and maternal nutrition. • Both faiths acknowledge that not eating well can harm the health of the mother and baby. • Both faiths provide for reducing the hours of fasting and substituting prohibited foods.
Delivery	<ul style="list-style-type: none"> • Many women (46% nationally and up to 96% in rural areas) deliver at home assisted by untrained TBAs, relatives and friends. • A few deliver under the care of trained TBAs. 	<ul style="list-style-type: none"> • A strong culture of delivering at home. • Fear that the services at the health facility are inadequate. 	<ul style="list-style-type: none"> • Many community members know that there are benefits to delivering at a health facility. • Many know that complications can occur during delivery. • Many would take a patient with pregnancy/delivery complications to a health facility.
HIV/AIDS	<ul style="list-style-type: none"> • People do not take precautions against being infected with 	<ul style="list-style-type: none"> • Many people do not know the difference between HIV and AIDS. 	<ul style="list-style-type: none"> • Most people know how HIV is transmitted. • They know what they

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
	HIV even during pregnancy.	<ul style="list-style-type: none"> • Many people believe that married couples are safe from HIV infection. – it is sex workers, youth and unmarried people who get infected • Condoms are rarely used in marriage. • Condom use during pregnancy is considered valueless because of the belief that an HIV-positive mother will always deliver an HIV-positive baby. 	<p>can do to protect themselves against HIV infection.</p> <ul style="list-style-type: none"> • Commonly listed ways of preventing HIV infection include abstinence, faithfulness, not sharing sharp objects, condom use, peer education and encouraging pregnant women to get tested.
Mother-to-child transmission of HIV and HIV testing and counseling	<ul style="list-style-type: none"> • Many people do not get tested for HIV. 	<ul style="list-style-type: none"> • Although most people know that it was necessary to take an HIV test, others said they could know one's status by looking at the individual's physical condition (such as warts, hair loss, discoloring of the face). • Few knew of a person who had been tested for HIV. • Some say they cannot afford the 10 Birr charged for HIV testing in some areas. • While some respondents would take the HIV test only after consulting friends or family members, others would not consult anybody or share test results even with their spouses. • Some are not aware of the benefits of HIV testing to the pregnant woman. • Most people are not familiar with the three modes of mother-to-child transmission of HIV: during pregnancy, labor and delivery and breastfeeding. • Many believe that an HIV-positive mother inevitably delivers an HIV-positive child. • Many people do not know the 	<ul style="list-style-type: none"> • People know that there are HIV testing centers and are aware of their location. • People know that it is important to take the HIV test. • Most people know the advantages of HIV testing to pregnant women. • Known advantages include being able to get medicine that protects the baby and aid from NGOs, as well as have information about breastfeeding and whether or not to have more children (Most believe that HIV-positive people should not have any more children and those who have should not breastfeed). • Many would like to be tested for HIV, if it was made available. • People know the following ways of PMTCT: avoiding breastfeeding, use of ARVs, adequate maternal nutrition and

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
		<p>benefits of ARVs.</p> <ul style="list-style-type: none"> If a person is known to have taken the HIV test, they are suspected of being HIV-positive, unfaithful or of questionable sexual conduct. 	<p>Cesarean section.</p> <ul style="list-style-type: none"> Some people know that mother-to-child transmission of HIV can be avoided. There are no objections to taking ARVs.
BF in general	<ul style="list-style-type: none"> Virtually all mothers breastfeed their babies (99%), although there are inadequacies in the quality of breastfeeding. 	<ul style="list-style-type: none"> Women's workload tends to reduce frequency and quality of breastfeeding. Mothers believe that breastfeeding increases the mother's workload, curtails the mother's freedom, causes the mother to lose weight, makes the mother tired and accelerates aging. Mothers and some health promoters believe the following: <ul style="list-style-type: none"> ✓ If a woman is not eating enough or the recommended kinds of food, she will not have enough milk and so she cannot breastfeed exclusively for six months. ✓ Frequent breastfeeding harms the health and well-being of the mother, especially if she is malnourished. The majority of mothers believe that: <ul style="list-style-type: none"> ✓ Frequent breastfeeding and breastfeeding from the two breasts cannot increase milk production. ✓ Women with small frames produce less milk than women who are better built, and have problems producing enough milk for their babies. Women possessed with the zar spirit are thought to be unfit for breastfeeding and are discouraged from doing so. Women who have ulcers and 	<ul style="list-style-type: none"> The following benefits of breastfeeding are recognized by mothers: breastfeeding creates a good bond between mother and child, helps mother forget labor pains, reduces pain from breast engorgement, and gives the mother happiness and respect. Many communities give lactating mothers special food to increase milk production. Grandmothers urge and support women to breastfeed. In many communities, women breastfeed for 2 or more years.

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
		<p>pain in the breast are believed to have bad breastmilk and are discouraged from breastfeeding, so that they do not pass on the disease to the baby.</p>	
BF among HIV-positive mothers	<ul style="list-style-type: none"> • Many HIV-positive women opt not to breastfeed, or are involved in inconsistent (mixed) feeding. 	<ul style="list-style-type: none"> • Most community members feel that HIV-positive mothers should not breastfeed and discourage them from doing so. They believe breastfeeding can harmful the mother and infect the baby • HIV-positive mothers hate their “dirty, infected” bodies, and believe that their bodies are “poisonous” to the baby. They feel guilt while breastfeeding and feel they are sinning if they breastfeed. • Most CHWs believe that HIV-positive women should not breastfeed and advise replacement feeding even if not AFASS. • Many health workers believe that HIV-positive mothers should not breastfeed and do not tell them about WHO-recommended feeding practices. 	<ul style="list-style-type: none"> • Some trained health workers and facilities tell mothers about feeding options and discuss AFASS.
Initiation of BF	<ul style="list-style-type: none"> • Some mothers delay breastfeeding: 3 hours to 6 days in different communities. • Some health workers give formula to babies after delivery. 	<ul style="list-style-type: none"> • Belief that mothers are exhausted after delivery and need rest. • Belief that babes do not need food immediately after birth. • Some grandmothers (such as in Hadiya) advise that breastfeeding should start 9 hours after birth, after the baby’s stomach has become clean. • Mothers in some parts of the country (such as in South Wello) initiate breastfeeding late—up to 6 days in some parts of communities. • Some say they start late 	<ul style="list-style-type: none"> • In many parts of the country, mothers initiate breastfeeding shortly after birth.

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
		<p>because there is no milk in the breast shortly after delivery.</p> <ul style="list-style-type: none"> • Mothers delay breastfeeding until the breasts are cleared of the “dirty” milk (colostrums) which is believed to cause diarrhea, vomiting and cramps. 	
BF on demand	<ul style="list-style-type: none"> • Most mothers breastfeed their babies 0-6 months. However, breastfeeding is inadequate in many ways. 	<ul style="list-style-type: none"> • Factors that determine when and how to breastfeed include the following: <ul style="list-style-type: none"> ✓ The mother’s workload. ✓ When the baby wants to feed. ✓ How long the baby wants to feed. • Number of feeds varies from 3 (employed women) to 10. • Short breastfeeding episodes 2-40 minutes. • Inappropriate positioning and breastfeeding process (e.g. baby strapped on the body to be breastfed as the mother works). 	<ul style="list-style-type: none"> • Many mothers breastfeed their babies when they cry or demand to breastfeed.

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
Exclusive BF for the first 6 months	<ul style="list-style-type: none"> • Many mothers do not breastfeed their babies exclusively for the first 6 months. They also give plain or fenugreek water, cow's milk and butter. • Mothers introduce complementary foods between 4-6 months and solid foods at about one year. • Most women fear to breastfeed away from home for fear of the "evil eye." 	<ul style="list-style-type: none"> • By the age of 13-17 years, many young people already believe that exclusive breastfeeding is inadequate for the baby. • Most people believe that babies get thirsty and need water. Some say water is "medicine." • Cow's milk and other foods are given in addition to breastmilk, because mothers believe that breastmilk cannot provide all the child's nutritional needs. • In Oromia, due to the belief that a baby who drinks water gets a distended stomach, a baby is given water on the first day and then withheld it till the child is two years old. • Some people believe that given alone, breastmilk causes diarrhea. • Most people advise HIV-positive mothers to not breastfeed. • Most women are unwilling to express milk. • Inconsistent messages from health workers: while some health workers promote exclusive breastfeeding for 6 months, others promote 4 months and others give formula to babies at the hospital soon after birth. 	<ul style="list-style-type: none"> • Virtually all infants are breastfed between 0-6 months. • About half of infants under 6 months are exclusively breastfed. • People know that feeding cups are cheaper than feeding bottles. • Women breastfeed away from home while covering their babies with a cloth to protect them from the "evil eye."
Complementary feeding	<ul style="list-style-type: none"> • Many mothers start complementary feeding earlier than 6 months. Common foods given are of low nutrition content and include water, diluted cow's milk, butter, tea, thin gruel and porridge, <i>injera</i> in stew, potatoes and eggs. 	<ul style="list-style-type: none"> • Poverty and food insecurity. • Lack of information. • Short maternity leave of working women in an environment where expressing milk has little support. 	<ul style="list-style-type: none"> • The Ethiopian government is committed to promoting exclusive breastfeeding for 6 months, and refresher trainings include this aspect.

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
	<ul style="list-style-type: none"> • Many others (57%) start complementary feeding late. • Only 29% receive food with minimum dietary diversity. 		
Weaning	<ul style="list-style-type: none"> • Mothers wean their babies off breastmilk between 1-3 years (Addis/Gondar), most at 2 years or later. • Most weaning foods are nutritionally inadequate and include diluted cow's milk, formula, fenugreek water and water with sugar, gruel and porridge. 	<ul style="list-style-type: none"> • Poverty and food insecurity. • High costs of infant formula/foods. • Some communities believe that breastfeeding a baby for a lengthy period of time can be harmful. It makes the male children dumb and when breastfed for a lengthy period of time, female children can make the mother sick. As a consequence, they shorten the period of breastfeeding. • In some communities, breastfeeding women are prohibited from engaging in sexual intercourse, and so they wean their babies when they want to resume sexual intercourse. • Many women stop breastfeeding when they become pregnant. 	<ul style="list-style-type: none"> • Information on good weaning practices is provided by health workers and community Health Extension Workers.

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
Transition to adult diet	<ul style="list-style-type: none"> • Giving infants foods other than breastmilk starts shortly after birth (see above). • Transition to full adult foods may last 1-4 years in different communities. • Some foods are not given to children. • Foods discouraged by different communities include bananas (believed to cause worms and ear infections), chili pepper (too hot), sugar cane (difficult to eat) and raw meat (causes tape worms) • Frequency of feeding children varied from 3 to 5 times a day, to when the child cries to be fed. 	<ul style="list-style-type: none"> • Lack of information on proper transitioning to adult diets. • In some communities, children start eating from the same plate as adults from the age of one year. • Some communities (such as Oromo) discourage children from eating too much, as they will feel uncomfortable. • Mothers are busy with other chores and some have little time to pay attention to the feeding of their children. • In many communities, fish and eggs are not given to children. 	<ul style="list-style-type: none"> • Feeding children is a shared responsibility of mothers, fathers, family members and neighbors in most communities. When the mother is not available, other people step in to help. • In some communities (such as Oromia), children drink milk from their own bowls. • In most communities, children are encouraged and cajoled by adults to eat if they do not want to eat. • In some communities, children are served on their own plates. • Where fruits are available (in Arba Minch, for example), they are given to children. • Fruits are believed to be nutritious and impart good color to the child.
Feeding during illness and recovery from illness	<ul style="list-style-type: none"> • Most communities feed children the same way, irrespective of whether they are sick, well or recovering from an illness. • Some give children thin or diluted food and feed them less frequently. 	<ul style="list-style-type: none"> • Lack of information on the best way to feed a sick and recovering child. • Parents are discouraged from feeding the child because the child has no appetite. • Poverty and poor economic state. • A mother has a heavy workload, leaving her with little time to attend to the needs of a sick child. 	<ul style="list-style-type: none"> • In Arba Minch and Hadiya, people give children recovering from illness increased amounts of food comprising of energy-dense food as ways to build appetite. • The Family Health Card being distributed to all mothers has messages on feeding a sick child.
Breast and bottle-feeding	<ul style="list-style-type: none"> • A few mothers do not breastfeed their babies. • Some mothers use 	<ul style="list-style-type: none"> • Mothers find it cumbersome to feed by cup at night. • Bottle-feeding is convenient, as the child can go on feeding 	<ul style="list-style-type: none"> • The community expects all mothers to breastfeed their babies. Those who do not breastfeed are

BEHAVIOR IDENTIFICATION AND ANALYSIS			
Category	Current behaviors	Factors promoting current behaviors	Positive factors that can promote change
	the bottle to feed their babies. Bottle-feeding is more widespread in urban areas such as Addis Ababa.	<p>as a mother attends to other work.</p> <ul style="list-style-type: none"> • Bottle-feeding comes in handy when the mother is away or has died. 	<p>looked down upon or suspected of being HIV-positive.</p> <ul style="list-style-type: none"> • Some mothers do not use the bottle because it is expensive to purchase. • Mothers who have had health education know that bottle-feeding can be dangerous to the health of the child
Wet nursing	<ul style="list-style-type: none"> • Most the respondents are against wet nursing 	<ul style="list-style-type: none"> • Fear that one may not know the HIV status of the wet nurse. • Fear that the wet nurse may have other diseases. 	
Care and support of HIV-positive mothers	<ul style="list-style-type: none"> • People segregate and discriminate against HIV-positive people. 	<ul style="list-style-type: none"> • Families tend to treat their HIV-positive members badly if they think they became infected because their risky behaviors. • Husbands stop sexual intercourse with their HIV-positive spouses; some separate from them. • HIV-positive mothers said they had been treated badly or rejected by their families/communities especially in sharing food, clothing and sleeping areas. • HIV-positive children suffer discrimination. • Family support for HIV-positive people deteriorates over time, as family members become “tired” of providing continuous support. • HIV-positive people feel that they do not receive special/good attention at health facilities. 	<ul style="list-style-type: none"> • Many people are sympathetic and supportive of HIV-positive spouses, family members or friends. • Families accept responsibility for looking after their HIV-positive members and do their best to support them—especially if they believe that the individuals were infected through no fault of their own. • Many HIV-positive people feel that the services offered are reasonable, although they would like special attention.

TBA=traditional birth attendant; BF=breastfeeding.