FINAL REPORT

Improving Health and Nutrition of Vulnerable Women and Children in Ethiopia and Zimbabwe

Submitted on behalf of CARE by:
Marnie Davidson
marnie.davidson@care.ca

April 2015

Table of Contents

Annex I: Logic Model

Annex II: Populated Performance Measurement Framework

1 Executive Summary

This is the final report for the *Improving Health and Nutrition for Vulnerable Women and Children in Ethiopia and Zimbabwe* with funding support from the Department of Foreign Affairs Trade and Development. In December 2011, the Government of Canada, through its Canadian International Development Agency (CIDA) approved a Contribution Agreement with CARE Canada, which provided $5,079,366 in Government of Canada funding through the Muskoka Initiative for the implementation of the *Improved Health and Nutrition of Vulnerable Women and Children Project in Ethiopia and Zimbabwe.*[1]

ARNI was implemented between April 2012 following the submission of the Project Implementation Plan and December 2014. The project ***goal was to improve the nutritional status in girls and boys under two years and pregnant and lactating women living in selected areas of Ethiopia and Zimbabwe.*** The project has four main components based on the following intermediate outcomes:

- Improved under two child feeding practices by mothers and caregivers
  - Key intervention: maternal nutrition and infant and young child feeding (IYCF) education
- Equal increased consumption of healthy and nutritious foods by men, women, boys and girls.
  - Key intervention: Nutrition sensitive agriculture
- Increased use of nutrition and health services by women, girls and boys
  - Key intervention: training and support of health workers on maternal nutrition and IYCF
- Improved hygiene practice by men, women, boys and girls to prevent diarrhea among boys, girls, and pregnant women
  - Key intervention: water, hygiene and sanitation

The main strategies used in the project behaviour change communication for maternal nutrition and IYCF education for men and women through Mother to Mother (M2M) groups, Village Health Workers (VHWs) and cooking and feeding demonstrations. Women's empowerment approaches using Village Savings and Loans (VSLA) groups and community dialogues supported improved women's autonomy and decision making around family nutrition at the household level. Health care worker training helped support improved access and availability of nutrition promotion services at the health facility level. Community led hygiene and sanitation efforts were applied to promote improved hygiene practices and sanitation conditions.

The ARNI project successfully achieved the following results between November 2011 and December 2014 in Ethiopia and Zimbabwe:

- CARE Ethiopia trained 171 male and 202 female health care workers in maternal nutrition and infant and young child feeding (IYCF)
- CARE Zimbabwe trained 519 women and 219 male health care workers in maternal nutrition and infant and young child feeding (IYCF)
- ***Minimum acceptable diet*** (MAD) in Ethiopia ***increased*** by more than 20% reaching 26.5% for boys and 27.7% for girls

[1] CARE uses the working title African Regional Nutrition Initiative (ARNI)

- ***Ante natal care (ANC)*** visits at least 4 times from a skilled provider ***increased*** by over 85% in Ethiopia from 10% to 40%
- 76.8% of women attended ***ANC*** at least 4 times during pregnancy in Zimbabwe an ***increase*** of 10.6%
- ***Exclusive breastfeeding (EBF)*** in Ethiopia increased by just under 10% from 65.3% to 76.2%
- ***EBF*** in Zimbabwe ***increased*** by 5.4% from 23% to 28.5%
- ***Stunting*** in children under 2 ***decreased*** in Ethiopia by 1.6% from 35.4% to 33.8%
- ***Wasting*** in children under ***decreased*** in Ethiopia 7.4% from 16.2% to 8.8%

Increasing food insecurity situation in Zimbabwe led to a decline in the following nutrition outcomes for pregnant and lactating women and children under 2 in the following areas:

- % of children under 2 years with MAD declined from 12.7% to 5.4%
- % of children under 2 who are stunted increased from 15.8% to 28.9%
- % of children under 2 who are wasted increased from 1.5% to 3.6%

Overall the project successfully achieved improved nutrition for pregnant and lactating women and children under 2 years in Ethiopia and Zimbabwe. In Ethiopia the project not only met, in many instances it exceeded its targets, while in Zimbabwe the results were slightly more mixed due to external and contextual factors.

2 Introduction

This report follows the final reporting templates found on page XX of the contribution agreement. In order for this to be a stand-alone project document, project implementation according to output has also been included. Section 3 Project Summary and Section 4 Project Context provides the background, key stakeholders and beneficiaries, along with the different contexts influencing project outcomes in Ethiopia and Zimbabwe. Section 5 contains the description of project implementation and assessment of immediate, intermediate and ultimate outcomes based on monitoring and endline data. The final sections include a risk management assessment, a gender equality assessment and a review of project successes and lessons learned.

3 Project Summary

3.1 Rationale and Justification

Ethiopia has one of the highest infant and child mortality rates in the world, with an under five mortality at 123 deaths per 1,000 live births. This means that one in every thirteen Ethiopian children dies before reaching age one, while one in 8 does not survive to the fifth birthday. Nutritional disorders rank among the top problems affecting the population in general, and children and mothers in particular. The malnutrition rate is high, with nearly one in two (47 %) children under five years of age being stunted, 11% wasted, and 38% underweight.

Ethiopia experiences high levels of both chronic and acute food insecurity, particularly among rural populations and smallholder farmers. Approximately 44% of children under 5 years of age in Ethiopia are severely chronically malnourished, or stunted. This lack of nutrients results in irreversible cognitive and physical damages (WFP, 2011). Directly or indirectly, malnutrition contributes to 53% of deaths of children under-five in developing countries. Ethiopia is one of the countries with highest under-five child mortality rate, with malnutrition underlying to 57% of all children deaths (UNICEF, 2013). Food insecurity is not the only cause of malnutrition. Other factors such as improper feeding practices, poor child and maternal care practices, as well as social and traditional factors contribute to malnutrition. Ethiopia has achieved encouraging progress in recent years in detecting and managing acute malnutrition, but there is growing evidence that a more comprehensive approach to tackle all causes of malnutrition is urgently needed. In addition, each year, an estimated 25,000 women die of complications during childbirth, and another 500,000 suffer long-term disabilities from pregnancy and childbirth complications, according to the UN Population Fund.

The 2005 Ethiopia Demographic and Health Survey found that while breastfeeding is nearly universal (median of 25.8 months), exclusive breastfeeding is short, with a median duration of only 2.1 months. Only one in three children age 4-5 months is exclusively breastfed, and complementary foods are not introduced in a timely fashion for many children. Similar to child health, Ethiopia's maternal health and nutrition status is one of the worst in Africa. The maternal mortality ratio (MMR) is a high of between

548 and 799 (EDHS 2005). Maternal chronic energy deficiency is a serious problem and 27% of women are chronically malnourished (BMI less than 18.5).

According to the Ethiopian National Nutrition Survey immediate causes of malnutrition include:

- Low dietary intake that is either not providing the right nutrients or the required amounts of food; and,
- Recurrent infections: the occurrence of repeated infections in children reduces their appetite and affects the bodies' ability to utilize food and further reduces resistance to infections.

Underlying causes of malnutrition include:

- Food insecurity: When families are unable to produce or purchase their own food or when there is unbalanced intra-household food distribution (for example priority is often not given to children and women though they are at higher risk of malnutrition).
- Lack of appropriate care: Due to negative social beliefs, attitudes, and cultural practices, children and mothers usually get less attention and care. As a result of this lack of care and reduced food intake they are exposed to malnutrition.
- Lack of basic health service delivery: The unavailability or low utilization of basic health services, poor personal and environmental sanitation, and inadequate water supplies are the main causes for the prevalence of disease. Children whose health status is compromised by different infectious diseases are at greater risk of malnutrition. Similarly, children who are malnourished will have a reduced resistance to infection.

Zimbabwe has shown signs of modest recovery after a decade-long economic and social decline characterized by poor health indicators, hyperinflation, high unemployment, and the neglect of basic infrastructure for health, water and sanitation, agriculture and power generation. Since 2002, recurrent droughts have led a large segment of the population chronically food insecure. Despite modest economic recovery, UNDP placed Zimbabwe on the bottom rung of the Human Development Index for 2011 (#146 out of 178 countries).

The maternal mortality ratio (MMR) is reported as 725 deaths per 100,000 live births. The under-five mortality rate increased from 54 deaths per 1,000 live births in 2000 to 82/1,000 in 2006. The infant mortality rate increased from 37 deaths per 1,000 live births in 2000 to 60/1,000 in 2006 (ZDHS). Thirty-eight percent of Zimbabwean children are chronically malnourished, and 33.8% of children 6-59 months of age were stunted. Only 5.8% of children are exclusively breastfed to six months/age while 38% of children received complementary foods by 3 months and more than 50% before 6 months. Of children 6-23 months of age, only 27.8% received the minimum number of meals recommended for their age, and only 8.4% received a minimal acceptable diet.

Children living in rural areas were significantly more likely to be stunted and underweight than children living in urban areas. 35% of children between 0-59 months of age lived in households that experienced a food deficit of 5 or more months in the past year. Very few young children were reported to be consuming eggs, meats, legumes, or fruits and vegetables. Underlying the majority of these maternal

newborn and child deaths is HIV/AIDS. In Zimbabwe, more than 17,000 children are infected with HIV every year.

The public health system is collapsing, plagued by water shortages, malfunctioning equipment, lack of finances, brain drain and a de-motivated workforce with limited capacity to provide greatly needed rural health care services to women and children. Between 2001 and 2006, the Ministry of Health and Child Welfare (MOHCW) provided basic training to more than 5,000 Village Health Workers (VHWs). Since the training and launch of the program, it is unclear how many VHWs remain active in their duties. In 2011/12 UNICEF will train a small (120) selected group of VHWs to provide IYCF education to women in the district of Zaka, Masvingo Province.

Under the leadership of the Food and Nutrition Council, Zimbabwe is working to develop an integrated, multi-ministerial framework to address the proximate and underlying causes of food insecurity. This framework will include strategies to address chronic malnutrition. Conclusions from the Food and Nutrition Council include:

- The country is off-target for achieving MDG's 1 and 4 – improving nutritional status is paramount to the achievement of both.
- Applying global estimates, nearly 12,000 child deaths each year may be attributable to maternal and child under-nutrition in Zimbabwe. Very few young children consume the recommended number of meals or the recommended number of food groups for their age – eggs, meat, milk products, and legumes are rarely included in the diets of young children.
- Less than 10% of Zimbabwean children under the age of 2 receive the recommended minimum acceptable diet.
- Women generally initiate breastfeeding according to recommendations, and continue breastfeeding through the first year of life. However many are not exclusively breastfeeding.
- More than half of Zimbabwean children are receiving complementary foods prior to 6 months - early introduction of complementary foods has negative implications for both growth and disease transmission.
- Interventions targeted at children in utero through 24 months of age will have the greatest impact at population level – the "window of opportunity".

Project goals and implementation strategies

The 3-year Muskoka MNCH project was designed and implemented to contribute to the national efforts to improve health and nutrition outcomes for women and children under 5. The project's intermediate outcomes were to:

- Improved under two child feeding practices by mothers and caregivers
- Equal increased consumption of healthy and nutritious foods by men, women, boys and girls
- Increased use of nutrition and health services by women, girls and boys
- Improved hygiene practice by men, women, boys and girls to prevent diarrhea among boys

To achieve these outcomes, the project identified the following strategies:

- Education and promotion of proper nutrition, caring and hygiene practices,
- Women/mothers social and economic empowerment,
- Build on existing capacity of health services and target community.
- Referral linkages between community based and facility based nutrition and health intervention.

3.2 Stakeholders

Government of Ethiopia

The Government of Ethiopia, specifically the Ministry of Health (MoH), Ministry of Agriculture (MoA) and Ministry of Women's Affairs at the national, woreda and kebele levels was the main project partner in Ethiopia. At all levels these line ministries were the primary partners of the project; facilitated the implementation of the project and aligned activities with government workplans; mobilized local community and volunteer groups; and, provided local health and nutrition data as needed.

CARE Ethiopia

CARE Ethiopia was the lead implementing organization for the project in Ethiopia through its headquarters in Addis Ababa and two field offices in Chiro (West Hararghe) and Harare (East Hararghe). In this capacity CARE Ethiopia:

- ✓ Coordinated project activities with its government counterpart at national, woreda and kebele levels.
- ✓ Provided technical support and training to project partners and community groups.
- ✓ Developed annual workplans, compiled reports for monitoring budget and project progress.
- ✓ Monitored risks associated with the delivery of the program and their impact on the project activities.

Government of Zimbabwe

The Government of Zimbabwe specifically the Ministry of Health and Child Welfare (renamed the Ministry of Health and Child Care – MoHCC), the Ministry of Agriculture (MoA) and the Ministry of Women's Affairs, Gender and Community Development (MWAGCD) at the national, district and ward level was the main partner in the project. At all levels these line ministries were the primary partners of the project; facilitated the implementation of the project and aligned activities with government workplans; and, mobilized local community and volunteer groups.

CARE Zimbabwe

CARE Zimbabwe was the lead implementing organization for the project in Zimbabwe through its headquarters in Harare and field office in Gweru. In this capacity CARE Zimbabww:

- ✓ Coordinated project activities with its government counterpart at national and district levels.
- ✓ Provided technical support and training to project partners and community groups.
- ✓ Developed annual workplans, compiled reports for monitoring budget and project progress.
- ✓ Monitored risks associated with the delivery of the program and their impact on the project activities.

CARE Canada

CARE Canada bore legal responsibility for the project before the donor and will be responsible for abiding by all contract terms and conditions. This included:

- ✓ Main contact with DFATD and other donors
- ✓ Project management, administration, implementation and quality assurance
- ✓ Supported to country office teams to implement the project's gender strategy and achieve overall gender equality goals
- ✓ Provided oversight of project monitoring, reporting on results and lessons learned
- ✓ Facilitated knowledge sharing across projects

CARE USA

CARE USA provided technical support on maternal and child nutrition, project monitoring and data management.

3.3 Beneficiaries

Ethiopia

The project in Ethiopia was implemented in the Doba and Tulo Woredas (districts) of the West Hararghe Zone and the Haramaya and Kurfachele Woredas of the East Hararghe Zone.

In Doba Woreda the project covered 15 kebeles and in Tulo covered 12 kebeles. In Haramaya Woreda the project covered 14 kebeles and Kurfachele 9. The beneficiary projections are based on the MoH WOreda Health Offices, which are used for health service planning.

Woreda	**Direct Beneficiaries**	
	Children Under 2	**Pregnant and Lactating Women**
Doba	9969	5828
Tulo	10649	6226
Haramaya	14769	19692
Kurfachele	3738	4984
Total	**39, 125**	**36, 730**

Zimbabwe

In Gweru district the project worked with all 18 wards and within Zaka all 14 wards. At the district level the project provided training to health workers in district offices and health facilities on maternal nutrition and IYCF.

District	**Health Facility**	**Total # of health service providers**
Gweru	7 municipal clinics 1 National Army Clinic Gweru District health Office	Males : 68 Females : 254 Total :

	Gweru City Health Infectious diseases Hospital	
Zaka	2 Hospitals (1 public, 1 private) 21 Zaka Rural Health Centres (7 public, 14 private) Zaka District Health Office	Males : 155 Females : 229

District	**Direct beneficiaries***		**Indirect beneficiaries****
	Children Under 2	**Pregnant and Lactating Women**	**Women of reproductive Age**
Gweru	8,387	14,542	59,140
Zaka	14,257	16,397	50,635
Total	**22, 644**	**30, 939**	**109, 775**
*MoH District Health Population Projections based on Census **2012 Census			

3.4 Governance Structure

General support and oversight was provided by CARE Canada, with project delivery and decision-making jointly shared between CARE Ethiopia and CARE Zimbabwe and their respective local partners (at provincial, district and local level) through a variety of consultative mechanisms and shared delivery approaches. All full-time staff associated with the project was based in Ethiopia and Zimbabwe and was recruited locally. They were based in CARE's field offices in the respective regions of interventions, and worked closely with their counterparts from the various provincial, district, and local authorities involved in the implementation of the program.

In Zimbabwe, the project was supported in its operational, technical and financial management efforts by CARE Zimbabwe's Country Director, the Assistant Country Director for Programs, and the Assistant Country Director for Finance & Administration. The project was led by a Project Manager, and implemented by two District Health/Nutrition Specialists, and one M&E Officer, in close coordination with their government counterparts at all levels.

In Ethiopia, CARE Ethiopia employs a program approach to project implementation that leverages economies of scale and support. The project was supported in its operational, technical and financial management efforts by CARE Ethiopia's Country Director, the Assistant Country Director for Programs, the Assistant Country Director for Finance & Administration, the Program Quality and Learning Coordinator, the Program Design, Monitoring and Evaluation (PDME) team leader, the Operations Manager, the Learning and Knowledge Manager and the Reproductive Health Coordinator. The project was led by a Project Manager, and implemented by two Team Leaders, two Capacity Building Officers, an M&E Officer, and four Community Facilitators, in close coordination with their government counterparts at all levels.

4 Project Context

In June 2010, through the Muskoka Initiative, Canada led G8 and non-G8 leaders to commit $7.3 billion to mobilize global action to reduce maternal and child mortality and improve the health of mothers and children in the world's poorest countries. Canada provided $1.1 billion in new funding and $1.75 billion in ongoing spending on maternal and child health programming, a total contribution of $2.85 billion from 2010 to 2015. In September 2011, Prime Minister Harper announced Canada's support for 28 new projects that will help save the lives of mothers, infants and children in Haiti, Africa and Asia under the Muskoka Initiative Partnership Program. The *Improving Health and Nutrition of Vulnerable Women and Children in Ethiopia and Zimbabwe* project contributes to the Government of Canada's Muskoka Initiative through a $5, 079, 366 contribution by the Department of Foreign Affairs, Trade and Development.

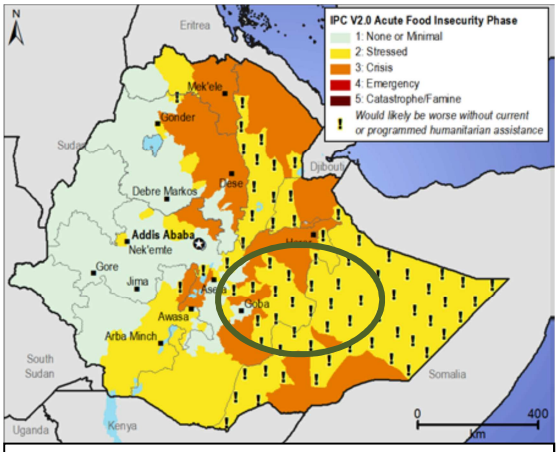
The Commission on Information and Accountability for Women's and Children's Health, called at the request of the UN Secretary-General, met in Geneva on January 26, 2011, to take the next step in this unparalleled opportunity to make a difference in the lives of women and children. Co-chaired by President Jakaya Kikwete of United Republic of Tanzania and Prime Minister Stephen Harper of Canada, the Commission agreed to establish a framework to monitor global commitments for maternal, newborn and child health and ensure committed resources save as many lives as possible.

4.1 Ethiopia Context

Food security situation

The area of the northern central highlands is known to be highly vulnerable to rain failures. Part of the area is dependent on two yearly rainy seasons: belg and kiremt. If the rain fails, is delayed or is unevenly distributed, the result is usually a commensurate shortage of staple food (sorghum, maize, teff, barley and wheat) and food security for a large part of the population is threatened. As an illustration, the number of people who require humanitarian assistance increased from 3.2 million to 3.7 million in August 2012, primarily due to the poor raining season during that year. In the beginning of 2013, access to water and pasture had improved considerably across the country. However, due to poor rain distribution starting in October, food access was reduced for the poor and very poor households in Belg-producing areas, including East and West Hararghe. Additionally, due to high demand, high inflation, and the poor Belg harvest grains' prices remained high and kept rising in 2013 reaching 19% at an annualized rate. In July 2014, CARE Ethiopia released an alert following the delayed and/or erratic distribution of the 2014 Belg rains. The alert was for areas that were critically affected by the situation including in the Oromiya region: East Hararghe and West Hararghe. Agriculture is the mainstay of the population of the four districts where the project intervened (Doba, Tulo, Haramaya and Kurfa Chelle). These districts are known for their mixed farming i.e. crop production and animal rearing. The food source is mainly crop production while the income source is cash crop and sales of animals.

The harvest of these crops serves as a bridge for households to sustain themselves during short food shortage periods until the next harvest season. In 2014, the onset of Belg rains was delayed by a month and hectares of crops were dried up and totally damaged. Consequently, in East Hararghe, maize prices have rose by about 9.3% to 14.2% between January and May, compared to 2013. Similarly, in West Hararghe, maize prices have increased in 2014 from 16 -17% from January and May 2014, compared to the same period in 2013. Doba and Tulo are 2 of the 16 districts located in West Hararghe while Haramaya and Kurfachele are 2 of the 20 districts located in East Hararghe. These four districts were chosen for the Muskoka project. According to the map below, their phase of acute food insecurity is scaled as stressed or in crisis.



Source: *FEWS NET Ethiopia*
Current food security outcomes, July 2013

Health System

To challenge these poor health outcomes and to break the intergenerational cycle of under nutrition, the Federal Ministry of Health (FMOH) of Ethiopia launched the Health Extension Program (HEP) in 2003. It became operational with the 2004–2005 graduation of 7136 Health Extension Workers (HEWs), trained to work mainly in disease prevention and health promotion in rural villages. The program was expected to help accelerate the country's progress in meeting Millennium Development Goals (MDG). Now it is the country's major health program counting more than 38,000 HEWs serving almost all villages in rural areas. The program approach is based on the *diffusion model*, which holds that community behavior is changed step by step: training early adopters first, then moving to the next group that is ready to change. Those resistant to change would gradually be conditioned to change because of changes in their environment. It assumes that health behavior can be enhanced in communities by creating model families that others will admire and emulate.

- *Who are the HEWs?*

Health extension workers are recruited from the communities in which they will work according to specific criteria: they are female of at least 18 years old; they have at least a 10th grade education, and speak the local language. Females are selected because most of the HEP packages relate to issues affecting mothers and children; thus communication is thought to be easier between mothers and female HEW. In addition, their selection is seen as empowering women. They are trained during one year to deliver a package of 16 preventive and basic curative services that fall under four main components: hygiene and environmental sanitation; family health services; disease prevention and control; and health education and communication. HEWs are considered salaried frontline health care staff.

- *How do they work?*

Throughout the country, in each health post, 2 HEWs are responsible for the health and care of 1000 households (5000 individuals). As a first point of contact of the community with the health system, they deliver preventive health services and ensure continuity of care throughout the lifecycle. HEWs' major task is increasing knowledge and skills of communities and households that deals with maternal and child health. They spend 75% of their time visiting families in their homes and performing outreach activities in the community. HEWs are also in charge of identifying households that could serve as "model families". These households are usually making the right choices to ensure a healthy family, like getting antenatal maternal health, building latrines, and making sure their children consume different types of food groups. These early adopters are considered Community Development Army, volunteers who share what they have learned about proper health and nutrition to the rest of the community. These community-level volunteers are trained by the HEWs to focus more intensively on generating local behavior change. **Women/Men development Army** make regular rounds to check on neighbors and encourage practices like latrine building and setting-up separate cooking spaces. Each development team (composed by 5 model families) looks after 25 to 30 households.

- *National nutrition Plan*

In 2013, the government of Ethiopia has launched a revised and ambitious National Nutrition Plan (NNP). This plan uses the community based service delivery platforms created in both the health and agriculture sectors to ensure decentralized and democratized public services. Just as the HEWs, Agriculture Extension Workers (AEWs) have been trained to improve nutrition outcomes among the vulnerable populations in their zones of influence. Their main task is to educate development army agents to promote nutrition, both in nutrition-sensitive areas, such as diversifying production and using increased incomes to purchase a diverse diet, and in nutrition-specific areas, such as ensuring consumption of diverse diets and improving hygiene practices. This nutrition plan has a particular focus on women, children and adolescent girls.

The Government of Ethiopia has shown its perseverance to reducing poor nutrition and health outcomes at a faster rate. In fact, this innovative initiative has been successful largely because of the strong political commitment. It requires the involvement of all responsible sectors and partners and a harmonized implementation at the ground level. Investment in health extension workers has been part of a wider package of support services that is showing promising result. Local government and community participation is gaining momentum, and development partners have manifested a growing trust in the government approach.

The Muskoka project took advantage of this government structure to improve access to health services and to diversified food for the rural poor. During three years, CARE has executed its activities through the HEP planning. The approach assumed that communities are owners, producers and multipliers of health. Therefore, the role of CARE, a key stakeholder in Ethiopia, was to enable households and communities to lead a healthy life by building their capacities and skills and adopting healthy feeding practices. Local government embraced this opportunity to partner with CARE as their frontline health and agriculture extension workers required more mentoring and capacity building in facilitating educational trainings at the community level.

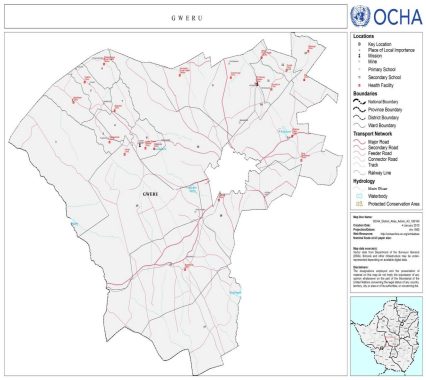
In September 2010, Federal Democratic Republic of Ethiopia joined the **SUN Movement**. At the time, Ethiopia had set up a high-level multi-stakeholder platform for nutrition comprising seven ministries. It included country representatives from United Nations agencies, bilateral donors as well as technical and research institutions. There was also a National Nutrition Programme (NNP), which provided the framework for strategic objectives and interventions to improve nutrition across relevant sectors including health, agriculture, education, water, labor and social affairs and women, children and youth affairs. In 2013 the government of Ethiopia has launched a revised and ambitious National Nutrition Plan (NNP) with a particular focus on women, children and adolescent girls. CARE Ethiopia is an active participant in those forums such as the Nutrition Technical Committee and the Scaling-Up Nutrition (SUN) coalition.

Nutrition Technical Committee: this committee is being chaired by Ministry of Health (MOH). Members meet on a monthly basis to exchange updates on nutrition development interventions. The ARNI project was represented on the NTC by the project's Maternal and Child Health advisor. Currently, members of the committee are working on revising phase 1 of National Nutrition Program and Designing National Nutritional Program II- 2015 - 2020. The role of CARE in this committee has been to share the lessons learnt from the nutrition and health project implementation, particularly ARNI's success in bringing maternal nutrition and IYCF to scale through the Men's and Women's Development Army. In addition, CARE Ethiopia is currently approached to assign a Nutrition Technical Person who will be participating on the design of the Health Sector Transformation Plan.

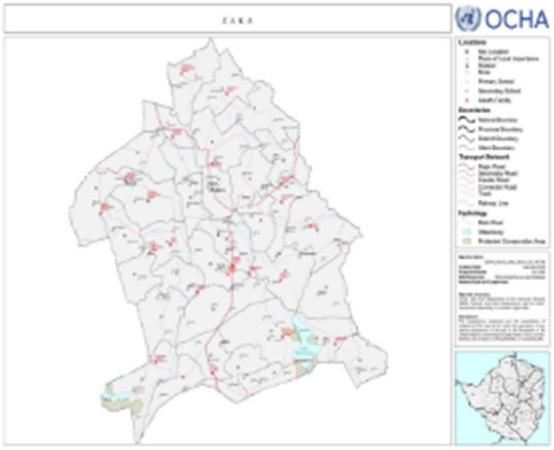
Ethiopia Civil Society Coalition for Scaling-Up Nutrition/ECSC-SUN: This initiative from the global scaling-up nutrition movement aims to increase public and relevant sectors' awareness on nutrition and ensure improved nutrition governance and raise the profile of political attention given to nutrition in Ethiopia. SUN works closely with MOH and supports national nutrition program implementation and it is represented in the National Nutrition Coordination Body. CARE Ethiopia is one of the steering committee members in this coalition and provided space in its office for regular meetings that are being held by this group.

4.2 Zimbabwe Context

The project operated in two Districts in Zimbabwe- Gweru and Zaka. Gweru is a district of Midlands province that comprises both rural and urban areas. ARNI project operated in the urban area whose urban primary health care systems are managed by the municipality, Gweru City Health. The city health has 7 clinics and 1 infectious disease hospital that cover 18 wards. However, all health and nutrition information is managed by MoHCC as they also report to the MoHCC District Office. The urban area also has a cadre of lay volunteer health worker called Care Facilitators (CF) similar to the rural VHW. Both the VHW and CF are volunteers recognized by MoHCC and are trained by MoHCC. The majority of people living in the peri-urban environment of Gweru do not



own houses hence they change lodgings frequently and often are lost to follow by CF. Moreover, many work outside of their home or migrate for long periods of time for work. Health care services including maternal health care services often require payment hence most people do not seek health /nutrition services regularly. Besides clinic fees they need transport fees as well. Those that have medical insurance usually seek maternal services from private institutions. Besides the municipal primary health care institutions, there is a Government District Hospital and a Provincial Hospital both are referral centres. The district hospital gets referral from both Gweru rural and urban catchment population while the provincial hospital is a referral centre for the whole Midlands province both urban and rural.



Zaka is a district in Masvingo province, a rural district where most households are subsistence farmers owning their own pieces of land. The livelihoods in the district though depressed are somewhat more resilient than in Gweru due to land and livestock ownership. The district has 21 clinics (14 belong to Rural District Council (RDC) while 7 are GVT clinics), 2 hospitals (1 GVT and 1 Mission) that cover 34 wards of the district. Zaka RDC clinics together with the GVT clinics report to MoHCC district offices that supervise them and all health and nutrition information is put together by MoHCC. Primary health care services including maternity health services are free in GVT institutions but the RDC cinics charge some cost recovery fees. The clinics to most households walk to clinics but they also require transport fares in emergencies and referals to next level of care. The district has VHW who are volunteers. The VHW are trained and managed by MoHCC. They report to clinics and they government through UNICEF supplied them with uniforms and bicycles that they use during home visits and to meetings at the clinics.

The economic recovery in Zimbabwe has had a growth decline from 11.9% in 2011 to 10.6% in 2012 and 3.4% in 2013 (ZimAsset, 2013) and **overall economic and food security at the household level worsened between 2011 and 2014 in Gweru and Zaka Districts.** ZimVAC 2014 reported that the prevalence of poverty in Zimbabwe was estimated at 63% with 16% estimated to be in extreme poverty and that poverty is more widespread in rural households (76%) compared to the 38% in the urban areas. FinMark Trust in 2014 reported that there have been major changes in the population profile of Zimbabwe between 2011 and 2014 with a decrease in the urban population from 35% in 2011 to 30% in 2014. FinMark added that 65% of adults personally earn $100 or less per month (including 'no income'). Farming remains the most important source of income with half the adult population dependent on income from farming activities. However, agriculture in Zimbabwe predominantly is rainfed hence becomes seasonal as well and 50% of the adults claim farming as a source of income with 36% claiming it to be their main source of income. Household that went on without cash income increased to 60% in 2014 compared to 53% in 2011.

Forty-four percent of the population had to skip a meal because of lack of money for food in 2014 compared to only 29% in 2011 reflecting an increase in household food insecurity. This is more typical in urban setting that relies on purchasing food commodities where generally there are limited livelihoods opportunities. For Zaka is that World Food Program pipelines that supported in Seasonal Targeted Assistance for the vulnerable populations had challenges in sourcing food commodities and there was reduction in targeted populations around 2011-2012. Zaka District continued to receive WFP assistance up until 2013-2014 when the district receive nothing as WFP's pipelines were exhausted and most WFP depots including those in Gweru and Zaka were closed. The livelihood outcome analysis from the ZimVAC report indicates that 15% of Zaka district population faced survival deficit. There have also been changes in access to infrastructure according to FinMark who reported that access to running water has decreased by 6% in 2014 mainly in urban areas. Access to piped running water decreased from 35% in 2011 to 29% in 2014. Due to lack of water, Gweru Urban community gardens as well most backyard gardens were no longer viable thereby reducing the availability and access to food. These gardens were also a source of income for the communities for inputs, health and nutrition services, school fees for children, transportation etc. In this regard, all food requirements need to be purchased from markets and grocery shops but given the limited to no sources of income; most households tend to suffer leading to the skip of meals.

Food Production

Due to poor rains, Zimbabwe faced a decrease in the production of mains crops in 2012/13. According to the Ministry of Agriculture, Mechanization and Irrigation Development (MAMID) the country experienced a harvest cereal deficit of 870, 000 million tons in 2012/13 consumption year, especially for maize (-45%) and groundnuts (-62%) productions, compared to 2010/11[1] productions. Fewsnet (October 2012) market monitoring systems revealed that maize prices were on average 28% above the national average in the deficit areas, making poor households access to food very challenging. This situation had an important impact on households' food and nutrition security, especially in the context of economic slowdown: Zimbabwe GDP has fallen from 7.4 billion USD in 2010 to 4.6 billion USD in 2012 and 4.4 billion USD in 2013. Gweru and Zaka districts' respective situations depict the overall country profile. Indeed, according to WFP[2] Gweru has one of the highest poverty prevalence rates (81-100%) and Zaka the second highest prevalence (61-80%). On another hand, Gweru district population relies on markets (while very poor) and Zaka households experience utilization and diversification challenges despite their relative access to food.

[1] Maize: 1,451,629 Mt in 2010/11 to 798,596 in 2012/13 (-45%); and Groundnuts: 230,475 in 2010/11 to 86,747 in 2012/13 (-62%)
[2] WFP, 2014. Zimbabwe: results of exploratory food and nutrition security analysis

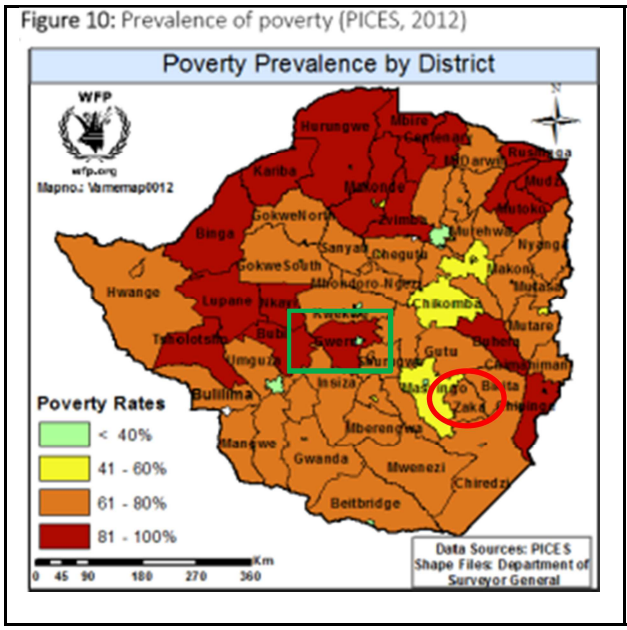


Figure 10: Prevalence of poverty (PICES, 2012)

Figure16: Indicative assistance strategy based on PCA

In 2013/14, cereal harvests improved significantly, according to the second round of ZIMVAC. For maize grain, millets, and sorghum, the production was about 85% higher than the previous year (2012/13) and 27% above the five-year average. During the same period, the number of estimate food insecure population dropped from 2,206,924 in 2012/13 to 564, 599 (-74%) and maize market prices decreased by 27% in Gweru, Masvingo and Mutare, compared to the two-year average according to Fewsnet (July 2014). Based on above figures, Fewsnet has considered the food security situation across the country being stable with most households accessing staple food from their own 2013/14 production and has classified Zimbabwe at IPC Phase 1, meaning minimal acute food insecurity from October 2014 through March 2015.

Health and Nutrition System

Village health workers were introduced into the Zimbabwe health care system in the early 1980s and have played a crucial role in delivering public health services at the community level in Zimbabwe ever since. In today's Zimbabwe, VHWs have faced increasing demands with a widespread HIV epidemic, social and economic instability, weakening of health services and chronic food insecurity. With a total of 10,000 VHWs the country only has about half of what it needs to provide the population with basic public health services. Moreover, relying on this small cadre of volunteer lay health workers to do everything from immunization, HIV/AIDS support and Infant and Young Child Feeding education puts a huge burden on a volunteer cadre of lay health professionals.

5 Performance Assessment

5.1 Performance Assessment Ethiopia

5.1.1 Project Implementation

Output 1.1.1 TOTs conducted on optimal IYCF practices and maternal nutrition with leaders of women development army/mother to mother groups

At the inception phase, the project identified the community development army as the structure through which to implement the maternal nutrition and IYCF education program. This structure was then developed into the mother to mother (M2M) groups and men group. Health extension workers (HEWs), and Agricultural extension workers (AEWs) were identified as the implementing partners at the district (kebele) level.

A comprehensive capacity building training was developed using and adopting materials from different sources. For the IYCF training, the project referred to *Alive and thrive* educational material. Alive and thrive is multi-country Gates-funded nutrition initiative. It focuses on three technical areas to save lives, improve health and nutrition, and reduce stunting: early breastfeeding, complementary feeding and maternal nutrition. It has been working closely with the Ethiopia Federal Ministry of Health (MoH), hosting trainings and producing context specific IYCF and maternal nutrition Information, Education and Communication (IEC) and Behavioral Change Communication (BCC) materials. ARNI selected the Alive and Thrive materials and adapted them for use in the ARNI project.

IEC BCC Material produced	#	Source	User	Print Date
IYCF quick reference (Afanormo version)	1000	Alive and Thrive	HEWs, AEWs, M2M group leaders	May 2012
IYCF quick reference (Amharic version)	4350	Alive and thrive	Men groups, M2M AEWs, and HEWs	May 2012
IYCF posters (Brief case)	9100	Alive and thrive	Men 2M groups AEWs, and HEWs	May 2012
IYCF recipes	9000	Tarik consulting	M2M, men groups	June 2014
Picture codes and flip charts on hygiene, gender maternal and child nutrition	2600		M2M, Men groups	Oct 2012

Training of Trainers (ToTs) for delivering the maternal nutrition and IYCF training began with a 3 day session May 23 – 24, 2012 where facilitators from Alive and Thrive trained 10 Care project staff and 4 MoH. In June 2012 CARE Ethiopia and Woreda Health Office staff cascaded the training to Health Extension Workers and M2M Support Group Lead Mothers (Women's Development Army). The training from June 2012 to May 2014 over two consecutive days in order to let the leaders facilitate group discussion at their village level related to IYCF and maternal and newborn health (MNCH) issues.

Topic	Dates	Cadre	Woreda	Kebele	Participants
IYCF and maternal nutrition training	Jun 2012 to May 2014	M2M Group leaders	Harmaya	11 kebeles	167 Females
			Kurfa chelle	9 kebeles	144 Females
			Doba	15 kebeles	156 Females
			Tulo	12 kebele	184 Females
			Total	47	651

The focus of training was to promote household and community practices such as exclusive breastfeeding, early initiation for breastfeeding, complementary feeding and overall child health issues. Besides training on maternal nutrition and IYCF, ToTs taught M2M Lead Mothers on how to establish M2M groups at the village level. A total of 403 Lead Mothers and 173 Men's Development Army leaders received the maternal nutrition and IYCF training. Three hundred and seventy-seven M2M groups were formed and met regularly. CARE project staff was responsible of monitoring the progress of the training and providing general education support. Field officers regularly attended M2M group meetings. Lead Mothers and HEWs kept a log of each meeting, number of attendees and topics discussed.

Indicator	Target	Total Project	Achievement
# of m/f leaders from M2M groups, VHWs, VSLA and other community support groups trained as trainers on IYCF and related maternal nutrition	173 Male CHPs	128	*Achieved*
	403 Female CHPs	503	
	144 VSLA Leaders	181	

Output 1.1.2 M2M groups, C/VHWs, and other community groups educated on IYCF practices, Maternal, nutrition, growth monitoring, and child-caring practices

The organized M2M groups are the platforms utilized to reach large number of women and men with IYCF and maternal nutrition education. All the leaders of 377 M2M groups facilitated regular discussions and dialogues in their groups. They also provided individual counselling and education to pregnant and lactating mothers in their village through home visits. The regular discussions conducted by the groups were all recorded on register book that indicates the list of participants and the topics discussed during each discussion session. The Lead Mothers also taught nutrition during holly days, and other community gatherings. In addition, ¨model families¨ were identified by the M2M leaders to be an active exemplar in their communities in terms of adopting healthy feeding practices. A total of 12,298 mothers were reached, and 8,560 women completed all the Alive and Thrive IYCF and maternal nutrition modules.

Woreda	# of M2M Groups	# of women
Haramaya	63	1463
Kurfachele	74	1589
Doba	148	3304
Tulo	92	2204
Total	**377**	**8560**

Indicator	Target	Total Project	Achievement
# of m/f leaders community members educated on IYCF and maternal nutrition	7900 F	8560 F	*Achieved*

Output 1.1.3 IYCF recipes developed using locally available food

Two locally appropriate IYCF recipes were prepared in such a way that all the necessary inputs taken from the locality and model mothers who are volunteers are used. Their say and demonstration were included in a recipe and more than 9000 copies were distributed to the targets. The varieties of food and ingredients incorporated in the recipe were harvested locally. These recipes meet the minimum acceptable diet requirements including diversity and meal frequency. The use of local resources and pictures of ¨model¨ mothers facilitated the learning and fasten the knowledge and skill transfer. Pictures of these model mothers were taken when they cook diet. Their preference on the content of the diet was also covered in the recipe.

Indicator	Target	Total Project	Achievement
# of new IYCF recipes using locally available foods developed or adapted	2	2	*Achieved*

Output 1.1.4 Cooking demonstrations organized with home economic experts, mother to mother groups and men groups

Cooking demonstration is one of the major activities the project implemented across 377 M2M groups and men groups. It is one of the critical components that the project emphasized to influence and to improve the feeding practices among children and mothers. Very practical, cooking demonstrations were an excellent mean to teach nutritional practices across the beneficiaries. Community members first attend IYCF education to learn the theory, and then they practiced the cooking using local food sources that fulfil the nutrient requirement for a complete diet. During big gatherings, public events and holidays, "Model Mothers" conducted the cooking demonstration with a detailed explanation of the mix of enriched food types and their nutritional values. They were attended by a large number of people. The cooking event considered on this output are only those conducted through the lead of district home economic experts on large events such as International Women's Day. A total of 25 big cooking demonstrations events were conducted. In addition, other smaller cooking demonstrations were conducted across all the mother to mother groups which were facilitated by the group leaders.

Woreda	# of cooking demonstration			Event	Participants
	2012	2013	2014		
Haramaya	3	2	1	Woreda and kebele Government leaders training	628 (429 m, 199 f)
Kurfa chelle	4	2	1	Cross woreda nutrition practice learning event, International women's day	418 (240 m, 178 f)
Doba	4	2	0	Cross woreda nutrition practice learning event, International hand washing day,	891 (302 m, 589 f)
Tulo	4	2	0	International hand washing day, Kebele leaders conference.	719 (309 m, 410 f)
Indicator:	*# of cooking demonstration sessions organized with home economic experts and VHWs*				

Total	**25**	**Target**	16	*Achieved*
Indicator:	*# of m/f attendees of these demonstrations*			
Total	1376 F, 1280 M	**Target**	480 F, 80 M	*Achieved*

Output 1.1.5 Men educated on optimal IYCF and maternal nutrition practices

Men discussion on IYCF discussion

Men's education was conducted through the existing Men's Development Army. Men's groups consisted of 25 to 30 members who regularly meet and discuss maternal and child nutrition among other issues such as gender, and vegetable farming. The men groups were most often supported by the Agricultural Extension Workers (AEWs) who were previously trained on IYCF and food diversity. Regularly, the AEWs facilitate IYCF and health discussions with men at farmer training centers (FTCs). The HEWs also supports men group education to complement the IYCF education and awareness discussion. Women and children nutrition including breast feeding (BF) and complementary feeding (CF), food diversity, and role of men to improve household (HH) nutrition were some of the discussion topics covered during these sessions. In the course of the project implementation period, a total of 311 discussion sessions were conducted to which 8432 men participated.

Indicator	Target	Total Project	Achievement
# of men receiving education on optimal IYCF/maternal nutrition and support	7900	8432	*Achieved*

Output 1.2.1 TOT conducted with community facilitators, social change agents and C/CHWs on Gender issues related to breast and complementary feeding practices

The CARE Canada Gender Advisor provided a 3-ay Gender Equality ToT in early 2012. ARNI organized trainings on gender issues related to breastfeeding and complimentary feeding practices for Men's Development Army Leaders, kebele leaders and managers in three rounds the first from January 7-8, 2013, the second from January 23 – 24, 2013 and the final on April 24 – 25, 2013. The trainings included decision making and control over child and maternal nutrition and used participatory learning such as group discussions. Participants developed action plans for their respective kebeles.

Dates	Participants		Cadre	Woreda	Kebele
	M	F			
Aug 2013 – Nov 2013	97	159	Mother groups, kebele leaders	Haramaya	15
	90	128		Kura chelle	9
	82	174		Doba	15
	101	200		Tulo	12
			# of sessions		
Sept 2013 - Dec 2014	714	431	485	Haramaya	
	519	391	469	Kurfa chelle	

	862	700	499	Doba	
	671	712	480	Tulo	
Total	**3086**	**2895**	**1933**		

During the first year of implementation, the training cascade covered 1031 community leaders and mother groups. However, in the last year of implementation, more than 1900 training sessions were organized in the fours districts. A total of 5981 villagers benefited from these trainings. It raised their awareness on gender issues such as household control over resources, household decision making, intrahousehold food distribution and segregation of duty.

Indicator	Target	Total Project	Achievement
# of m/f community facilitators, social change agents and CHW/VHW trained as trainers on gender issues	593 Female CHPs 395 Male CHPs	2895F (662 CHPs) 3086M (370 CHPs)	*Achieved*

Output 1.2.2 Training conducted with traditional and religious leaders on gender issues, women and child health and nutrition issues

Culturally religious leaders are the most respected persons, their opinion and saying is often well considered by villagers. One thousand eight-hundred and twenty-one (1821) religious leaders received training on gender, women and children health and nutrition. Topics covered were gender role, gender division of labour, access to resources, power relation, control over resource and decision making related to maternal and Child health and nutrition. Religious leaders shared these messages to their fellow, taught husbands to support women with household chores, to support wives during breastfeeding, and complementary feeding for children. They also conveyed these messages in mosques and other religious places. The training curriculum was developed by Zone and woreda nutrition experts and gender experts and facilitated by them. The engagement of religious leaders varied from one district to another. Some of suggested that because frequent travel to the city, they would not be able to engage as much with their communities.

Training of religious leaders (Doba)

Indicator	Target	Total Project	Achievement
# of m/f traditional and religious leaders trained on gender issues and children's health and nutrition	1639 male traditional leaders	433 F 1388M	*Achieved*

Output 1.2.3 New messages disseminated on IYCF, Health and Nutrition

Communities of East and West Hararghe have a culture of listening to the radio. By taking this as an opportunity the project planned to produce and transmit short radio messages in the form of dramas and dialogues. Accordingly, 2 radio messages on exclusive breast feeding, complementary feeding, men involvement in HH nutrition and hygiene and sanitation were prepared in local language and

transmitted through national radio and Oromiya radio. The messages were developed by contracting e consultants knowledgeable with the culture and language of East and West Hararghe.

The 3 to 4-minute messages were transmitted in 63 sessions; 25 during year two of the project (2013) and the rest of them during the last year (2014) of the project period. To ensure messages reached the target audiences, the project communicated the schedule of messages transmission in advance to M2M groups. All the groups were supplied with a radio and a flash player to which the messages are recorded. Villagers listened to the messages both from national transmission and from the flash player during their regular meetings. It is estimated that messages reached to a minimum of 11,220 listeners that are members of the 377 M2M groups. The feedback was collected by interviewing the community to reflect what they understood from the message transmitted through radio.

During the production of the first message in year one (2012), the project had challenges transmitting messages. The radio station which the project contracted was on hold after the contract agreement was signed because of the death of the Prime Minister of the country. As a solution, the project contracted local radio station (FM radio station) that covers only East Hararghe. For West Hararghe the message reached to population by using local mini-media.

Indicator	**Target**	**Total Project**	**Achievement**
# of new messages disseminated through radio and other local message formats on IYCF, health and nutrition	1	2	*Achieved*
Frequency of messages disseminated through radio and other local message formats on IYCF, health and nutrition	26	63	

Output 2.1.1 TOTs conducted on dietary diversity and nutrition with leaders of M2M groups, VSLAs, and other community leaders

Home economics experts from the government and project staff took a ToT on dietary diversity using the dietary diversity manual produced by the MoH. The training was cascaded the training to M2M groups December 31, 2012 in West Hararghe and April 26 – 27, 2013 in East Hararghe. The training was facilitated for 1700 (459 male and 1241 female) M2M group leaders and kebele leaders. The cascade training was facilitated by mother group leaders with the support of Agricultural Extension Workers (AEW). Home economics experts from government and CARE project staffs facilitated the trainings at the district level. The major topics covered were; the source and values of the different food groups, cooking habits, food storage, cooking and eating practices, quality of diet and its links to child development and health in general. The progress is documented on the register book which is kept with mother group leaders. The role of CARE staff was to monitor the continuous cascade training and education.

Dates	Cadre	Woreda	Kebele	Females
Oct 2012 to Dec, 2012 Jan 2013 April, 2013	M2M groups, VSLAs	Haramaya	15 kebeles	66
		Kurfa chelle	9 kebeles	74
		Doba	15 kebeles	148

		Tulo	12 kebeles	93
			Total	**381**

Dates	Topics	# of sessions	Woreda	Kebele	M	F
October 2013 up to December 2014	Dietary diversity and nutrition with leaders of M2M groups, VSLAs	49	Haramaya	15 kebeles	81	222
		44	Kurfa chelle	9 kebeles	99	191
		92	Doba	15 kebeles	179	204
		75	Tulo	12 kebeles	100	243
				Total	**459**	**860**

Indicator	Target	Total Project	Achievement
# of m/f leaders from M2M groups, CHWs, VSLA and other community support groups educated in dietary diversity and nutrition	1440 F	1241 F 459 M	*Achieved*

Output 2.1.2 TOTs conducted with AEWs on nutrition and food diversity to support production of nutritious food

Home economics experts who took the ToT training on nutrition and food diversity cascaded the training to AEWs May/June 2013 and January/February 2014. AEWs are deployed by the government and work on for the Agricultural Extension Program at the kebele level and report to the district agriculture office. Three hundred and ninety AEWs received the training between 2012 and 2014. AEWs then supported women and men groups through facilitating dietary diversity discussions and dialogues, and supervising the regular discussion by men groups and compiling progress reports of the discussions and dialogues. The major topics covered were: nutrient sources and values of different food groups, cooking of the different food types, food hygiene and storage. Components of IYCF Exclusive and continued BF, introduction and continuation of complementary feeding were also included in this training. This output was over achieved by 60% because the project decided to train all AEWs in Muskoka kebeles.

Indicator	Target	Total Project	Achievement
# of m/f AEWs trained as trainers in nutrition and food diversity to support the production of nutrition foods	97 F AEWs 145 M AEWs	138 F 252 M	*Achieved*

Output 2.1.3 M2M groups, VSLAs and C/VHWs trained on food diversity using backyard and community gardens to improve consumption and diversify diet

The project supported its target population to improve harvest of nutritious food sources such as egg, and vegetables at HH level. Selected vegetable seed, pullets, and goats that improve HH food harvest were supplied to 6547 HHs. In line with this, building the knowledge and skill of the target

community on how to harvest vegetables in the backyard, how to process, cook and store the project provided improved access diversified food sources. Households were selected based on individual HH food security status.

Input	Haramaya	Kurfacele	Doba	Tulo	Haramaya	Kurfacele	Doba	Tulo	Total
	2013				2014				
Pullets	1518	1293	1405	1405	1150	1150	1519	1505	10,945
Seeds	11 kg	9 kg	13 kg	8 kg	8 k	6 kg	8 kg	8 kg	63 kg
Goats	0	0	0	0	804	750	424	543	2521
Households	656	614	691	899	900	711	995	1081	6547

In addition, pregnant and lactating women were prioritized. This exercise was done through a committee represented by administration office health office, life stock agency, agriculture office and CARE staff. Inputs were distributed to households at different times. Vegetable seeds were distributed during belg/winter rain season, between February and April. Goats were distributed between the periods from February 2014 to July 2014. Pullets were distributed between March 2013 and May 2014. Backyard gardening and food diversity trainings were facilitated at the village level for 7516 M2M groups by AEWs and home economics experts.

Indicator	**Target**	**Total Project**	**Achievement**
# of trainings in food diversity using backyard and community gardens provided to M2M groups, VSLAs and CHWs	263 leaders 10 trainings 7900 mothers	377 leader/ promoters trained in 10 training sessions and cascaded to 7516 mothers	*Achieved*

Output 2.1.4 VSLA groups created

Because of its high value at empowering women, VSLA became a crosscutting issue to all development programs of CARE Ethiopia. This MNCH project implemented VSLA across all its operational kebeles. About 377 VSLA groups are established and supported with the necessary trainings and kits. These groups have saved a total of 1,632,850 birr with the highest saving per group of 18,260 birr. The report from HEWs who supervise and supports VSLAs indicated that more than 80% of the groups get loan access from their saving and engage in small trading.

Woreda	# of VSLA	Savings in birr	Uses for social fund	Provisions for nutrition and health in their constitution
Haramaya	63	123,151	58% have social fund	All groups integrated health and nutrition discussion in their constitution
Kurfa chelle	74	159,940	78% have social fund	
Doba	148	600,804	83% have social fund	
Tulo	92	748, 955	86% have social fund	
Total	**377**	**1,626,850**		

Initially the plan for this output was only to create 144 VSLAs. During the project implementation, CARE staff learnt that the M2M groups were also interested in the saving group activities. In order to include

them, the number of VSLAs rose to 377. The VSLA and the M2M groups are composed by the same women. They carry out both finance and health related discussions. Thus, mothers learn about child and maternal practices while saving money at the same time.

VSLA groups on IYCF disussion, Kurfa chelle district

The social fund is a sort of saving collected and registered in a separate book. It is used when someone from the group faces a catastrophic HH expenditure such as a health issues. Group members can use the Social Fund without having to pay it back to the group. The report from HEWs indicated 76% of the VSLA groups have a Social Fund. Loans are used to start small trading and generate money. Some people trade chat, grain, fruits and vegetable. With the profit, members are able to purchase food which to complement what the harvest. Reports collected from HEWs indicated that 80% of the groups provide loan service to members.

Indicator	Target	Total Project	Achievement
# of VSLA groups created	144	377	*Achieved*
# of women in leadership positions in newly created VSLA	90%	100%	

Output 2.1.5 VSLAs trained on IGA, animal rearing activities and new seed varieties to improve access to high nutrient foods (chicken, goats, vegetables, etc…)

In order to revolve the saved money described under output 2.1.4 and enabling VSLAs to improve their income, small income generating activities (IGA) trainings were provided to VSLA members. The training was facilitated by partners from microfinance office who had taken IGA-SPM (selection, planning and management) TOT training. The major topics covered are adult learning, IGA concept and definition, elements of IGA, IGA planning and management.

Dates	Participants	Woreda	Cadre	Post test Results
March 2013	6 m	Doba	Woreda Microfinance and cooperative staffs	27(90%) passed the post-test exam
	6 m	Tulo		
	4m, 1 f	Haramaya		
	5m, 1 f	Kurfa chelle		
Total	21 m, 2 f			

A total of 2800 people are addressed by this training. The training was provided by project staff with experience working on microfinance and IGA focusing mainly on small business planning and management. The cascading training targeted only women because the project worked with the VSLA/M2M groups.

Woreda	Dates	Topics	Cadre	# of round	# of female
Haramaya	April 2013 through July 2013	IGA-SPM training	VSLA members	4	690
Kurfa chelle				3	588

Doba				5	809
Tulo				4	690
				Total	**2777**

Indicator	Target	Total Project	Achievement
# of VSLA members trained in IGA animal rearing activities and new seed varietals	1728 F 432 M	2777 F	*Achieved*

Output 2.1.6 Linkages established between backyard and community garden producers and VSLAs

To create a sustainable vegetable market that VSLAs access at their vicinity, the project strengthened 8 Farmer Training Centres (FTCs) by providing basic IYCF and food diversity training to 10 (9m, 1f) FTC staff (like AEWs). FTCs are institutions established at the kebele level in order to train farmers on modern cultivation under supervision of woreda agriculture office. The FTCs have farm land by which they demonstrate modern cultivation to farmers. The FTCs were also provided with vegetable seeds, farm tools and other inputs. The FTCs were linked with VSLAs and became a learning center. Mothers visit them to learn about harvest of vegetable and proper cooking of enriched diet. Different to the condition before Muskoka project, FTCs continually harvest and sell vegetables to VSLA members, 497 of whom purchased vegetables from FTCs.

Indicator	Target	Total Project	Achievement
# of VSLA members who use funds to purchase new seed varieties or micronutrient rich fruits and vegetables for family consumption		497	*Achieved*

Output 2.2.1: TOTs conducted with community facilitators, social change agents, groups, C/VHWs, midwives and local leaders on the link between women's decision making for improved maternal and child nutrition

A total of 625 religious leaders and 255 health workers who have a potential contact with mothers and fathers have taken these trainings. The training curriculum was developed by zone and woreda nutrition experts and gender experts who also facilitated the training. The experts explained the consequences of gender inequality on health and nutrition status of children, mothers, and the household in general.

Indicator	Target	Total Project	Achievement
# of VSLA members who use funds to purchase new seed varieties or micronutrient rich fruits and vegetables for family consumption		497	*Achieved*

Output 2.2.2: Key messages with doable actions disseminated on women's authority to make decisions to improve dietary diversity and household nutrition

While working on the household burden to be shared between the couple, it was necessary to promote women's authority to decide and act on what food to provide to household members particularly the children. In this regard, the project produced radio massages that teach about benefits of increasing

women authority to make decisions on dietary diversity and transmitted it in 38 sessions by contracting radio air time from Oromiya radio and television organizations.

Indicator	Target	Total Project	Achievement
# of new messages disseminated through radio and other local message formats on women's authority to make decisions to improve dietary diversity at the HH level	1	1	*Achieved*
Frequency of messages disseminated through radio and other local message formats on women's authority to make decisions to improve dietary diversity and HH nutrition	26	38	

Output 2.2.3: Community groups organized to discuss social and cultural issues focused on gender and power relations using the SAA approach

The common social norms associated with gender and power relations were explored using social analysis and action approach (SAA) a method for community dialogues. This method was used to promote dialogue towards social behavior change. SAA builds upon the community action and project cycle, adding critical reflection and dialogue on social norms and attitudes that influence health. SAA is an ongoing process of reflection and action, which includes three key elements. The key elements include the following: 1) analysis and exploration, 2) understanding and seeing things differently, and 3) action for improved health. The approach assists in providing open space for discussion of social norms that influence health and nutrition in the respective communities. Throughout the project life, 24 community groups were organized at village level to discuss common gender and social norms related to maternal nutrition and IYCF. The organized groups had at least one facilitator trained on SAA. They also received supportive supervision by AEWs and HEWs. With such chain of support and discussion structure, the power relation which mostly owned by men were challenged. As a result, men started sharing HH works, like cooking food, caring for children, and compound sanitation.

> *Mohammed Dawud from Bakelch Biftu Kebele, Doba "I was assuming all the works I do now are the tasks of women. Because of the discussion I attended in SAA, I learnt there is no instinctive division of work for men and women. Now I am committed to support my wife with any kind of work in our house."*

Indicator	Target	Total Project	Achievement
# of community group sessions organized to discuss social and cultural issues focused on gender and power relations using SAA	24	24	*Achieved*

Output 2.2.4: SAA modules adapted (to include gender, health, nutrition and hygiene issues)

CARE Ethiopia adapted CARE's SAA manual originally designed for sexual and reproductive health programming for nutrition. The SAA manual contained covered the following major topics: perception and authority related to child and maternal care, role and involvement of men on household task and child nutrition, authority and experiences in life time during child feeding and caring and misconceptions of exclusively breast feeding. A total of 641 copies were produced and distributed for all SAA groups and government sectors supporting the SAA process. The SAA process was facilitated by picture codes which were produced based on the assessment done in the community to support facilitators discussion

of challenging questions. The picture codes are pictures with the local dressing and environment. CARE Ethiopia then supported CARE Zimbabwe in their pilot of SAA in Zaka by providing training and an English translation of the adapted SAA manual.

Indicator	Target	Total Project	Achievement
# of SAA modules adapted to include a focus on gender, nutrition and hygiene	1	1	*Achieved*

Output 3.1.1 Health service providers trained in IYCF, maternal and child health, nutrition and gender issues

Year 3 activity: ARNI provided maternal nutrition and IYCF training to health service providers for three days from January 14 – 16, 2014 in Haramaya and April 2-4, 2014 in Kurfa Chelle. In West Hararghe the training was conducted with integrated nutrition counselling April 14-7/23-26, 2014. The major topics addressed in the training were EBF, complimentary feeding, hygiene and sanitation and food diversity. Health service providers play a key role in counselling and educating the target commuity about IYCF maternal nutrition and gender issues. In their usual duty, health service providers provide group counselling in health institutions and during home visits.

Health Service providers role play

In total, 373 participants (171 m, 202 f) received a 3-day training on IYCF, maternal and child health, nutrition and gender issues. Almost all the participants passed the post-test. The major topics addresed by this training were Exclusive breast feeding, complimentary feeding, Hygiene and sanitation and food diversity. Health workers then provide nutrition counselling at health facilities and through home visits.

Indicator	Target	Total Project	Achievement
# of m/f health service providers trained on IYCF, maternal and child health and nutrition and gender issues	153 F 102 M	202 F 171 M	*Achieved*

Output 3.1.2 Health service providers trained in optimal breast- and complementary feeding, micronutrient consumption and food diversity

This output was integrated with output 3.1.1.

Output 3.1.3 Health service providers, CHWs, groups and VSLAs trained on the use of the community scorecard (CSC)

Community score card (CSC) is two-way community based participatory monitoring tool. It ensures accountability; improve service quality and transparency between supply and demand sides. Moreover, the project adopted this approach to increase the utilization of health and nutrition services by women and children. A TOT and cascade CSC trainings were provided to health service

CSC training, Dire Gudina health center

providers and community members. A total of 581 (263 m, 318 f) have got the training. The project also supported introduction of the tool in 8 health centres where by the health centres able to see the quality of services and the image of the institution by the service users.

Through a process of meeting, introduction, scoring, interphase, action planning and follow up supports health facilities to know the expectation of service users and identify gaps in service delivery. Meetings are followed by the preparation of action plan which is implemented and reviewed regularly. Through this processes, the community and health service providers participate jointly in improving service provision. Some of the achievements obtained in the health centres through CSC process are: improved drug availability, and increased client flow, availability of staffs at duty and duty off hours. In each of the 8 health centres using the CSC health service provider performance scores increased.

Topic	Date	M	F	Cadre	Woreda	Kebele	1st score	2nd Score
CSC Meetings	Aug 2012	104	89	HEWs, HSPs and M2 M leaders, male group leaders and other community members	Haramaya	15	*30*	*76*
	Oct 2013	70	60		Kurfa Chelle	9	*29*	*81*
	Jan 2014	48	91		Doba	15	*33*	*90*
	Feb 2014	41	78		Tulo	12	*31*	*88*
	Total	**263**	**318**					

Indicator	Target	Total Project	Achievement
# of attendees at trainings directed to CHWs, M2M group members, and VSLA members trained on use of CSC	153 F 102 M	263 F 318 M	*Achieved*

Output 3.1.4 CHWs trained in 3A approach for participatory action planning

Activity dropped because of similarity with Alive and Thrive training modules.

Output 3.2.1: Referral network established/supported between local health care providers, groups and CHWs for health services, including ANC and PMTCT services

The purpose of the referral system is to support the increase of health service utilization by children and women. To this end, the project in collaboration with zonal and woreda health offices identified areas of support in the community and in the health institution. Some of the identified areas of support are outreach antenatal care, PMTCT, and support to traditional birth attendants (TBA). Accordingly 496 TBAs and M2M groups were supported (provided orientation training) to refer maternity cases including labor to health centre rather than trying to deliver at home. In addition, 450 copies of short messages that promote referral of maternity cases were printed on umbrella, t-shirts and bags and distributed to TBAs and other community members. Simple and appropriate referral forms (34,000 copies printed) which are used to record basic information were also developed and provided to TBAs and M2M group leaders. HSP and HEWs were oriented about the referral and supported to do outreach antenatal and PMTCT services in connection/collaboration with the TBAs and M2M group leaders. A total of 370 service providers (volunteers and Government health workers all female) are supported on the above specified topics.

Indicator	Target	Total Project	Achievement
# of health care providers trained in the referral process including ANC and PMTCT services	95 M 160 F	370 F	*Achieved*

Output 3.2.2 Learning exchanges conducted with groups, VSLAs, CHWs and community facilitators on maternal and child health service recommendations, access and referrals

Learning event at Kurfa Chelle district

In order to scale up these best practices, the project organized 5 big cross woreda and cross kebele learning events. Men and women who changed their behaviour and did excellent in IYCF and maternal nutrition were selected to share their process of change and to show their cooking skills by doing a demonstration.
During this learning event there has been a panel discussion on EBF but also an *award ceremony* were conducted to recognize the efforts of community volunteers an approximate of 1402 people attended the event. The most unexpected part during the event was to watch men cooking an enriched diet. In addition, there was a woman teaching the theory and practice of HH nutrition and food preparation almost like a graduate nutrition teacher. Government partners were pleased to observe how the ARNI project had appropriate strategies and approaches. They were impressed by the tangible results in changing the nutrition and health practices of mothers and children. Zonal health office requested CARE staff to organize a learning event where other NGOs in the area were invited to exchange ARNI project knowledge.

Indicator	Target	Total Project	Achievement
# of learning exchanges conducted with M2M groups, VSLAs, CHWs and community facilitators on MCH service recommendations, access and referrals	4	5	*Achieved*

Output 3.2.3 Linkages strengthened between VSLAs, health service providers and other social support programs through community health days

The MoH cancelled National Health Days. Activity not implemented.

Indicator	Target	Total Project	Achievement
# of National Health Days commemorated at the community level	8	0	*Not achieved*

Output 3.3.1 Trainings conducted with women's groups on gender issues regarding health care decision making at the household level

Year 3 Activity: To improve the health and nutrition of children and women, CARE emphasized supporting women's decision making at the HH level. Health care decision making training was provided for 1896 women members of M2M groups. Sixty-five (65) men were also involved in the training. The training was conducted from February 6-7 and May 26-27, 2014 in East Hararghe and from April 14-17/23-26, 2014 in West Hararghe. Most trainees were illiterate so the training was adopted to this audience.

Indicator	Target	Total Project	Achievement
# of attendees at trainings conducted with women's groups on gender issues related to health care decision making at the HH level	1586	1896	*Achieved*

Output 3.3.2 Health service providers, C/VHWs and midwives trained on gender issues and counselling female clients on the importance of decision making and referral authority at the HH level

Between March and September 2013 a total of 255 health service providers and 419 M2M group leaders have got this training. Health service providers targeted for this training to improve their capacity at counselling female and male clients at the health facility on women's decision making and referrals. Accordingly service providers are selected from maternal and child health unit in health centres. The mother to mother groups are also trained to transform for their own and to negotiate with husbands with regard to their authority and decision making in the HH. The training was facilitated by gender experts from woreda women affair office. Post-test results show an increase of over 130%.

Indicator	Target	Total Project	Achievement
# of m/f health care workers, CHWs, VHWs and midwives trained on gender issues and to counsel female patients on the importance of decision making and referral authority at the HH level	630 M 30 F	181 M 493 F	*Achieved*

Output 3.3.3 Trainings conducted with specific groups including men, on gender issues regarding health care decision-making at the household level

To improve the health and nutrition of children and women, women and men received trainings that supported them making the right decisions in the HH. Six-hundred and eleven (611) women and 692 men received counselling on how to take decisions at the household level when for example there is a need to visit health services. Observations from CARE Ethiopia and government gender experts suggest that that the number of women requiring permission from their husband to visit health facilities has decreased over time.

Indicator	Target	Total Project	Achievement
# of m/f trained on gender issues regarding health care decision making at the HH level	638 M 637 F	692 M 611 F	*Achieved*

Output 4.1.1 Household hygiene and sanitation behaviour change groups established

Year 3 activity: In order to reduce the incidence of diarrhoeal disease among children and women, improvement in the hygiene and sanitation practices is crucial. Therefore the project established 51 kebele level behaviour change groups. The groups work on kebele based hygiene and sanitation activities. The major activities organized were: initiate and facilitate hygiene and sanitation discussions at public gathering (mosques, public holidays, etc.), cleansing and protection of water sources. They also examined village and kebeles to identify dirty areas to which they take appropriate action together with villagers. Finally, they counsel mothers to provide oral fluid for children with diarrhoea and to take them

to health facility while giving oral fluid. One thousand eight-hundred and eighty-eight (1888) villagers benefited from these activities to learn and adopt hygiene practices.

Indicator	Target	Total Project	Achievement
# of HH hygiene and sanitation behaviour change groups established	102	102	*Achieved*
# of m/f members participating in HH hygiene and sanitation behaviour change groups	1530 M 1530 F	1888	*Under achieved*

Output 4.1.2 Community mapping conducted to inventory hygiene and sanitation conditions and Issues

Incidence of diarrhoeal disease is highly related to environmental waste management. In a well-managed environment there is less incidence of diarrhoea. To reduce the incidence of diarrhoea among children and women, it is necessary to promote and support proper waste management. Therefore, the project supported 52 (100%) community mapping events by which the potential sources of infection/ infectious areas were identified and general cleansing and disinfection was done through mobilizing the community and conducting sanitation campaign. As a result of the mapping, 47 pond water and water points were cleansed and fenced, 52 villages are cleansed through total sanitation campaign.

Indicator	Target	Total Project	Achievement
# of community maps developed with hygiene and sanitation conditions and issues identified	51	51	*Achieved*

Output 4.1.3 M2M groups, and VSLAs, and trained on improved hygiene and sanitation, water handling and food preparation and links to diarrhoea

Diarrhoeal disease is one of the major causes of morbidity and mortality among children. Most of the incidences of diarrhoea in the project operation areas are communicable disease (hygiene and sanitation related). ARNI planned to address diarrhoeal disease through supporting hygiene and sanitation activities. In line with this, the project provided Hygiene and Sanitation training to the 51 target kebele members, including the M2M group members. The topics covered were fecal contamination, compound sanitation, cleansing and treatment of water, waste disposal, personal hygiene, food preparation, handling and hand washing. Between May and August 2012 the project conducted the first training with 297 men and 663 women. Between June 2013 and February 2014 project staff trained a second group of 138 men and 594 women. Project staff trained a total of 1692 (435 m, 1257 f) who are now are facilitating hygiene and sanitation discussion at village level**.** The trained members then educate M2M group and other community members in their village. As a result of this, the number of people practicing proper waste disposal, water treatment and save handling, clean cooking procedure increased. In fact, during field visits, project Field Officers observed that some community members had constructed and used the latrine, and boiled the water for drinking.

Indicator	Target	Total Project	Achievement
# of m/f group members trained on improving hygiene and sanitation, water handling, food preparation and links to diarrhoea	320 M 1280 F	435 M 1257 F	*Achieved*

Output 4.1.4 Messages disseminated on improved water and sanitation and health promotion activities with communities and households

While working on community capacity on hygiene and sanitation, the project also produced and distributed hygiene and sanitation messages, and pictures that provoke discussion and dialogue to women and men groups. Four-hundred and ninety-nine (499) copies of hygiene and sanitation pictures that imitate discussion and dialogue were produced and distributed to the project targets. A one-minute hygiene and sanitation message was also transmitted in 63 sessions through national and local radio stations.

Indicator	Target	Total Project	Achievement
# of new messages disseminated through radio and other local message formats on improved water, sanitation and health promotion activities	1	1	*Achieved*
Frequency of new messages disseminated through radio and other local message formats on improved water, sanitation and health promotion activities	26	63	

Output 4.2.1 Train M2M groups, teachers and other local groups on behaviours that lead to diarrhoea prevention, treatment (including ORS) and when to seek medical attention

Along with training the M2M group members (output 4.1.3) the project also trained teachers and students to support hygiene and sanitation activities within schools. Accordingly, 337 school teachers, students and M2M group leaders were trained on healthy behaviours and practices that led to diarrhoea prevention and treatment. Using the cascade model, the trained teachers and M2M group leaders facilitated discussions and dialogue to women groups, men groups, and other community members to which 6083 benefitted. The major topics covered were hygiene and nutrition, hygiene and health, contamination cycle, waste management at HH and community levels, and preparation of safe drinking water. The trained school teachers also established 28 health and nutrition clubs within primary schools. These clubs stimulates behaviour change activities in school and out of school. These clubs have been releasing short nutrition and hygiene messages through mini-media, theatres (drama), and music.

Indicator	Target	Total Project	Achievement
# of m/f group members and teachers trained on behaviours leading to diarrhoea, diarrhoea prevention, treatment including ORS and when to seek medical attentions	3160 M 4740 F	2051 M 4364 F	*Achieved*

Output 4.3.1 TOTs conducted with community facilitators and social change agents on gender equality and women's decisions related to household hygiene and diarrhoea

Gender equality and women's decision related to hygiene and diarrhoea training was provided to 273 HEWs, M2M Lead Mothers and AEWs between March 2013 and June 2014. They were responsible on

passing their knowledge at the community level. Therefore they provided counselling and education to households during home visits and community gathering.

Indicator	Target	Total Project	Achievement
# of m/f community facilitators and social change agents trained as trainers in gender equality and women's decision –making authority related to HH hygiene and diarrhoea	150 M 123 F	164 M 109 F	*Achieved*

Output 4.3.2 SAA dialogues conducted with men around hygiene and women's decision- making authority at the household level

SAA is one of the approaches the project had used to address social norms and values that affects health and nutrition of women and children. Hygiene and Sanitation are one of the dialogue sessions included in the SAA discussion manual (Output 2.2.4) that was prepared and distributed to targets by the ARNI project. Therefore, household hygiene and women decision making authority dialogues were conducted among 6924 participants. The discussion explored how household hygiene and sanitation duties are considered women's duty only. Those beliefs were challenged through a process of dialogue. The discussion elucidated hygiene and sanitation activities that men can participate and support. Preparation of pits for latrine and waste disposal pit, caring for children hygiene, washing closes are activities that men started to work on and support their wife. As a result of the continued discussion and dialogue among men, HH and compound waste management and other hygiene activities like washing children's clothes became shared responsibility of men and women in most kebeles of the project operational woredas.

This activity was underachieved by over 45% mainly due to the resources needed to implement the SAA dialogues in terms of staff time to provide training and monitoring. The targets (higher than those for any other component of the project) were too ambitious, especially given the nature of the project where the main intervention is a maternal nutrition and IYCF education conducted through M2M groups.

Indicator	Target	Total Project	Achievement
# of attendees at SAA dialogues around hygiene and women's decision making authority at the HH level	3200 M 9600 F	5500 M 1424 F	*Underachieved*
# of community volunteer and mother group facilitators trained on the content as well as facilitation skills to share this information with community groups	400 M 1200 F	76 M 891 F	

5.1.2 Immediate Outcomes

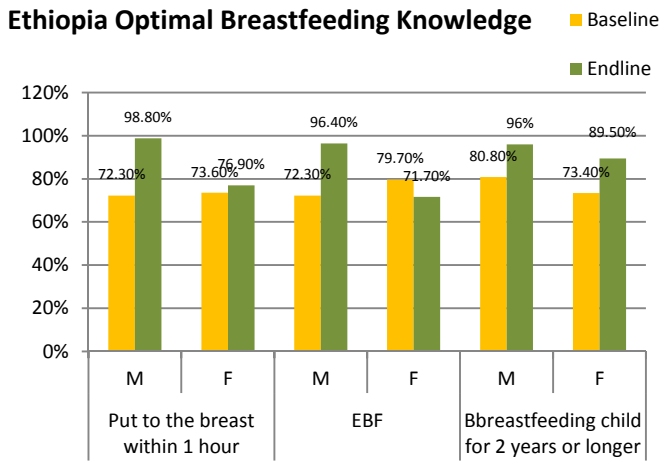
In order to measure progress on project performance and monitor ongoing program implementation, the project implemented mixed methodologies including qualitative and quantitative methods. In Ethiopia, CARE conducted an assessment at baseline in April 2012, mid-term in August 2013 and endline in January 2015 and included a household survey, anthropometric measurement, focus group discussions and key information interviews. Focus groups discussions with women, mother-in-law and men were also conducted as part of ongoing supportive supervision conducted by CARE Ethiopia.

Rolling profiles are a qualitative tool for longitudinal study. The project conducted interviews with the same households periodically (every 6 months) across the life of a project. It helped understand how that particular individual is changing – or not - (in terms of knowledge, behaviours, actions, and interactions), and the factors that influence that change. Health management information system data was collected at the Woreda level to track Outpatient Therapeutic Program utilization.

IO 1.1 Improved knowledge of women and men on optimal maternal and child feeding practices

Indicator	Gender	Baseline	Endline	Target	Achievement
% of men and women who report that a newborn baby should be put to the breast within 1 hour	M	72.3%	98.8%	90%	Achieved ✓
	F	73.6%	76.9%	90%	Not achieved ✗
% of men and women who report that a mother should give her baby only breastmilk for the first 6 months	M	72.3%	96.4%	90%	Achieved ✓
	F	79.7%	71.7%	90%	Not achieved ✗
% of men and women who report that a mother should continue to breastfeed her child for 2 years or longer	M	80.8%	96%	90%	Achieved ✓
	F	73.4%	89.5%	90%	Achieved ✓

The level of knowledge of women and men on optimal maternal and child feeding practices has significantly improved for men with more moderate improvements overall for women. For men, knowledge of early initiation increased by 37%, EBF by 33% and length to two years up 13%. For women, knowledge increased significantly for length by 22% and by 5% for early initiation but decreased for EBF.



In total, the project reached 8560 women that are part of the M2M group or about 23% of the population of pregnant and lactating women in the project implementation area. From the endline survey 77% of women participated regularly in a M2M group with most M2M groups meeting on a weekly basis supported by CARE Field Officers and Health Extension Workers. Lead mothers were able to reach more mothers to facilitate discussions around health and nutrition by dividing larger M2M groups into smaller ones in order to have more intimate discussions. As a result, Lead Mothers selected and trained other potential leaders who carried out similar function. As a result, Lead Mothers created 57 additional M2M groups.

Endline results also show significant program exposure for men with 57% participating in a Men's Development Army group related to maternal and child nutrition. Eighty-four percent of women and 55% of men participated in cooking demonstrations. Although the project had higher exposure amongst women, the self-reported knowledge for women increased 5% for early initiation and actually decreased by 10% for EBF. These findings are somewhat inconsistent with what is being reported in practice and the baseline where with the exception of early initiation knowledge was higher than practice.

Endline FGDs demonstrate that men, women and mothers in law are able to understand why infants should be given breastmilk within one hour after the birth in order to provide special protection from illnesses. In addition, many households learnt that breastmilk alone contains all the nourishment a baby needs for the first six months of life. FGD participants could explain the healthy benefits and why it is important to EBF. In many cases, FGD participants recollected not having knowledge prior to the ARNI project regarding maternal and child health and nutrition practices. Women were able to observe and compare the health status of other children that received water and food at an early stage, children exclusively breastfed were observed to be healthier. Men and women also benefited greatly for the hands-on experience on preparing nutritious food for infants greater than 6 months and young children, reportedly having used many of the recipes in the recipe book developed by the ARNI project.

IO 1.2 Increased authority and capacity of women to make decisions regarding breast and complementary feeding practices

Indicator		Baseline	Endline	Target	Achievement
% of women who make decision about when and how often to breastfeed their girl or boy child	Respondent	81.9%	58.8%	>10% increase	Achieved ✓ (Joint) Not achieved ✗ (woman alone)
	Respondent w/ husband	13.6%	40.6%		
% of women who make decisions about when to start complementary feeding for girl or boy	Respondent	75.3%	43.6%		
	Respondent w/ husband	19.4%	55.2%		
% of women who make decisions about how much food to give their boy or girl child	Respondent	84.5%	72.2%		
	Respondent w/ husband	11.6%	27.3%		

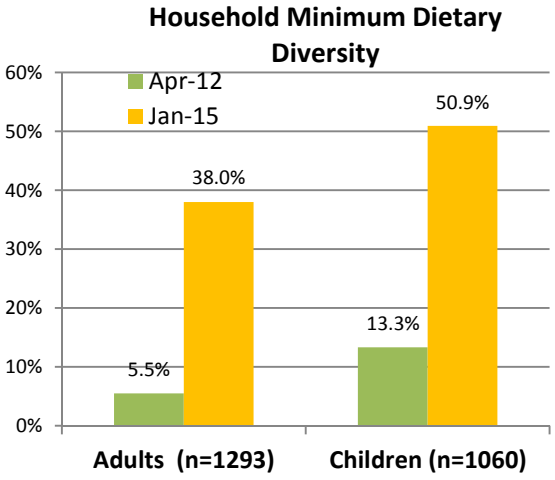
Joint decision making between men and women related to child feeding practices appear to be increasing. As described in the previous outcome, men's knowledge of optimal breastfeeding practices seem to have increased significantly more than woman's. While joint decision making in relation to complimentary feeding is important, women should have some autonomy to decide on breastfeeding practices as they affect a woman's own health and well-being. In this case, joint decision making increased for decisions about breastfeeding, from 13.6% to 40.6% while at the same time women's decision making alone for breastfeeding declines by 40%. Positively, joint decision making with regards to child feeding practices increased similarly and presents a likely more encouraging trend as men engage in the welfare of their children, traditionally seen as a woman's domain.

By acknowledging the male dominated decision making in households, the project worked with key community groups and provided context specific gender trainings that support women's capacity and authority to decide on child caring, specifically breast and complementary feeding practices. Religious leaders and other influential members promoted women's autonomy to decide on the care and feeding of children in the household. They also promoted and educated villages about supporting a lactating mother at home and outside home. The IYCF discussion conducted among men's groups also played significant role to create knowledge about good nutrition and thus support women at breastfeeding and complementary feeding.

IO 2.1 A variety of nutritious food is more equally available to men, women, boy and girls at the household level

Indicator of minimum diversity diet		Baseline	Endline	Target	Achievement
% of women aged 15-49 and men aged 15-64 who consume 5 or more of the 9 food groups	M	5.5%	37.1%	9.5%	Achieved ✓
	F	5.5%	39.2%	9.5%	
Ratio of men to women who consume 5 or more of the 9 food groups		1:1	1:0.914	1:1	
% of girl and boy children 6-23 months who consume 4 or more food groups	M	15.8%	48.9%	16.8%	
	F	10.8%	53.4%	14.8%	

The household survey collected precise information about what each member of the household ate during the last 24 hours. With this data, the indicator generated is called the minimum diversity diet. It is reflected by the consumption of at least five of the ten food groups. The table and the graph show a significant increase in the number of households who have meet the WHO's minimum dietary diversity requirements with a more than 200% increase in dietary diversity scores between 2012 and 2015.



Focus groups discussions explained how women, men and children were able to access a greater variety of foods. First of all, they were more conscious of the nutritious meals and were able to apply at home preparations of enrich diet and to feed household members including children. Secondly, families in need were given seeds for various vegetables and legumes, they were encouraged to share or trade foods with other community members, as needed. The agricultural extension workers trained women and men on backyard gardening and food diversity. Some families received chickens or goats and were advised to keep the eggs and milk for household consumption rather than sell them at the market in order to buy biscuits or macaroni, as was the previous practice. Finally, the project supported the establishment of VSLAs, IGAs training which gave them the opportunity to access more food groups. It is the combination of these enabling factors that allowed families to access and to consume a bigger variety of food.

In terms of equal access to food, the quantitative results translate a ratio man to woman is slightly in favour with women. However, the qualitative data show a fair amount of variation around this topic. Children were generally given first priority at meal time. Then, depending on the household, either the couple ate together, or the man would eat first, followed by the woman. Alternatively, the woman would eat second, and then finally, the man would eat. Variation appeared to be affected by the man's work, the relationship between the couple, and whether it was a period of food surplus or food shortage. This household dynamic is further analysed in the next gender related indicator.

The qualitative data demonstrated that knowledge about the importance of nutrition for all family members has increased, but especially around children and pregnant or lactating women. Women who had previously been informed they should avoid certain foods such as vegetables or fruits or avoid gaining too much weight were surprised to learn that these beliefs were incorrect. Interviewees were able to accurately verbalize the information they had learned during trainings and interactions with health providers about how to prevent nutrition deficiencies. Importantly, men could also articulate the critical role they played in enabling these healthy habits.

IO 2.2 Increased authority and capacity of women to make decisions regarding improved household nutrition and consumption

Indicator		Baseline	Endline	Target	Achievement
% of women who make decision about Their own food intake	Respondent	77.3%	51.1%	>5% increase	Achieved ✓ (Joint) Not achieved ✗ (woman alone)
	Respondent w/ husband	11.6%	42.6%		
Proportion of women who make decisions about what food to buy for their family	Respondent	75.3%	43.6%	>10% increase	
	Respondent w/ husband	19.4%	55.2%		
Proportion of women who make decisions about how food is distributed within the household	Respondent	84.4%	70.6%	>5% increase	
	Respondent w/ husband	4.6%	28.1%		

The household survey shows an increase in jointly decisions regarding food consumption and distribution within the family. Inevitably, this reduces the responses of women that take the decision alone. In order to achieve this indicator, the project organized many gender and household nutrition discussions and counselling among 377 mother groups, men groups. The social analysis action (SAA) was also a tool used to address the social, economic and cultural factors that influence health. The project staff worked with communities to identify linkages between social factors and health and then determine how to address them.

A consultant conducted FGDs with mothers to better articulate the household decision making process. During the mid-term, the analysis indicated that most of the mothers were able to decide and buy food and diversify household diet without interference from husbands. Qualitative reports from HEWs and AEWs indicated that women's economic support through IGA and VSLA, coupled with men's understanding about nutrition created conducive environment for women to make decisions regarding

improved household nutrition and consumption. These FGDs were conducted during the period of plenty in late August 2013.

In the endline focus group discussions (January 2015), the discourse was less homogenous and positive. Depending on the family, either the man ate next, or the couple ate together. Men often reported that they ate after the children because they had to return to work in the field. However, one man from East Hararghe stated that during food shortage seasons, that he ate first, then the kids, then finally the woman. A mother in law from the same region, explained that "during food shortage and food insecurity, food is first served to her husband, followed by baby, then if there is left over, women will finally eat. In food surplus time, the food distribution is similar amongst family members, but in food shortage times, mothers are always in danger". Similar information was echoed by another woman: "When there are shortages in resources in the household, the share increased for the husband and the mother shouldered the challenges. Since the husband and children have no tolerance for hunger, the mother give a chance to the husband and children to eat, then she would look for other options of getting food" (Mother in Law group, West Hararghe). Finally, another woman expressed that men also gave priority to children and then to pregnant and lactating women, but that during normal times (when woman not pregnant or lactating), that women gave priority to the husband (Woman, Mothers to Mothers group member, West Hararghe). In other cases, the FGDs highlighted stories from women where they have been empowered to fight for their rights and to have a say in the household.

"My husband always wants to dominate over everything in the house; he did not want me to involve in any of decision of resources: sell of chat, plantation, purchase and sell of cattle". As a result of discussions with gender officer and M2M groups, I understood the unfair decisions of my husband to control everything alone. Therefore I started challenging him and negotiated to jointly decide in some household issues. He is now convinced that dual decisions have significant positive impacts including reducing burden from his shoulder. Now, we have reached on consensus to share decisions over everything in the house hold."

IO 3.1 Improved ability of nutrition and health related service providers to deliver services appropriate to men, women, boys and girls

Indicators		Baseline	Endline	Target	Achievement
Number of service providers who complete the ¨augmented training¨ the program will deliver	n/a	n/a	255	255	Achieved ✓
% of service provider who successfully pass the post-training assessment test	n/a	57%	97.3%	100%	
Proportion of respondent surveyed who reported being ¨very satisfied¨ with their health provider visit	M	14.6%	60% increase*	22%	
	F	13.7%		22%	

*data from community score-card (CSC)

Health service providers play a key role to improve the health and nutrition status of women and children. They are the potential groups who contact lots of the service users and train and counsel about child caring, feeding, treatment and other services. The project seek to address both quality and access by improving skilful and communicative services providing to clients and by encouraging health service providers to engage with mothers and their children during M2M support groups and other contact

points in the project. Therefore, the project supported training of 255 health service providers on IYCF and maternal nutrition. Once trained, the health staff was more able to provide nutrition counselling to reproductive age mothers encountered in sick baby clinics, vaccination room, and family planning room. The post-test assessment is a good indicator that the health staff gained new knowledge related to infant and maternal nutrition. Almost everybody had passed it in comparison to half of them passed at the beginning.

Unfortunately, the data collected at the endline survey did not include a question about client satisfaction of health services. However, by using the monitoring data collected by the project staff, it is possible a proxy indicator shows that women are appreciating the health services received. In addition, to increase the number of mothers reached by nutrition counselling, health services provided outreach nutrition counselling at the village level especially for pregnant and lactating mother groups. 91.1% of the mothers received counselling about infant and young child feeding. It demonstrates that the practice of counselling on nutrition by health service providers got improved and adapted to the population needs.

IO 3.2 Improved linkages between health service providers and communities

Indicators	Baseline	Endline	Target	Achievement
Proportion of extension workers who report that they meet with their HEW supervisors once a month or more	86.6%	100%	92%	Achieved ✓

ARNI project worked to improve the linkage between health service providers and service users. The project had in place a monitoring approach called supportive supervision. They help identify the areas where HEWs need more support to implement the project activities. In total, 51 supportive supervision sessions were done; they allowed a revision of the activity plan to ensure the project will achieve its target. The project also provided orientation to 496 community groups and 255 health service providers about referral services with a particular focus on maternal and child health issues. Community Score Card introduced in 8 health centres has been a successful social accountability tool. It promoted participation, transparency and accountability between service users and service providers and improved the quality of services including referral services through interactive dialogue between service users and service providers. The combined effects of all these efforts increased the number of clients referred and utilizing health and nutrition services in the health facilities. As an example, Momina Abduraman M2M group leader from a village referred 22 mothers for antenatal and delivery services. The pictures below represent mothers in waiting room (pre and post-delivery) at Doba health centre said, *"We come here for knowing the benefits of giving birth in health centre through the regular discussion in our group."*

Interviewees reported that women had increased frequency in interacting with the health workers who provided information and support to community members on various topics such as nutrition, breastfeeding, and importance of antenatal care. Participants all reported that they could speak with Health Extension workers, M2M leaders, community leaders, and seek care at the health institution

when necessary. Mothers in law reported that they were usually the people who provided the consultation in their community since they had experience with childrearing and had also received training. If the issue was beyond their capacity, they could discuss with the Health Extension Workers and consult the nearby health institution. Health Extension Workers (HEWs) had more regular contact with parents for monthly growth monitoring sessions and would advise them about feeding or nutrition. The increased use of health services by pregnant women was facilitated by the strong communication and common goals of those involved, particularly between leaders of Mothers to Mothers groups and HEWs. Group leaders had regular contact with their group members, had a system of identifying who was pregnant, and thus would refer them to the HEW for follow up.

IO 3.3 Increased authority and capacity of women to access health care services

Indicator		Baseline	Endline	Target	Achievement
% of mothers who make decisions about what to do when they become sick	Respondent	29.5%	38.6%	>10% increase	Achieved ✓ (Joint) Not achieved ✗ (woman alone)
	Respondent w/ husband	11.6%	73.3%		
% of mothers who make decision about What to do when their child is sick	Respondent	38.3%	8.5%		
	Respondent w/ husband	44.6%	81.7%		

As indicated in a previous indicator, it seems that there is a change in attitude towards the authority of women in households, particularly for improved household nutrition and health services. Trained kebele leaders, religious leaders, and other influential members became champions on women's participation in the sell/purchase of assets and owning resources for health and nutrition services. While women were explained how to decide by themselves to go to health centres when needed, men were taught about the benefits of health services for their children, their wife and themselves. In effect, the number of mothers and children seeking health service and visiting health posts and health centres has increased throughout the project life. The monitoring reports from HEWs indicated that all mothers in the network (M2M group) were more capable of deciding and going to health facility when they or their child get sick. A HEW explained that mothers who previously did not go to facilities for health care without the permission of their husband, were now able to go without waiting for the permission from their husband. During the last FGDs, women compared the health status of their first children to the new babies. The health of the children who had the benefits of their new way of practicing appeared stronger and were reportedly less likely to become sick. When children did need medical attention, mothers were able to make the decision and have the financial resources to go to the health center, thanks in part to savings or loans through the membership with the Village Savings and Loan Association.

IO 4.1 Improved hygiene practices at the household level

Indicator		Baseline	Endline	Target	Achievement
% of men and women who report practice hand washing at minimum of 3 out of 4 critical times	M	32.3%	73.4%	40.3%	Achieved ✓
	F	47.6%	95.2%	55.6%	
% of men and women who report always practicing hand washing with soap before eating	M	87.7%	99.2%	92%	
	F	86.3%	99.7%	92%	

Hand washing event, mother group leader demonstrating hand washing

To improve hygiene practices among the target community, the trainings emphasized hand washing practice, management of waste, and treatment of water. The quantitative findings show a significant improvement in terms of hand washing at critical times for both men and women. During the FGDs, men, women, and mothers in law all reported that they now had knowledge of the importance of washing with soap or using ash for hand hygiene. In addition, 71% of the M2 group members constructed and utilized latrine. When conducting their usual discussion in the communities, HWE and M2M leaders closely monitored households who should construct latrine. This monitoring was well received by the community as it encouraged people to keep improving towards better outcomes. One participant explained that previously "we were living with cattle in the same house but now we separated the cattle from the humans and the kitchen. We have brought big changes in our sanitation and hygiene after Muskoka. Although sanitation education and activities existed before the project, the real changes came after this project because of a close follow-up from Health Extension Workers and the leaders. "

This outcome is perhaps one of the most significant improvements within the individual households and the community as a whole. The construction and use of sanitation facilities had an impact on the living conditions. Previously, not all families had latrines and used to defecate in an open field or the backyard. Interviewees reported that after the Muskoka project, all families now had latrines for solid and liquid waste and used them properly. Furthermore, some participants reported that they had even constructed a model latrine on the roadside so that travellers could use facilities and contribute to maintaining a sanitary environment. A Development Agent described the positive transformation in the attitudes and practices of a community. He recognized that it was challenging to introduce the hygiene topic at the beginning. However, through training and education sessions, the community showed an interest and got mobilized: *"The community became a model for other villages. People from other areas visit to see how the latrines are built, how to use them, how to manage dry and liquid waste by digging pits, how to collect animal waste together, keep their house clean, promote their children's hygiene, and separate their animals' house from their house."*

IO 4.2 Increased knowledge of diarrhoea prevention and treatment by women and men

Indicator		Baseline	Endline	Target	Achievement
% of men and women who correctly identify the amount of fluid to give a child who has diarrhoea as "more"	M	32.3%	73.4%	40.3%	Achieved ✓
	F	47.6%	95.2%	55.6%	
% of men and women who correctly identify the amount of food to feed a child who has diarrhoea as "more"	M	87.7%	99.2%	92%	
	F	86.3%	99.7%	92%	

Men and women clearly have the knowledge on diarrhoea treatment. Building the knowledge and skills of the target community on prevention and treatment of diarrhoeal disease has been critical in this project. Knowledge, skill and practices about hygiene and sanitation were necessary to reduce the

incidence of diarrhoea. Therefore, the project supported training on hygiene and sanitation and its links to diarrhoea to school teachers, and community members (M2M groups, men group). School teachers supported the community through the facilitation of discussions and demonstration on home treatment for a child with diarrhoea. According to the report from the M2M group leaders and HEWs, the practice of taking children with diarrhoea to traditional healers has been reduced while treating with homemade fluid and referring to health centres increased.

Community members reported that they had a better understanding of personal hygiene and environmental sanitation. Demonstrations on hand washing, maintaining clean environment were helpful. Men reported that there was less frequent diarrhoea as well as decreased frequency of visits to the health centre due to disease, especially for children. One man from West Hararghe reported that after he and his family got a latrine and started using it, their compound became cleaner. He then elaborated that there was a children's graveyard in his village, implying that the children were dying. Now, after the community adopted latrines, everything changed and the rate of children mortality has decreased (Man, Group member, West Hararghe).

> Asha Ahmed from LegeLencha kebele said, "I used to think restricting fluid intake to a child with diarrhoea is the first and foremost treatment. Now I learnt increasing fluid intake to a child with diarrhoea is the first and for most treatment"

Some community members indicated that they had received sanitation education and activities prior to the project, but they attributed the large changes in sanitation and hygiene to the close follows- up from Health Extension Workers and the group leaders (Woman, Group member, West Hararghe).

4369 women and 2051 men received trained on behaviors leading to diarrhoea, diarrhoea prevention appropriate treatment and when to seek medical attention. Although the first number represents only 2% of the PLW population in the project operational area, these training sessions have had a great impact on changing community behavior. On important evidence is the reduction by 18% of diarrhoea prevalence in 3-year implementation. This success can be explained by the participatory approach taken by ARNI. The participation of communities in their own projects empowered the community and improved its decision making about the services it needs and wants to maintain. As communities gain awareness of their water, sanitation and hygiene situation through participatory activities, they are empowered to develop and carry out their own plans to improve this situation.

IO 4.3 Increased authority and capacity of women to make decisions that lead to reductions in diarrhoea

Indicator	Baseline	Endline	Target	Achievement
% of women who report seeking advice of treatment for child's diarrhoea	56.5%	84%	65%	Achieved ✓

The endline survey shows a 32% increase in the number of women who report seeking treatment for a child's diarrhoea. In many villages, improving latrine coverage was a women-led initiative. This is

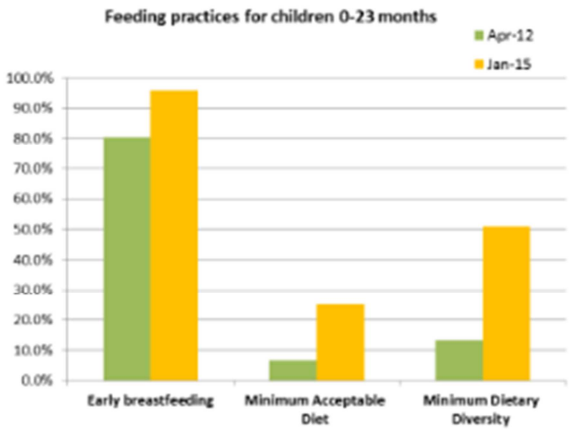
indicative of the increased women authority and capacity to take action on hygiene and diarrhoea prevention. In addition, women's capacity to seek for the appropriate actions for diarrhoeal disease has increased from 2012 to 2015. Naturally, not all community members' embraced change at the same pace; some needed encouragement. When men did not want to support the wife by doing household chores, the other group members modelled the desired behaviours: "When we find a man who is traditional and holds bad attitude, we invite him to our house and show how we are supporting our wives, tell him the benefit and encourage him to support his wife in all aspects. Sometimes we invite him to bercha (chew chat together) and let him observe what is going on in our house. He observes while we support our spouse on the household chores. Then he will look at himself and realize that he is not on the right track. The approach we use is to share our experience."

5.1.3 Intermediate Outcomes

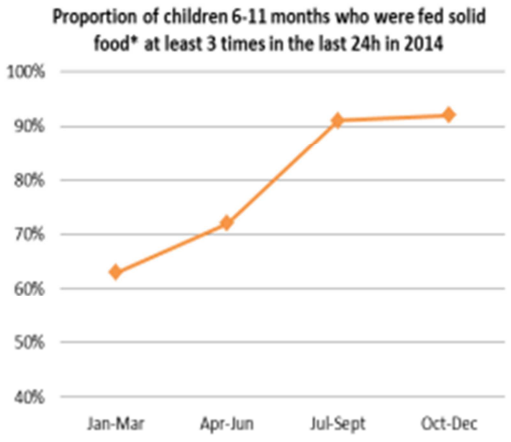
IO.1 Improved under two years child feeding practices by mothers and caregivers

Indicator		Baseline	Endline	Target	Achievement
% of boy and girl children 0-23 months put to the breast within 1 hour of birth	M	81.3%	96.2%	88.5%	Achieved ✓
	F	79.6%	96.8%		
% of children 0-5 months receiving only breastmilk	M	67.7%	73.9%	71%	
	F	62.2%	76.2%		
% of boy or girl children 6-23 months with minimum acceptable diet	M	7.2%	26.5%	10.6%	
	F	5.9%	27.7%		

Child feeding practices improved significantly between baseline and endline. Early intiation improved by over 15% for men and women, exclusive breastfeeding improved between 8% for men and 18% for women and where we see the biggest increase is in minimal acceptable diet which increased over 73%. Results on these indicators of child feeding pratices have well exceeded the intended target demonstrating an overall improvement in child feeding in the ARNI implementatio area.



Women from the FGDs conducted at endline clealry saw the benefit of the improved feeding practices. "When I joined the M2M group, I was 6 months pregnant. At that time I didn't much care about feeding my children. They eat together with the family members becasue I didn't prepare a separate food. After I joined the M2M groups, me and my husband understood the advantages of proper feeding for children. Then when I gave birth, I started breast feeding my daughter right away and this for 6 months. At her 7 months, I gave her porridge made from mix of food groups. Now she is healthy and wellgrowing." Another recounted that "eexplaining about exclusive breast feeding and complementary feeding is as easy as telling my name. In the discussion group we are demonstrating the right and wrong attachment and positioning for breast feeding. These are the most significant part of our discussion that I was quickly able to learn and do." Likewise another explained that "being a mother is not just giving birth. Rather, it is giving birth and proper caring/feeding to the baby. She was not properly fed. I was taking her to the clinic as she got sick of diarrhoea repeatedly. I come to be knowledgeable and skilful about child feeding through attending M2M group discussion and applied to my second daughter Sena. Now, I have high satisfaction about the health status of my second daughter."



IO 2 Equal increased consumption of healthy and nutritious food by men, women, boys and girls

Indicator of minimum diversity diet		Baseline	Endline	Target	Achievement
% of women aged 15-49 and men aged 15-64 who consume 5 or more of the 9 food groups	M	5.5%	37.1%	9.5%	Achieved ✓
	F	5.5%	39.2%	9.5%	
% of girl and boy children 6-23 months who consume 4 or more food groups	M	15.8%	48.9%	16.8%	
	F	10.8%	53.4%	14.8%	

These results show that overall women, men and children are consuming more variety of foods in their diet. The project contributed to diversifying HH diet by providing vegetable and fruit seeds and pullets to more than 6547 families in need. In addition to these inputs, households and farmers strengthened their capacity to planting and harvesting. As a result, they were able to supply to their needs using their backyard garden and consume nutritious foods including animal products. Today, households practicing subsistence farming can access better staple foods from their own gardens.

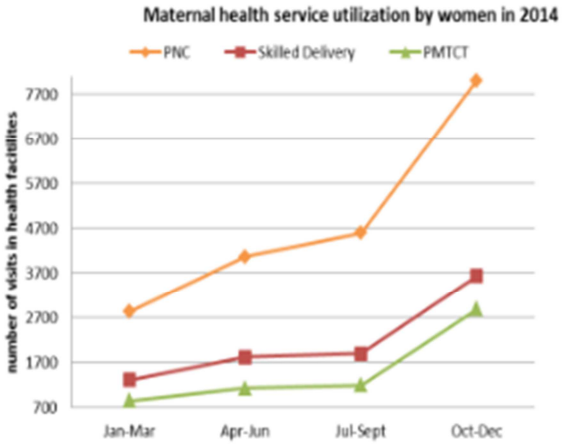
People benefitted greatly from the food preparation demonstrations by group leaders during which they could taste the foods and then practise in their own families. Elderly family members also started requesting the new, delicious foods. Families in need were provided with various seeds, chickens, and goats to increase the variety of foods available as well as increase overall consumption of nutritious foods. Finally, learning resources suitable for illiterate community members (pictorial information cards, radio messages) with continuous discussions were instrumental.

Different from the living conditions they had before the ARNI intervention; family members were more able to consume a diversified diet. Nabiha Mohamed, a mother of three children from East Hararghe is a testament of how the multifaceted interventions of the project impacted her life. She is a VSLAs member and was trained and engaged in incomes generating activities (IGAs). Nabiha explained that "previously I did not know that children require separate food. I used to provide my children food prepared for adults. After I got IYCF training by Muskoka project, I know that children are delicate and need a soft and enrich diet. My son started food at 6 months with soft porridge made from mix of flour, oil, egg and vegetable. I produce eggs and vegetables because I was supported by Muskoka. I also make small trade and I use that money to buy food and enrich my son's diet. "

Model family (Husband and wife) teaching diet diversity during cooking demonstration

IO 3 Increased use of nutrition and health services by women, men, girls and boys

Indicator of minimum diversity diet		Baseline	Endline	Target	Achievement
% of women aged 15-49 with a live birth who received ANC from a skilled health provider at least four times during pregnancy	M	5.5%	37.1%	9.5%	Achieved ✓
	F	5.5%	39.2%	9.5%	
% of registered children under 2 years who attend monthly growth monitoring and promotion visits	M	15.8%	48.9%	16.8%	
	F	10.8%	53.4%	14.8%	



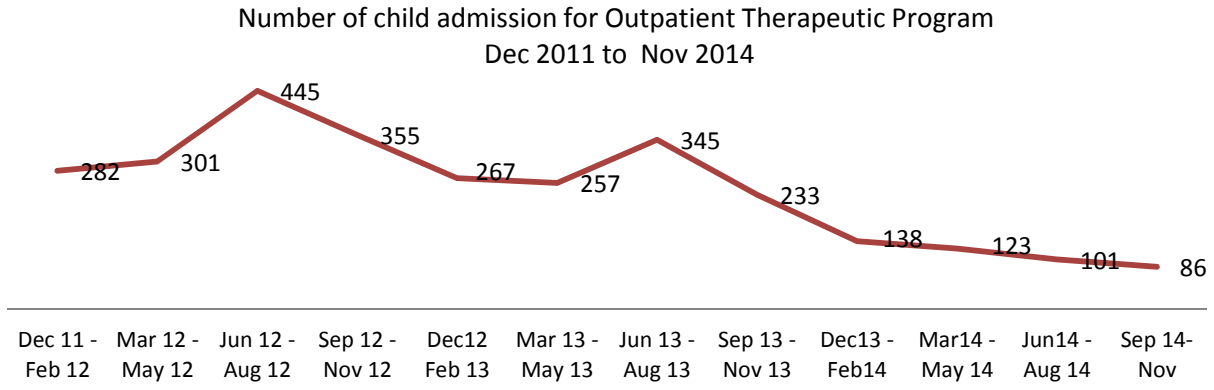
One of the ways to improve the health and nutrition of women and children is through increasing utilization of health and nutrition services by women, men, boys and girls. Ante natal care visits at least 4 times from a skilled provider increased by over 85% and the percent of children under 2 attending regular growth monitoring showed over a 67% increase. Overall health service utilization rates for the ARNI project increased well in excess of the targets. To this end, the project facilitated awareness and knowledge creation to its larger targets. Members of the M2M groups were taught about benefits of attending health facility during pregnancy, labour and other health conditions including growth monitoring and vaccination. In addition, referral linkage and networks were created and strengthened thanks to the role of M2M leaders and the traditional birth attendants. They enabled referrals of mothers and other sick persons

form their locality. Data from health facilities demonstrates that the number of mothers utilizing maternity services has increased dramatically. For example, the graphic below shows how the number of visits in health facilities augmented on a quarterly basis. This is the case for all maternal services such as antenatal care (ANC), post-natal care (PNC), skilled delivery, Prevention Mother to Child Transmission (PMTCT). For example, ANC visits tripled from Q1 to Q4 passing from 5,940 to 15, 849 visits.

IO 4 Improved hygiene practice by men, women, boys and girls to prevent diarrhoea among boys, girls and pregnant women

Indicator		Baseline	Endline	Target	Achievement
Prevalence of diarrhoea among boys and girls during the project period, defined as 3 or more loose or liquid stools in one day or more frequently than what is normal in the past two weeks	M	20%	2.1%	12%	Achieved ✓
	F	20%	2.5%	9.5%	
% of women and men who practice hand washing at a minimum of 3 out of 4 critical times	M	32.3%	73.4%	54%	
	F	47.6%	95.2%	54%	

Prevalence of diarrhoea is one of the best indicators of the overall hygiene and sanitation environment in a given area. In this regard the ARNI project was highly successful in improving the overall hygiene and sanitation conditions in the implantation areas with huge decreases in self-reported diarrhoea. The project followed multifaceted approaches to improve the hygiene and sanitation practices with in the target community. Trainings were provided on hygiene, hand washing in particular and the link to diarrhoea to school teachers, students, and M2M group leaders at district and Kebele/village level. The trained people engaged communities in discussions around fecal contamination as a cause of diarrhoea, compound sanitation, etc. Communities understood that hands were a major vehicle for contamination and diseases. Findings demonstrate that the proportion of men and women practicing hand washing at critical times increased very much in comparison to the baseline results. Joint supervision by government health office and CARE staff revealed the same improvement in hygiene practices. In other cases, communities were very active and mobilized. They planned activities to prevent the spread of communicable diseases related to hygiene. For example, after identifying potential sources of infections, there has been a "village cleaning day" organized in 51 kebeles.



The outpatient therapeutic program for the relevant health centre catchment areas for the project's implementation sites highlights the declining trend in malnutrition which is affected by the change in practice demonstrated in intermediate outcomes 1 and 2 and also a decrease in diarrhoea incidents. Until recently, the management of severe acute malnutrition has been limited to hospital cares with limited coverage (WHO, 2007). Outpatient Therapeutic feeding Program (OTP) brings the service of management of Severe Acute Malnutrition closer to the community. It offers the lifesaving treatments with ready-to-use therapeutic foods. Ethiopia has taken the OTP as most important and accessible program to treat malnutrition. OTP is operational at health centres and health posts to treat severely malnourished children in their catchment area. The graph below summarized the trend of OTP admission in the operational area of the project. Since June 2013, cases admitted into the OTP have been in constant reduction.

Mohamed Gezali from Kurfa Chelle said explained the change this way; "I see the result of Muskoka project. Many things changed as a result of the project intervention and I am happy to see them. The change brought regarding hyigene is crucial. Most of the people wash their hands after toilet use, before cooking and after baby care. Latrine coverage increased and most of the people including my self properly utilizes latrine. This was not the case 2 years ago where almost all the people used open defication."

5.1.4 Ultimate Outcome

Improved nutritional status in girls and boys under two years and pregnant and lactating women living in selected areas of Ethiopia

Indicators		Baseline	Endline	Target	Achievement
Proportion of boy and girl children 0-23 months with length-for-age < -2 sd (Stunted)	M	39%	43.3%	33.4%	Boys Not Achieved ✗
	F	31.5%	27.1%		Female Achieved✓
Proportion of boy and girl children 0-23 months with weight-for-length < -2 sd (Wasted)	M	19.3%	12.1%	14.2%	Achieved ✓
	F	12.8%	5.1%		
% change in pregnant and lactating women with MUAC <23 cm		29.7%	28%	26%	Underachieved by 2%*

*Target and achievement within margin of error

This outcome has been measured through anthropometrics' indices during representative household surveys at the baseline and endline levels. Height and weight of children under 2 years old have been carefully collected in the Oromiya region to assess the nutrition status. Stunting (inadequate length/height for age) captures early chronic exposure to undernutrition while wasting (inadequate weight for height) captures acute undernutrition. In addition, Mid-Upper Arm Circumference (MUAC) screening for women has been completed. These indicators are compared to the WHO growth standards reflecting the optimal growth and nutrition status of a population. In April 2012 (baseline), the proportion of children classified as stunted was 35.4%; in January 2015 (endline) it has slightly decreased to 33.8%. The proportion of stunted girls has been reduced by 4.4% overtime to reach 27%.

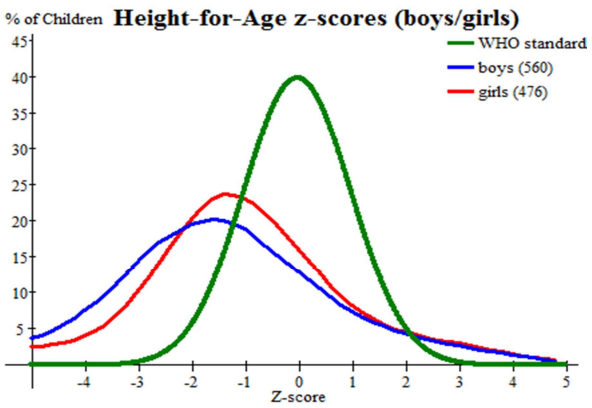


Figure: **Prevalence of stunting based on Height-for-age z-scores (HAZ) by sex - January 2015**
Legend: A stunted child has a height-for-age Z-score that is below -2 standard deviations (SD) based on the WHO reference population
n=1039 children under 24 months

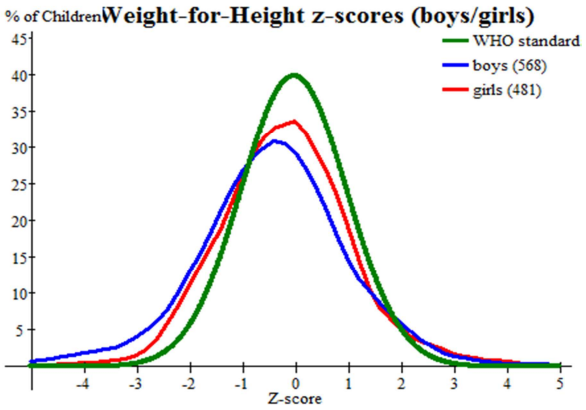


Figure: Prevalence of wasting based on weight-for-height z-scores (WHZ) by sex – January 2015
n= 1036 children under 24 months
Legend: A wasted child has a weight-for-height Z-score that is below -2 SD based on the WHO reference population

The left-hand graph represents the prevalence of stunting children by sex in January 2015. Findings show that boys are more likely to be stunted than girls. This result coincides with the general trend in sub-Saharan Africa, where stunting is usually more prevalent in boys than in girls (UNICEF, 2011). Stunting is often associated with long- term factors such as chronic malnutrition, especially protein-energy malnutrition, and frequent illness. It is therefore an indicator of past growth failure and is often used for long-term planning of policies and intervention programs in non-emergency situations. Therefore, it is important to keep in mind that observing stunting reduction in children will require longer monitoring. These include improving women's nutrition, especially before, during and after pregnancy; early and exclusive breastfeeding; timely, safe, appropriate and high-quality complementary food; and appropriate micronutrient interventions. Positive results from these multiple interventions have been demonstrated under the intermediate outcomes section. It is clear that stunting reduction require interventions from the health, education, agriculture, and social-economic infrastructure perspectives. The project used this multispectral approach, in line with national led investments to contribute to the reduction of stunted children. However, further efforts are needed to achieve better nutritional results.

On the other hand, the percentage of children being too thin for their height (wasted) has decreased overall by 7%, which exceeds the target fixed at the beginning of the project. According to the household survey findings, the overall children classified as wasted represent 8.8% of the sample. The right-hand graph shows how the boys and girls curves are much closer to the WHO standard one in comparison to the stunting figure above. This pattern of higher level of stunting and lower level of wasting is usually observed in cases of non-emergency situation. Wasting is usually related to acute or short-term exposure to a negative environment. It is sensitive to changes in calorie intake or the effects of disease.

Finally, Mid Upper Arm Circumference (MUAC) has been used to assess nutritional status of women of reproductive age. The measurement of MUAC is commonly used as an indicator of malnutrition and wasting in children. In this case, it has been used as an indicator of maternal nutritional status. However, Standard adult MUAC tapes were not available for the data collection. A combination of MUAC for children and a simple meter were used to measure the MUAC of women. This is a limitation of the study that needs to be considered while analysing the data. Results show that 28% of the women that participated in the survey in January 2015 are at risk of malnutrition, as their MUAC is under 23 cm (WHO standards). Although the proportion has decreased by almost 2% in comparison to the baseline data, the target of 26% has not been reached. However, it is important to keep in mind the margin of statistical error while studying this data.

In addition, the qualitative studies conducted during the last year of the project revealed promising feeding practices that should improve overtime the household nutritional status. Women reported that they increased their consumption from two meals to four during pregnancy, and also increased the variety of foods. They stated they felt cared for by the husband who would buy foods they craved or give them money to buy it for themselves. All interviewees reported that they now understood that women needed additional nutrition during pregnancy so that she and the baby would be healthy. Women previously believed that gaining weight during pregnancy would contribute to a more difficult labour but now had learned that maternal nutrition was important for healthy delivery. Additionally, some lactating women reported they drank more fluids such as a watery sorghum broth or milky coffee to ensure they were not dehydrated as this would affect lactation. Interviewees reported that in the months following delivery, that women would drink more fluids such as milky coffee, to ensure adequate hydration.

Community members reported that breastfeeding is part of Ethiopian culture, however, that past cultural practices also included giving newborn infants other liquids or foods. A mother from West Hararghe explained that they used to give newborn babies a solution that remained after baking injera (to prevent baby from getting abdominal worms) and also a solution of water that was prepared by washing knives. It was believed that children who drank a solution from a washed knife would develop warrior characteristics and be able to protect his family against aggressors. Fortunately, the majority reported that mothers now breastfed exclusively for six months due to their training and support from husbands for chores that previously required them to leave home and be away from baby (fetch water, gather firewood, go to market). If necessary, breast milk would be put in a clean cup for the baby to drink while the mother was away.

5.2 Performance Assessment Zimbabwe

As in Ethiopia, HealthBridge conducted the baseline survey for Zimbabwe. Zaka made several petitions to the Masvingo Provincial Authorities; however, they declined to provide the necessary authorizations and the project was forced to use data from the 2010 National Nutrition Survey for Zaka District. The survey was allowed to go ahead in Gweru and was conducted between April 16 and 23, 2012.

As a result, certain baseline values are not available for Zaka District and comparability between baseline and endline data is limited in some cases. The project conducted focus group discussions (FGDs) at baseline and endline. FGDs at endline were done at community gardens supported by CARE staff and participants self-selected so the FGDs have a much higher number of beneficiaries who directly benefited from the project than the household survey as the objective was to understand behaviour change pathways.

Following the development of monitoring tools, the project shared the plans and tools with both Gweru and Zaka District Health Authorities in early 2013, in particular a knowledge, practices and attitudes (KPA) survey to be used at the community level. Gweru approved the tool fairly quickly for use as a health facility exit interview survey. Zaka District Medical Officer had to be engaged by the Zaka District Nutritionist and several questions on the survey were changed. The tool was eventually approved by Zaka District as a health facility exit interview survey.

Ongoing monitoring and quality improvement visits were conducted with jointly between CARE staff and the District Authorities in both Gweru and Zaka. The Muskoka Project was largely dependent on the availability of district government officials to conduct field support visits to VHWs. In Zaka the District Nutritionists requested only quarterly visits to the VHWs, therefore, not all the VHWs were provided support visits during the course of the project. The project planned to conduct quarterly monitoring using a KPA survey for field officers to use with community members; however, the district authorities in Gweru and Zaka preferred this be done as exit interviews from health facilities. Limited access as a result of needing government representatives for CARE staff to go out and conduct community monitoring activities led to certain VHWs never receiving supportive supervision visits.

5.2.1 Project Implementation

Output 1.1.1 TOTs conducted on optimal IYCF practices and maternal nutrition with leaders from M2M groups, C/VHWs, VSLAs and other community support groups

The ToT for maternal nutrition and IYCF was a cascade training which began in June 2012 with health care workers in Gweru and Zaka. Using the IYCF national training package adapted from UNICEF, ARNI project supported MoHCC master trainers with resources to conduct health professionals' TOT. Among the participants for Zaka District were midwives, qualified nurses, the District Health Environmental Officer (DEHO), the District Nursing Officer (DNO) and the District Health Promotion Officer (DHPO). A total of 18 (14 female and 4 male) participants from Gweru Urban were also trained as trainers; 4 from the nutrition department, 1 from the school of midwifery, 1 from the hospital food services department, 2 from DHE, 1 Senior Nursing Officer who is in charge of all city health clinics and 9 city health clinic nurses (including 3 midwives).Training included counselling positive counselling skills, maternal nutrition, optimal breastfeeding and complimentary feeding.

In November and December of 2012 a total of 44 male and 172 female Village Health Workers (VHWs) were trained by the health care worker master trainers. Recommendations from the cascade training

with VHWs included a) need for refresher training, follow- up and review with trained VHWs particularly around documentation and record keeping; b) that the training materials be translated into Shona; and, c) the large knowledge gap related to breastfeeding practices and HIV given the high prevalence of HIV in Zimbabwe. VHWs started maternal nutrition and IYCF home visiting in January 2013. The project provided 250 t-shirts, sling bags and floppy hats to the VHWs along with a package of counselling cards designed for individual counselling. The VHWs then registered between 10 – 15 households. Each household was visited on a monthly basis and provided visit on a monthly basis. Project staff and government counterparts provided ongoing supervision through quarterly supportive supervision visits.

Year 3 Activities

In November and December 2014, the project conducted refresher courses on IYCF for the VHW to enhance their skills and capacity in counselling and follow up of clients within their communities. VHW were encouraged to make registrations for pregnant and lactating women and in the third year encouraged to replace children in their registers that had turned two years. A total of 166 VHW went through the refresher training in both districts with Gweru having 44 active out of the 79 initially trained during the first year. The inactive VHW for areas like Senga, Totonga and Mtapa/Ascot were replaced and 30 VHW went through 3 day training of new volunteers who received IYCF counselling packages (key message booklets, pamphlets, counselling cards, registers, pens, note books and a sling bag and T shirt) each and this also acted as motivational material for the new VHW; thus the total number of VHW for Gweru is 74. For Zaka, a total of 122 out of the 139 initially trained community health workers were still active and they went through the IYCF refresher courses. All the old VHW in the program from both Gweru and Zaka Districts who were still active were supplied with registers, pens, note books and pamphlets each as motivational incentive.

Indicator	Target	AWP Target	Year 3	Total Project	Achievement	
# of m/f leaders from M2M groups, VHWs, VSLA and other community support groups trained as trainers on IYCF and related maternal nutrition	42 (6m, 36f)	Completed in Y2	Completed	Zaka: 21f, 7m Gweru: 17f, 4m	*117%*	*Achieved*
	200 VHWs (20m, 180f)		166 VHW (refresher training)	Gweru: 72 f;7m Zaka: 100f; 37m	*108%*	*Achieved*
	100 VSLA Facilitators			50F	*50%*	*Underachieved*

Output 1.1.2 M2M groups, C/VHWs, and other community groups educated on IYCF practices, maternal nutrition, growth monitoring, and child-caring practices

Community level counselling and education continued at household level throughout the project cycle. The project supported MoHCC in conducting joint monthly support and supervisory visits as follow up to VHWs' community activities. Due to conflicting national activities like the Child health days, mass drug administration, national nutrition surveys (micronutrient survey - food consumption assessment-SMART survey), ZimVAC, as well as national elections and other competing NGO activities just to mention a few within MoHCC, the project ended up doing the support visits bimonthly and quarterly, and hence did not manage to reach every VHW. However, VHWs continued to work with support/action oriented groups within their communities. In some cases, these were mixed groups of men and women. During these support groups, discussion around child care practices, including hygiene and importance of

continued growth monitoring, were discussed given that proxy immunizations are completed within 6 weeks and with the boosters administered at 18 months. With the VHW initiative in Zaka, one group started savings through VSLA and is using their savings to buy inputs for their community garden. Complementing VHW efforts, during cooking demonstrations, education sessions on improved IYCF practices, maternal nutrition were conducted before the demonstrations started. With every ward level community gathering, the VHW would be given a slot to share key messages regarding IYCF and related maternal nutrition. Through these sessions, community members also learned about texture and quantity and number of feeds when introducing complementary feeding.

Indicator	Target	AWP Target	Year 3	Total Project	Achievement	
# of m/f community members educated on IYCF and maternal nutrition	200 VHWs (20m, 180f)	Completed in Y2	166 VHW (refresher training)	Gweru: 72 f;7m Zaka: 100f; 37m	*108%*	*Achieved*

Output 1.1.3 Community IYCF recipes developed/adapted

Working together with MoHCC and AGRITEX, the project developed 30 recipes using locally available foods. The recipes were put together in a booklet that was distributed during cooking demonstration points and to health facilities and to AGRITEX district offices for reference. The project thus over achieved the overall target by 20%, given that 25 recipes were planned for. The project had good multisector input into the recipes, which resulted in more than anticipated.

Indicator	Target	AWP Target	Year 3	Total Project	Achievement	
# of recipes using locally available foods developed or adapted	25 recipes	Completed Y2	Completed Y2	30 recipes	*120%*	*Achieved*

Output 1.1.4 Cooking Demonstrations conducted with Home Economics Experts and VHW

Year 3 Activity

Cooking demonstrations were conducted in May – June 2014 in Zaka and August – September 2014 in Gweru in partnership with Agricultural Extension Workers (Agritex) and MoHCC. The demonstrations were conducted at community gardens and at least 6 sessions per garden were conducted concurrently. At some gardens, school teachers including men from the Home Economics Food and Nutrition Department participated at the community demonstrations. The teachers considered the recipe booklet as reference material in teaching children back at their schools on how they can prepare food grown in their school gardens and take this knowledge home. The community members were encouraged to continue educating each other at household/community level. The communities welcomed the idea of using what they have at their households and referring to the recipe books written especially in the local language.

The ARNI project originally planned to conduct 3 sessions per cooking demonstration per site on the assumptions that the communities might not have enough cooking ingredients since the different food

items were coming from participants. The communities instead proved to be self-sufficient and an average of 6 sessions was conducted during each demonstration session per garden. A total of 168 recipe demonstration sessions were conducted at 15 community gardens in Zaka and 9 in Gweru with 331 (57m, 274f) participants in Zaka and 257 (166m, 91f) in Gweru.

Government partners and the CARE ARNI team started the cooking demonstrations with talks on various topics related health and hygiene, importance of EBF and complementary feeding, maternal nutrition, the 4 star diet and dietary diversity, food preservation and processing, male involvement in IYCF, social barriers to maternal infant and child feeding, and household food consumption versus selling. The communities organized the locally available foods and other ingredients, cooking utensils and firewood. On selecting recipes, the communities divided themselves into groups and followed instructions as given in the recipe book. The communities gathered at former CARE funded community gardens and were urged to use fresh food crops direct from their gardens like carrots, tomatoes, onions, leafy green vegetables, beans to add on what they will have brought from their homes like chicken, kapenta, vegetable oil, pumpkins, mushrooms, cereal meal, fruits, peanut butter, round nuts and ground nuts. The ARNI project assisted with flour and kapenta only to some communities that indicated they would not manage to put together either of or all the items. The most common recipes cooked included mashed pumpkin with sweet potato, enriched kapenta (with eggs, peanut butter sauce or with onions in pancakes), dried mushroom in peanut butter sauce, various cereal porridge among other recipes demonstrated.

Indicator	Target	AWP Target	Year 3	Total Project	Achievement	
# of cooking demonstration session organized with home economic experts and VHWs	80 sessions	80 sessions	168 sessions	168 sessions	*210%*	*Overachieved*

Output 1.1.5 Men educated on optimal IYCF and maternal nutrition in the household

Men were reached through various trainings and activities such as IYCF ToTs (Output 1.1.1), Theatre for Development (Output 1.2.2), Dietary Diversity (Outputs 2.1.2 and 2.1.3), Social Analysis and Action (Output 2.2.3) and BFHI (Output 3.1.1).

Indicator	Target	Total Project	Achievement	
# of men receiving education on optimal IYCF and maternal nutrition	1450m	3494	241%	*Overachieved*

Output 1.2.1 TOTs conducted with community facilitators, social change agents and C/VHWs on gender issues related to breast- and complementary feeding practices

Gender training was included as part of the maternal nutrition and IYCF ToT (Output 1.1.1). The training included sessions on gender issues related to breast and complementary feeding practices and was repeated during refresher training in year 3.

Indicator	Target	AWP Target	Year 3	Total Project	Achievement	
# of m/f community members educated on IYCF and maternal nutrition	200 VHWs (20m, 180f)	Completed in Y2	166 VHW (refresher training)	Gweru: 72 f;7m Zaka: 100f; 37m	*108%*	*Achieved*

Outputs 1.2.2 Trainings conducted with traditional and religious leaders on gender issues on children's health and nutrition

2.2.3 Community groups organized to discuss social and cultural issues, focused on gender and power relations using Social Analysis and Action (SAA)

Community dialogue on gender related issues on children's health and nutrition was conducted through different workshops using SAA approach. A total of 441 (177f; 264m) community members were reached with SAA training to promote dialogue on gender power relations and decision making. Though at a small scale with Zaka having 3 pilot wards, female community members constituted about 67% of the total community members and this has a social bearing in improving support to women's decision making regarding children's health and nutrition. Of the social change agents in the respective communities, the following were represented in the trainings: traditional leaders, government partners (MoHCC, AGRITEX, Ministry of youth, Ministry of Women's Affairs Gender and Development); community health workers, lead farmers, VSLA leaders, community garden committee members and some religious leaders. Also through theatre for development, gender related issues were highlighted through live performance, thereby reinforcing continued community dialogue to help improve, maternal, child health and nutrition. While the project came near its target, the SAA dialogues only reached 441 out of the targeted 506. This is due to the method being new to Zimbabwe and the decision to pilot test intensively.

Gweru	
Partners (MoHCC and AGRITEX)	11(7f ; 4m)
Social Change Agents	71 (21f;50m)
Traditional leaders	42(20f ;22m)
Zaka (3 wards)	
Core group	23 (16f; 7m)
Traditional leaders	105 (14f; 91m)
Village facilitators	189 (99f; 90m)
Total reach 441 (177f; 264m)	

Indicator	Target	Total Project	Achievement
# of m/f traditional leaders trained on gender issues and children's health and nutrition	506 m/f traditional leaders	441 (177f; 264m)	Underachieved

Outputs 1.2.3 New messages disseminated on IYCF, health and nutrition

2.2.2 Key messages with doable actions disseminated through radio and other local message formats on women's decision making authority to make decision to improve dietary diversity and HH nutrition

A total of 20 messages were developed and the project used different media in broadcasting the messages. The messages were written on T shirts and also distributed through pamphlets and same came out during live theatre performances. During community gatherings including cooking demonstrations, VSLA meetings and other national health days commemorations, pamphlets were distributed on discussing some of the messages. Also engaged by the project was a local theatre company that was also contracted to conduct live community performances in all 34 wards of Zaka

district in supporting the messages on mothers' decision making and demonstrating mother-in-law power regarding maternal and child feeding practices as well as male involvement in maternal child health and nutrition. The company also produced 400 CDs that were distributed to the communities for own viewing and to health institutions for reference.

Also adapted were the UNICEF/MoHCC sets of pamphlets that the project reproduced for distribution through VHW and health facilities. The pamphlets had information regarding complementary feeding, exclusive breast feeding and maternal nutrition. The first set was entitled "Nutrition during pregnancy and breastfeeding", the second, "How to breast feed your baby" and the third set "How to feed a baby after 6 months". The pamphlets were distributed with all community gatherings and during live drama performances that also motivated people to read the pamphlets as reference after seeing the drama.

ARNI also distributed recipe booklets to community members for use as information and education material in food preparation for maternal, infant and child feeding as well as the whole household's benefit. Using locally available foods in developing the recipes would also enhance the capacity and encourage communities to socially accept locally available foods and work towards consumption of a healthy diet using these ingredients.

Indicator	Target	Total Project	Achievement
# of new messages disseminated through radio and other local message formats on IYCF, health and nutrition	20 messages	20 messages	*Achieved*
Frequency of messages disseminated through radio and other local message formats on women's authority to make decisions to improve dietary diversity and HH nutrition	With every community gathering	With every community gathering	*Achieved*

Output 2.1.1 TOTs conducted on dietary diversity and nutrition with leaders of M2M groups, C/VHWs, VSLAs, and other community leaders

Output 2.1.3 M2M Groups, VSLAs and CHWs trained on food diversity using backyard gardens and community gardens to improve consumption and dietary diversity

Sessions on dietary diversity were conducted during health professionals' IYCF TOT and cascade training for VHW to which Gweru trained 79 (72f; 7m) VHW, while in Zaka 137 (100f; 37m) VHW were trained as IYCF counsellors. Also trained as trainers in dietary diversity were AGRITEX officers; 108 (43f; 65m) for Zaka and 10 (7f; 3m) for Gweru. Through the trained AGRITEX team and MoHCC, the project trained 141 (59m; 82f) in Gweru and 158 (73m; 85f) in Zaka community members included lead farmers, garden committee members, VSL leaders/members and VHW. These community members disseminated the acquired knowledge with other garden members and community members. Of these participants, 109 were VSL members and 18 VHW (Zaka only). The project achieved the overall target of 2 trainings (1/district). The dietary diversity trainings were a combined effort by AGRITEX as the lead and supported by MoHCC. The dietary diversity trainings were conducted concurrently for 2 days/cluster at schools or community centres/halls; Gweru trained on 20-22 March, 2013 and Zaka from 2-5 September, 2013.

Output	Indicator	Target	Total Project	Achievement
2.1.1	# of male and female leaders from M2M groups, C/VHWs, VSLA and other community support groups educated in dietary diversity and nutrition	200 VHWs (20 m, 180 f)	216 VHWs (44 m, 172 f)	*Achieved*
2.1.3	# of training in food diversity using backyard and community gardens provided to M2M groups, VSLAs, and CHWs	2 trainings in food diversity to VHWs and VSLA leaders	2	*Achieved*

Output 2.1.2 TOTs conducted with AEWs on nutrition and food diversity to support production of nutritious food

The TOT for AGRITEX workers was targeted for supervisors who in turn cascaded the TOT to ward level officers. Given the small numbers of supervisors (2 for Gweru Urban and 15 for Zaka District); Gweru trained all 10 (3 male and 7 female) officers as the district combined the 2 supervisors and 8 ward level officers in one TOT. Zaka trained 15 supervisors and 15 ward level Officers (9 female and 21 male). The remaining 74 ward level officers for Zaka District went through ward level TOTs to which they were trained by the trained supervisors and other senior ward officers who attained the initial TOT. In this regard, a total of 103 (43f; 65m) AEWs were trained as trainers in dietary diversity and food crop production for Zaka District. The ward level AEWs cascaded the training on nutrition and food diversity in supporting production of nutritious foods to community members by garden. Practical demonstrations on intercropping were conducted and the same was conducted at all levels down to household level through the VSLA leaders and community garden leaders. Gweru TOT was conducted at Gweru City Council Community Theatre from September 25-27, 2012 and the Zaka TOT from October 30 to November 2, 2012 at Flamboyant Hotel in Masvingo. Figures below provide a snapshot of the training events in Gweru and Zaka.

Group sessions featured prominently during the workshop as facilitators ensured that every participant was participating and had the chance to present. Gweru TOT: Gweru City Council communal theatre on September 25-27, 2012.

Zaka AGRITEX TOT at Flamboyant Hotel, Masvingo from October 30 to November 2 showing participants following proceedings during the workshop and group discussions preparing for return demonstrations on facilitation.

Indicator	Target	Total Project	Achievement
# of m/f AEWs trained as trainers in nutrition and food diversity to support the production of nutritious foods	6 female AGRITEX 46 male AGRITEX	43 female AGRITEX 65 male AGRITEX	Achieved

Output 2.1.5 VSLA trained in IGA animal rearing activities to increase access to high nutrient value foods (chickens, goats, etc.)

VSLA activities concentrating on maternal and child health nutrition while synergizing community gardens, small livestock and market linkages were initiated in the final year of project implementation. The VSLA team profiled 240 functional clusters and worked with 1046 (190m; 856f) VSLA leaders. A total of 1775 VSLA members (856m; 1046f) worked with VSLA cluster facilitators. The identified functional clusters were still engaged in IGAs and small livestock rearing. The IGAs included poultry, piggery, goats, buying and selling. Illustrated in the picture are chickens that were raised by one, Mrs. Chimbunde of Mutimwi Cluster in Ward 4, Zaka District. The project's VSLA team supported these clusters and their various IGAs focusing on business development services, market linkages and value chains thereby enhancing houseld income to help improve health and nutrition at household level. Discussions around decision making, power relations and social norms affecting health, maternal and child feeding practices were conducted during the VSLA meetings at community level.

Indicator	Target	Total Project	Achievement
# of m/f VSLA members trained in IGA animal rearing activities and new see varietals		856m 1046 w	*Achieved*

Output 2.1.6 Linkages established between backyard and community garden producers and VSLAs

Year 3 Activity : The project's VSLA team worked with the 240 cluster facilitators from April 2014. The project covered 24 wards as the ENSURE project is implementing the VSLA activities in the other 10 wards. A 2 day refresher training for cluster facilitators was conducted for 43 facilitators who were trained in 2 separate groups. The refresher course was conducted on 19-23 May 2014 at Muzimbo Lodge in Zaka District. The first group of 25 was trained from 19-20 May, 2014 and the second group of 18 was trained on 22-23 May, 2014. The refresher course was facilitated by the ARNI project VSLA team. The cluster facilitators were trained in individual self-screening, groups and leadership, constitution development, group fund development and record keeping as part of the refresher course. The cluster facilitators received mentoring on how to conduct registrations and monitoring of groups. The cluster facilitators who attended the refresher course went back and provided feedback to other cluster facilitators in their communities. Given that a VSLA takes usally one year to be sufficiently capitalized to lend money, this activity was conducted too late to see borrowed money used for new seed varietals which must be purchased at the beginning of the growing season.

Indicator	Target	Total Project	Achievement
# of VSLA members who use funds to purchase new seed varietals or micronutrient rich fruits and vegetables for family consumption	TBD	Not captured	*Achieved*

Output 2.2.1 TOTs conducted with community facilitators, social change agents, M2M groups, C/VHWs, midwives and local leaders on the link between women's decision making and improved maternal and child nutrition

The Gweru and Zaka District TOT for health workers, conducted on July 16-20, 2012 and June 4-8, 2012 respectively, included sessions that were conducted on child nutrition and maternal related nutrition (output 1.1.1). These sessions were also conducted during the cascading C-IYCF training on November 5-9, 2012 to VHW in Gweru Urban and in December 2012 in Zaka District. The sessions were conducted through role plays, focus group discussions, case studies and practical visits to local health centres. Socio-cultural factors that affect women's empowerment were discussed around women's capacity to make decisions on EBF, best complementary feeding practices, nutrition and the pregnant/lactating woman without being influenced by men, mothers in law etc.,. Issues and sentiments around family and community members support in empowering women were conducted through role plays as well as role plays and demonstrations on how change would take place from not knowing through different stages to sustenance of a new behaviour that becomes part of a daily normal life. Involvement of family members and other community members in influencing change and capacitating women in decision making was said to be paramount while working with women in the community through the community health workers. During the practical sessions conducted at clinics, interviews with mothers' action oriented groups and IYCF support groups were conducted. Interviews with mothers of children (0-24 months) sought to find the link between mother's decision making and maternal and child nutritional status. The above mentioned focus group discussions and practical sessions during health professionals IYCF TOT were conducted at Mutapa Clinic for Gweru Urban and at three health centres in Masvingo (namely Rujeko, Mucheke and Runyararo West) for Zaka district health professionals IYCF TOT. VHW in respective districts, conducted practical sessions at the same clinics that were their training venues as well. Results observed during the training sessions showed that all paired participants had the ability to conduct focus group discussions. Supervised individual counselling sessions were also conducted. These sessions were meant to sharpen the skills of trainers for them to replicate in their respective cascade trainings. This training was consolidated with the IYCF ToT as the availability of trainees to undertake multiple ToTs was limited and as a result this output was included in output 1.1.1 and included the number of participants as planned for in the IYCF ToT.

Indicator	Target	Total Project	Achievement
# of m/f community facilitators, social change agents, M2M groups, VHWs, midwives and local leaders trained as trainers on the link between women's decision making and improved maternal and child nutrition	506 (200 VHWs 100 VSLA Facilitators)	Zaka: 21f, 7m Gweru: 17f, 4m VHW 172 f VHW 44 m VSLA 50 female	Underachieved

Output 2.2.4 SAA modules adapted (to include gender, nutrition and hygiene)

SAA manual adapted by Ethiopia. See section on Ethiopia output 2.2.4.

Output 3.1.1 Health service providers trained in IYCF, maternal and child health and nutrition and gender issues

Training for health professionals in both districts, Gweru and Zaka was conducted in year 1. Health professionals from both Zaka and Gweru district participated in the IYCF TOT conducted on June 4 to 8, 2012 and July 16 to 20, 2012 respectively, where sessions on child nutrition and maternal related nutrition were presented. Gender issues and male involvement on maternal and child health were also discussed during the IYCF TOT and the cascade trainings that were conducted for VHW in November 2012 for Gweru and December 2012 for Zaka. The sessions on gender related issues that affect maternal infant and young child feeding were conducted through role plays, focus group discussion and practical visits to local health centres. During the field visits, interviews with mothers' action oriented groups and IYCF support groups were conducted. The facilitators ensured that each of the participants was able to counsel mothers and caregivers on child nutrition and maternal related nutrition as they (facilitators) observed and assessed the participants and provide feedback after the practice. Both districts also benefited from the BFHI training that reinforced discussions towards improving knowledge and practice in maternal child health, nutrition and gender issues. ARNI project supported MoHCC in training of all health care employees, clinical and non-clinical staff in the two districts of operation.

Indicator	Target	Total Project	Achievement
# of health care providers trained in the referral procedures, including ANC and PMTCT services	36 females 6 males	35 female 11 men	Achieved

Output 3.1.2 Health service providers trained in optimal breast- and complementary feeding, micronutrient consumption, and food diversity

Through project support, health service providers at all levels received training on optimal breast and complementary feeding (age appropriate feeding practices), micronutrient consumption and food diversity during the IYCF trainings. As on-going process, the trained health service providers counselled and educated pregnant, lactating women and their family members on optimal maternal and child feeding practices. Both Zaka and Gweru IYCF TOT had sessions conducted on optimal breast and complementary feeding, micronutrient consumption, and food diversity. Different methodologies were used in conducting the training, in addition to the lecture/discussions, participatory learning practices including role plays in optimal breast-and complementary feeding, micronutrient consumption, and food diversity were undertaken. Proper positioning of the baby during breast feeding was also demonstrated as part of the training. Facilitators concluded that participants had grasped the basic tenets of optimal breast-and complementary feeding practices as participants were tasked to role play some basic components of breastfeeding and the different complementary feeding options.

Year 3 activity: To complement and express emphasis on optimal breastfeeding and complementary feeding, micronutrient consumption and food diversity, MoHCC with support from ARNI project conducted BFHI training for both districts which included 213 male and 483 female health care workers. The training also included role plays and case studies as well as practical sessions that enhanced the capacity to understand the concepts. Participants for the BFHI training were drawn from clinics and hospitals that the project assisted in training of nurses in IYCF. All staff members within these health

institutions were trained that is non-clinical and clinical staff, with the aim of equipping all with knowledge on optimal breast feeding and infant and child feeding practices.

Indicator	Target	Total Project	Achievement
# of m/f health workers trained on optimal breast – and complimentary feeding, micronutrient consumption and dietary diversity	519 females 219 males	35 female 11 men	Achieved

Output 3.2.3 Linkages strengthened between VSLAs, health service providers and other social support programs through community health days

The project supported GoZ in conducting the Zimbabwe Vulnerability and Capacity Assessment (ZimVac) conducted in the district. Over the years, the project supported both districts in various national activities to include in child health days, Africa immunization days, mass drug administration and WBW. Specifically, the project supported national immunization days (NIDs) conducted from 18th to 22nd June 2012 in Zaka and Gweru districts as well as Africa immunization week commemoration from April 23 to 28, 2012. During these national health events, the following were conducted by MoHCC: mass immunization administration of measles, poliomyelitis vaccines and Vitamin A were provided to children up to 59 months. With Mass drug administration, MoHCC administered intestinal worm drugs as well as bilharzia drugs. In both districts, the Muskoka Project supported in-kind by seconding to MoHCW fuelled vehicles for supervision activities, mobilization and distribution of pamphlets with key messages. The project supported Gweru City health in September 2013 in commemorating of the world breastfeeding week and on the day, free basic health services were provided including rapid testing of HIV, blood pressure checks, rapid blood sugar testing and counselling corners (IYCF and HIV). In August 2014, Zaka District was supported in commemorating the World Breastfeeding week (WBW) in collaboration and coordination with the National Deputy Director Nutrition Department. In January 2014, the project team also supported the District Nutrition Department in conducting the Ministry's quantitative Lot Quality Assessment survey (LQAS) as the methodology used to assess key nutrition indicators on knowledge practices, behaviour and skills. This was the initial assessment conducted by MoHCC after the training of health care workers and community health workers in IYCF. The project also facilitated the donation of a computer and printer (not from project funds) to Zaka District Nutrition Department and a computer to Gweru District Nutrition Department for official use in nutrition and health information management systems.

Supporting Zaka District in WBW Commemoration on 27 August 2014 at Mandhloro Clinic

Indicator	Target	Total Project	Achievement
# of National Health Days commemorated at community level	6	6 (Gweru - -3 and Zaka 3)	Achieved

Output 3.3.2 Health service providers, C/VHWs and midwives trained on gender issues and counselling female clients on the importance of decision making and referral authority at the HH level

The project supported training of health service providers at both institutional and community level in year 1 and Q1 of year 2. As on-going process, the trained health professionals (nurses, nutritionists) and VHW provided education and counselling on IYCF, rMN, child health nutrition and gender issues to pregnant and lactating mothers, caregivers, other influential family members including men. During these trainings, practical sessions on gender issues on counselling of female clients on the importance of decision making were conducted with health professionals during the IYCF TOTs conducted in June and July 2012 respectively for both Zaka District and Gweru Urban. The same sessions were also conducted for the VHW in Gweru and Zaka during the cascade training conducted on November and December, 2012. The trained VHW in both districts conducted on-going household counselling and education on the importance of decision making and referral authority at household level. The VHW are referring the female clients for further management to clinics for maternal and child health and nutrition care services. Within the 3 SAA pilot wards in Zaka District, discussions around gender issues on importance of decision making and referral authority will be on-going at village level.

Indicator	Target	Total Project	Achievement
# of m/f health care workers, VHWs, and midwives trained on gender issues and to counsel female patients on the importance of decision making and referral authority	200 VHW (20 m, 180 f)	11 m, 38 f	Achieved

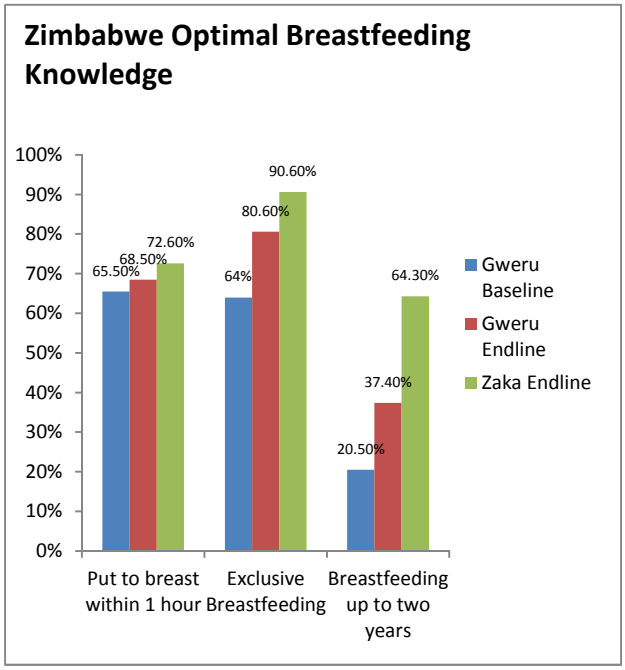
5.2.2 Immediate Outcomes

IO 1.1 Improved knowledge of women and men on optimal maternal and child feeding practices

Indicator			Baseline	Endline	Target	Achievement
% of men and women who report that a newborn baby should be put to the breast within 1 hour	Gweru	M	69.2%	62.4%	80%	Gweru – Not Achieved ✗
		F	65%	69.8%	80%	
	Zaka	M	No data	77%*	80%	Zaka - Not Achieved✗
		F	No data	72.7%	80%	
% of men and women who report that a mother should give her baby only breastmilk for the first 6 months	Gweru	M	50.8%	63%	70%	Gweru – Not Achieved ✗ Zaka - Achieved✓
		F	66%	84.1%	80%	
	Zaka	M	No data	78.4%	70%	
		F	No data	94%	80%	
% of men and women who report that a mother should continue to breastfeed her child for 2 years or longer	Gweru	M	23.1%	34.4%	60%	Gweru – Not Achieved ✗ Zaka - Achieved✓
		F	20.1%	38%	60%	
	Zaka	M	No data	57.3%*	60%	
		F	No data	66.2%	60%	

*Within survey margin of error

According to the endline survey, there was an increase in men and women's knowledge in optimal breastfeeding practice, with the exception of men's knowledge of early initiative of breastfeeding. The project did not achieve targets with men in Gweru, while in Zaka for both men and women ARNI achieved close to or all of its targets and in some cases significantly overachieved, particularly with regards to optimal exclusive breastfeeding. Women and men reported knowing most about exclusive breastfeeding and least about optimal length for breastfeeding. Optimal breastfeeding practices were promoted through VHW home visiting, VHW counselling at the health facilities during ante natal visits and health care workers trained through the maternal, infant and young child feeding ToT and BFHI training.



Respondents from Zaka had between 30% and 60% greater exposure to maternal, infant and young child feeding information through community based interventions such as VHWs and IYCF groups than did those from Gweru. Lower program exposure in Gweru may account for the less than expected improved knowledge of women and men on optimal breastfeeding and child feeding practices. In total the project reached 4400 pregnant and lactating women through monthly VHW visits, which is about 16% of the population of PLW in Gweru and Zaka. Cooking and feeding demonstrations were a very well-liked activity and the project reached 50 men and 205 women in Gweru and 63 men and 290 women in Gweru district. As over 70% of PLW in Gweru and Zaka receive ante natal care at a health facility, the project's focus on health facility based counselling and support also likely had a positive effect on the changes in breastfeeding knowledge.

Sources of IYCF Information	Gweru	Zaka
Cooking Demonstrations	8%	10%
IYCF Support Group	9%	12%
VHW	25%	40%
Clinic IYCF	87%	74%

Issues faced by the project's VHW program in Gweru included:

- High attrition rate of VHWs in Gweru, which is an urban/peri-urban environment. Forty-four percent of the VHWs turned over in Gweru during the course of the project. Higher costs for volunteering in an urban centre contributed to the VHW attrition including communication and transportation expenses as well as insufficient time to dedicate to volunteering were cited by VHWs as reasons for ending volunteer service.
- Older VHWs struggled to conduct regular home visits
- Catchment areas were very large and VHWs were not provided bicycles
- More clients requested to be registered than a VHW caseload could handle

- Quality issues with filling out the VHW registers
- Low number of supportive supervision contacts and feeling that health care workers were there to punish not support

CARE Zimbabwe addressed some of these challenges by holding a refresher training in November and December of 2014. From interviews conducted regularly with VHWs Esther Simbi, Jerita Chari and Sylivian Kunorubwe, they observed that besides their 10 clients booked in their registers, more women are consulting with them on IYCF and related maternal nutrition. Moreover, they were able to use this interest to form mother to mother support groups which provide for exchange of information, testimonies and sharing experiences. It appears that demand for community based health promotion services exceeded the supply based on number of VHWs where greater reach could be achieved with a scaled up program. VHWs found that the live drama performances were very helpful in reinforcing and validating the maternal nutrition and IYCF messages that were being delivered by them at the household level to the point that the District Nursing Officer in Zaka recommended they take place once per quarter.

Many of the VHWs did not succeed in setting up mother to mother support groups and given that CARE project staff could only access to VHWs with government staff present, it appears support to VHWs might not have been sufficient for all of them to mobilize community groups. Moreover, the government recommendation to solve the demand for services was to increase the number of registered clients for VHWs from 10 to 18. As the VHWs are a MoHCC cadre of lay health professional, the project had little influence in adding to the total number of VHWs.

For the clients who benefited from the program, based on the endline FGDs, PLW, mothers in law and husbands the VHWs provided quality of maternal nutrition and IYCF information as respondents understood optimal breastfeeding practices and key messages and could talk about why it was important for infant and child health. Participants all cited receiving information from VHWs, health facilities and the Muskoka project. "Breastfeeding restrictions became a thing of the past after group and individual counselling received by pregnant and lactating women and other family members from nurses and VHWs" (FGD participant, Zaka, 2015).

IO 1.2 Increased authority and capacity of women to make decisions regarding breast and complementary feeding practices

Indicator			Baseline	Endline	Target	Achievement
% of women who make decision about when and how often to breastfeed their girl or boy child	Gweru	Respondent	83.5%	81%	>10% increase	Achieved ✓
		Respondent with husband	2.6%	10.8%		
	Zaka	Respondent	No data	83.4%	>10% increase	
		Respondent with husband	No data	6.5%		

Gender change in ARNI is premised on the hypothesis that women need a certain amount of autonomy over their own bodies and significant equality regarding control over resources and decision making

over maternal and newborn health issues in order for the project's overall health goals to be met. The three immediate outcomes related to increasing women's authority and capacity to make decisions measure the extent to which women have basic control over their bodies and over pregnancy and lactation. The results discussed below fall within the first concentric circle of gender results described more fully in the gender equality section of this report.

Husbands and mothers in law continue to have significant influence over a women's decisions around breastfeeding. In terms of decisions related to when and how much to breastfeed and to introduce complementary feeding, women in Zaka and Gweru report ***high levels of autonomy***. At the same time, broader gender inequality dynamics beyond women's autonomy in decision making are likely influencing women's decision to breastfeed as described in this report under 8.1 Gender Equality. Project testimonials and FGDs show some examples of men's positive support, but more statements focus on men pressuring women to be "good women" according to social standards, standards that do not favour exclusive breastfeeding for six months. If a husband is not providing moral support and/or helping out with household chores then the mother did not feel she had the emotional support or time to breastfeed. As one women suggested "breastfeeding for 6 months is like prison."

Influence of mothers in law also constrains women's decision making autonomy in the household, which is especially problematic as the prevailing belief among that generation is that breastmilk is insufficient to help a baby grow. During one endline FGD, one woman told the story of her most recent child. While she was pregnant she advised her mother in law that she was going to exclusively breastfeed. The mother in law objected believing that breastmilk alone could not provide sufficient nutrition for an infant. When a VHW visited the household while the woman was pregnant the mother in law was present and heard the information about optimal breastfeeding practices using the counselling cards. The VHW also instructed the mother in law to accompany her daughter in law to the clinic for ANC visits, which she did. After giving birth the woman reminded her mother in law that she would exclusively breastfeed and that no medicine or cultural porridge was given to the child. Reluctantly, the mother in law agreed but was very watchful over the first 6 months. To her surprise, the child did not get diarrhoea or nhova (sunken fontanel from dehydration). The baby was healthy and growing well. This woman started advising other women to prepare their mothers in law and seek assistance from healthcare workers at community and health care centres. She said her mother in law is advising mothers/sisters in law on practicing EBF as they would save money seeking sangomas (traditional healers) or going to clinics as EBF proved to her that it is achievable and children are less likely to get ill.

IO 2.1 A variety of nutritious food is more equally available to men, women, boy and girls at the household level

Indicator			Baseline	Endline	Target	Achievement
% of women aged 15-49 and men aged 15 – 64 who consume 5 or more of the 9 food groups (minimal dietary diversity) (Repeated indicator under intermediate outcome 2)	Gweru	M	20%	29%	24%	Gweru – achieved✓ Zaka – n/a
		F	21.6%	29%	24.6%	
	Zaka	M		21%		
		F		21%		
% of boy and girl children 6-23 month who consume 4 or more food groups (Repeated indicator – explained under intermediate outcome 2)	Gweru	M	41.3%	28.5%	47.8%	Not achieved ✗
		F	46.1%	23.3%	47.8%	
	Zaka	M	29%	17.4%	33%	
		F		16.4%	33%	
Ratio of men to women who consume 5 or more of the 9 food groups (Dietary diversity)	Gweru		14:13	1:1	1:1	Achieved✓
	Zaka			1:1	1:1	

The dietary diversity score of women aged 15 – 49 increased beyond the target as 29% of women consumed 5 or more food groups in the previous 24 hours. The dietary diversity ratio between men and women also decreased to 1:1. These improvements are encouraging and suggest that efforts to educate women and men on dietary diversity and the promotion of community gardens was relatively successful. The pumpkin recipes proved to be very popular following the harvest period. According to some community members, pumpkins were used to feed pigs and donkeys as they felt pumpkins do not taste nice; however, due to the traditional cooking methods used, pumpkins are generally boiled. With the recipes provided, the communities vowed not to waste pumpkins as they now have the knowledge in how to cook/prepare pumpkins in different ways. Storage for pumpkins seemed another cause of concern; the women said they did not store their pumpkins safely and properly, but would leave them outside under their granary stores. They added that they were going back home and reconsidering storage of the pumpkins after the AGRITEX education session given on food storage, preservation and processing before the cooking started. One mother-in-law who was part of a group preparing mashed potatoes with carrots said, "I wish my daughter-in-law had not travelled, she could have benefited from all these recipes especially the pumpkin and sweet potato porridge for my grandchild." The mother–in-law was encouraged to cook together with her daughter-in-law on her return from the journey using the recipe book as well as encouraging the daughter-in-law to attend other cooking demonstrations as called for and conducted by their community. In Gweru most women indicated that they were going to share the recipes and conduct demonstrations at their women's clubs and women's societies within their churches. Besides that they said they would use the recipe books in preparing household meals as they seemed to note that the food stuffs are affordable as they can be readily available given that there was nothing new that they used to cook but the way to prepare the food. Most of the foods the communities realized, can be available as they are producers of the food crops the likes of potatoes, carrots, butter–nuts, pumpkins, leafy vegetables, fruits including wild fruits, beans tomatoes, ground nuts, round nuts, cow peas etc. except for kapenta, veg oil and at times flour that they would need to buy. They also have small livestock especially chickens that they would slaughter once in a while and by selling some of their produce, they would be able to buy other ingredients.

The childhood dietary diversity score

The communities, on realizing that they can do the cooking, indicated that together with their local AGRITEX Officers, they would organize additional cooking demonstrations on their own and conduct them regularly as they wanted to try every recipe in the book. One male school teacher said, "Being male, the recipes will go a long way in educating my students as well as the communities." He added that the recipes will help ease his job as a home economics teacher and will encourage boy children/students to like and enjoy cooking.

IO 2.2 Increased authority and capacity of women to make decisions regarding improved HH nutrition and consumption

Indicator	District		Baseline	Endline	Target	Achievement
% of women who make decisions about their food intake	Gweru	Respondent	74.1%	78.1%	5% increase in women-only or 10% w/m jointly or both of the above; decrease in neither	Gweru – achieved✓ Zaka – n/a
		Respondent with husband	5.6%	6.6%		
	Zaka	Respondent		55.6%		
		Respondent with husband		5%		
% of women who make decisions about what food to buy for their family	Gweru	Respondent	62.4%	65.5%	10% increase in women-only or 10% w/m jointly or both of the above; decrease in neither	
		Respondent with husband	15%	16.6%		
	Zaka	Respondent		50.6%		
		Respondent with husband		15.7%		
% of women who make decisions about how food is distributed within the household	Gweru	Respondent	89%	95.8%	5% increase in women-only or 10% w/m jointly or both of the above; decrease in neither	
		Respondent with husband	1.5%	0%		
	Zaka	Respondent		89%		
		Respondent with husband		1%		

The above table shows slight increases in the percentage of women making decisions about their own food intake, in what food to buy and in how food is distributed. According to the project's concentric circle model of decision making, these increases cannot, however, be interpreted as significant gains in either autonomy or authority because they are not related to the relational or structural gender dynamics that count the most for secure nutrition. The three decisions above are conditioned by decisions that men make regarding the size of the housekeeping budget, their food preferences, and how much support to provide women in growing or sourcing nutritious food. It is these latter decisions that are more likely to influence good nutrition. In this way, the results above show that women have retained an ability to apply project knowledge insofar as their traditional decision making purview permits. FGDs explain these increases as the maintenance of independence in areas that women traditionally control: what is cooked for dinner, and how much goes on each person's plate. Again broader gender equality issues outside of women's autonomy in decision making over food choices influence what choices are available (household budget allocated to food etc…).

IO 3.1 Improved ability of nutrition and health related service providers to deliver services appropriate to men, women, boys and girls

Indicator		Baseline	Endline	Target	Achievement
# of service providers m/f who complete the augmented training the program will deliver	M		7	6	Achieved ✓
	F		38	36	
% of providers who successfully pass the post-training assessment	M		100%	100%	
	F		100%	100%	

Pre-test and post-test results from the ToT for the IYCF indicate there was an increase in knowledge for the health care workers who were trained as trainers. In both the Gweru and Zaka ToTs, the post-test results were over 96% representing an increase from pre-test in Gweru of 9.1% and 15.3% in Zaka. For the cascade training there was a 35% increase in correct responses and 19% in Zaka with an overall average above 93%. Certain test questions remained challenging for the VHWs in the cascade training. Many participants struggled with the idea that women who were malnourished still could produce breastmilk sufficient to nourish and infant. As food insecurity in both the Gweru and Zaka districts of Masvingo presents an ongoing reality, perceptions around quality of breastmilk and malnourished lactating women are quite well entrenched. The second area where participants struggled is related to complimentary feeding and the idea that infants moving to solid foods should start on foods the consistency of breastmilk. One of the participants from the endline focus group discussions suggested that while most health care workers might know the maternal nutrition and IYCF curriculum, there are some who may perpetuate myths and misconceptions in private, subverting the information provided to clients in health facilities. Assessment and certification of Baby Friendly Hospitals will be an ongoing process carried forward by UNICEF and the MoHCC. A preliminary assessment was conducted in Zaka in November 2014 by the Masvingo Provincial Health Team, who reported improvements such as having breastfeeding counselling policies in place and information, education and communication materials on breastfeeding available. At the same time it was suggested that the materials be translated into local languages to be more accessible for clients and certain cadres of health and support workers.

In preparation for national level assessment of hospitals on BFHI, Masvingo Provincial team conducted preliminary review of the hospitals that had BFHI training conducted from July-August 2013 in Zaka District; the assessment included Ndanga and Musiso Hospitals that were trained with ARNI project support. Both hospitals were reported to be doing well with BFHI policies in place, 10 steps to breastfeeding displayed, both clinical and nonclinical staff were said to be knowledgeable on breastfeeding and code compliance. Ndanga Hospital established a breastfeeding corner for staff and had also designed their own IEC materials i.e. posters on breastfeeding/breastfeeding mothers. However, the need for staff to also educate mothers on how to express breast milk was seen to be an area that needed to be strengthened. The report also stated that the policies though displayed should have a translation into local language to ease comprehension.

From the interviews conducted with health care workers, one Zaka District nurse described that the Muskoka Initiative made great strides in improving the health status of pregnant and lactating women as well as children under 5 years. She reported that the information the nurses are providing has

enabled women to make informed decisions regarding infant and young child feeding. The nurse added that since the inception of the ARNI project, Zenguwo clinic has observed an increase in the number of mothers adopting exclusive breastfeeding for the first six months, a practice that seemed impossible prior to the project.

IO 3.2 Improved linkages between health service providers and communities

Indicator	Baseline	Endline	Target	Achievement
% of VHWs trained as IYCF counsellors who received at least 1 supervisory visit each quarter	0%	20%	60%	Not achieved ✗

Ongoing monitoring of the VHWs was planned monthly to be conducted by CARE field officers and the district nutritionist or other available staff from the District Health Authority. As a requirement by the district government, all visits by CARE in Zaka and Gweru required accompaniment by a representative from the District Health Authority, usually the District Nutritionist. In Zaka, the District Nutritionist limited their participation for supervisory visits to one day once per quarter and in Gweru the project struggled at times to find timely availability of government officials. As a result the supervision visits by CARE were conducted 1/3 less frequently than planned. Limited access as a result of needing government representatives for CARE staff to go out and conduct community monitoring activities on not only a scheduled but as needed basis led to certain VHWs indicating that they never received supportive supervision visits for IYCF during the course of the project.

At the same time, the VHWs are directly supervised and report to health facilities. Health facility staff was involved in the ToT on IYCF and the BHFI, so were able to provide most VHWs weekly support for their outreach activities including home visits and counselling for maternal nutrition and IYCF. CARE staff also regularly visited health facilities to provide support visits to health care workers and VHWs. In terms of actually supporting linkages between communities and health service providers, the project clearly succeeded as the number of ANC visits increased dramatically (see Intermediate Outcome 3). The inability to provide supportive supervision visions with the frequency planned likely affected more the quality of the counselling and support received by PLW and caregivers rather than the overall reach of the project.

IO 3.3 Increased authority and capacity of women to access health care services

Indicator			Baseline	Endline	Target	Achievement
% of mothers who make decisions about what to do when they become sick	Gweru	Respondent	37.4%	48.6%	10% increase in women-only or 5% w/m jointly or both of the above; decrease in neither	Gweru – achieved✓ Zaka – n/a
		Respondent with husband	8.7%	33.6%		
	Zaka	Respondent	Data unavailable	45.6%		
		Respondent with husband		19.8%		
% of mothers who make decisions on what to do when a child becomes sick	Gweru	Respondent	37.4%	48.6%	10% increase in women-only or 5% w/m jointly or both of the above;	
		Respondent with husband	8.7%	33.6%		
	Zaka	Respondent	Data	70%		

		Respondent with husband	unavailable	17.3%	decrease in neither	

Women, according to qualitative surveys conducted, do not seek permission to access health care services. They inform household members as courtesy. However, their capacity is limited due to financial constrains in instances where there is need to pay user fees. In this way, an element of permission and delay is retained as long as inequalities over household spending and cash control remain. In this regard, the increases shown in Table X above show an increase in the authority of women to decide on when to access health services. Qualitative data describes this as an increasing trend of women to dialogue with and assert themselves with mothers-in-law or husbands (as in the testimonial below). The difference between Zaka and Gweru may be explained by participation in VSLAs.

5.2.3 Intermediate Outcomes

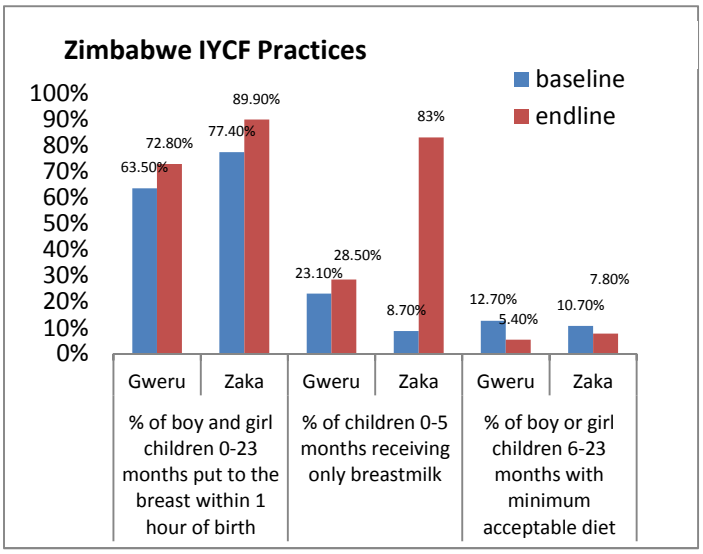
IO 1 Improved U2 child feeding practices by mothers and caregivers

Indicator	District		Baseline	Endline	Target	Achievement
% of boy and girl children 0-23 months put to the breast within 1 hour of birth	Gweru	M	60.3%	70.8%	73.5%	Achieved✓
		F	66.8%	75.5%		
	Zaka	M	77.4%	89.2%	85.4%	
		F		90.6%		
% of children 0-5 months receiving only breastmilk	Gweru	M	18.5%	25%	31.1%	Gweru M - Not achieved ✗ Gweru F - Achieved✓ Zaka - Achieved✓
		F	29.7%	33%		
	Zaka		8.7%*	83%**	16.7%	
% of boy or girl children 6-23 months with minimum acceptable diet	Gweru	M	14%	4.8%	16.7%	Not achieved ✗
		F	11.4%	6.2%		
	Zaka	M	10.7%	8.1%	14.7%	
		F		7.6%		

*Data from Zimbabwe 2010 National Nutrition Survey

**Data from Zaka District Nutritionist.

Behaviour change in the area of optimal breastfeeding practice, which is an intervention the project had direct influence over behaviour change, and was not constrained by issues of food access and availability, was successful. For optimal breastfeeding practice we see an improvement in Gweru of 15% in early initiation and 23% in exclusive breastfeeding, which is fairly consistent with the improvements in knowledge of optimal breastfeeding practice. At the same time 28.5% of women practicing



exclusive breastfeeding is still low and likely does not suggest a tipping point for behaviour change in Gweru to normalizing optimal breastfeeding practices. In Zaka the data suggests a significant improvement in breastfeeding rates; however, given these are different data sources and the District Nutritionist data is only for those lactating women who visit health facilities, the results are likely less dramatic. In 2013 the District Nutritionist Data showed 67% of children 0-5 months exclusively breastfed and in 2014 this was increased to 83%. This 24% increase is likely more in line with actual changes in breastfeeding

Myths, hunger and traditional beliefs around breastfeeding along with inconsistent messaging by some health care professionals around breastfeeding and HIV continue to be obstacles to further increases in optimal breastfeeding. There was mixed statements in terms of breastfeeding practice in the endline FGDs. Those who practice EBF said it was convenient and saw that their babies were healthy and happy when they were exclusively breastfed. "You can tell a baby that has been given cereal versus a baby that has just had breastmilk because they are not happy and bouncy." However, more often it seems that EBF is still a challenge for three key reasons:

1. If a baby is crying the conclusion is usually that breastmilk is insufficient and other food is introduced and anecdotally
2. Lack of husband and family support
3. In Gweru lack of maternity leave and women going away to work

There are a few cases of positive deviance where women in Gweru expressed so that they could exclusively breastfeed and another where a woman continued to breastfeed while pregnant.

IO 2 Equal increased consumption of healthy and nutritious food by men, women, boys and girls

Indicator			Baseline	Endline	Target	Achievement
% of boy and girl children 6-23 months who receive food groups from 4 or more food groups	Gweru	M	41.3%	28.5%	47.8%	Not achieved ✗
		F	46.1%	23.3%		
	Zaka	M	29.1%	16.4%	33.1%	
		F		17.4%		
% of children 6-23 months who receive solid, semi-solid or soft foods the minimum number of times	Gweru	M	50%	28.5%	58.7%	Not achieved ✗
		F	50.3%	23.3%		
	Zaka	M	32%	16.4%	40%	
		F		17.4%		
% of men and women who consume 5 or more of the 9 foods groups	Gweru	M	20%	29%	24.8%	Achieved✓ Not achieved ✗
		F	21.6%	29.1%		
	Zaka	M		20.7%		
		F		21.1%		

Children's minimum meal frequency and dietary diversity scores were not only not achieved but actually became worse over the course of the project by around 50% and were similarly low in both Gweru and Zaka. The feeding practices around complimentary feeding seem to be mixed between ones that are cultural, personal and ones informed by health care providers. From the endline FGDs, the timing of complementary feeding was deemed a culture issue - some groups introduce babies to other foods on

the first day whilst for some individuals it is exclusive for up to 8 months. As explained by one mother, a baby that cries a lot is deemed a hungry one, and therefore the introduction of complementary foods will come sooner; however on the other hand, if there is food scarcity, then mothers will continue to exclusively breastfeed. Most women seem to be initiating complementary foods at the age of 6 months because of EBF although some introduce complementary foods before their children reach six months. The foods introduced for complementary feeding that the groups mentioned were: porridge, sadza, tea with milk, water, potatoes, green vegetables, meat and eggs, celeriac, NAN (fortified milk), peanut butter, fruit when there is availability. Again, all groups mentioned the importance of the VHWs as disseminators of valuable information. One mothers in law mentioned: "Our daughters in law are getting information on nutritious complementary foods from nurses and VHWs" and another: "Most women now seek advice on complementary feeding from VHWs and nurses unlike before when mothers in law advised young mothers on complementary feeding."

IO 3 Increased use of nutrition and health services by women, girls and boys

Indicator			Baseline	Endline	Target	Achievement
% of women aged 15 – 49 years with a live birth who received ANC from a skilled health provider at least 4 time during pregnancy	Gweru	F	66.2%	76.8%	72.2%	Achieved✓
	Zaka	F	30.3%	83.7%	30.3%	
% of mother with a child under 2 years of age who receive IYCF counselling from a trained VHW at least once	Gweru	F	0%	46.5%	20%	
	Zaka	F	0%	72%		

Health care workers regularly reported that there was an increase in the number of women attending ANC following the introduction of the ARNI project in Gweru and Zaka districts in Zimbabwe. From the endline survey we see a significant increase in utilization of health services with Gweru seeing a 16% increase and Zaka a 176% increase. Moreover, home visit and community reach of the VHW was also more than achieved as according to the endline survey almost 50% of PLW in Gweru and over 70% in Zaka received maternal nutrition and IYCF counselling and support from a VHW. Health care workers also reported a significant increase in the demand for ante natal and post-natal care services including maternal nutrition and IYCF counselling. This rise in demand for ANC and PNC did put a strain on already limited and stretched health human resources and was a regular concern of health centre staff.

5.2.4 Ultimate Outcome

Indicator			Baseline	Endline	Target	Achievement
% of boy and girl children 0-23 months with length for age <-2 sd (stunted)	Gweru	M	17.9%	24.4%	13.8%	Not achieved ✗
		F	15.5%	34.7%		
	Zaka	M	30.8%	24%	28.8%	Achieved✓
		F		26.2%		
% of boy and girl children 0-23 month with weight for age <-2 sd (wasted)	Gweru	M	1.7%	4.3%	1.5%	Not achieved ✗
		F	1.5%	2.1%		
	Zaka	M	1.9%	3.7%	1.9%	Not achieved ✗
		F		6.8%		
% change in pregnant and lactating women with MUAC	Gweru	F	5.15	11.9%	4.5%	Not achieved ✗
	Zaka	F	Data unavailable	5.3%		Not achieved ✗

In Gweru we see a significant decline in the nutritional status of children under 2 and pregnant and lactating women suggesting the project has had little short-term effect on the nutritional status of the district. In Gweru the data suggests an 82% increase (15.8% at baseline and 28.9% at endline) in stunting in children under 2 years of age. There is an increase in wasting in Gweru by 140% from 1.5% at baseline to 3.6% at endline. Percent of PLW with a middle upper arm circumference (MUAC) less than 23 centimetres increased by 130%. Results from Zaka are a little bit more mixed. There is a decrease in stunting by 19% (baseline 30.8% and endline 25%), which may be in part due to the prevailing trend in recovering agricultural yields, which would directly benefit the subsistence farmer population of Zaka. However, we also see an increase in wasting of 174% compared to baseline from the National Nutrition Survey conducted in 2010. With no MUAC baseline data for PLW since the National Nutrition Survey from 2010 conducted by the Zimbabwean government did not collect gender specific data, it is difficult to draw any conclusions. Reasons for the decrease in nutritional status of children under 2 and pregnant and lactating women may include:

- Seasonality : the baseline was collected post-harvest and the endline during the lean period
- Declining food security situation in Gweru as the landless tenant population is highly susceptible to economic instability
- Anecdotal evidence of declining water infrastructure and an increase in use of unsafe drinking water

6 UN Commission on Information and Accountability for Women's and Children's Health

The UN Commission on Information and Accountability for Women's and Children's Health (CoIA) is co-chaired by Prime Minister Stephen Harper of Canada and President Jakaya Kikwete of Tanzania. The four objectives of CoIA are:

- Track results and resource flows for women's and children's health at the global and country levels;
- ***Identify a core set of indicators and measurement needs for women's and children's health;***
- Propose steps to improve health information and registration of births and deaths in low-income countries; and,
- Explore opportunities for innovation in information technology to improve access to reliable information on resources and outcomes.

The second objective is relevant to the project level investments in MNCH. In May 2011, the Commission issued its report, Keeping promises, measuring results, which laid out a framework for accountability. The Commission identified 11 core indicators that, taken together, enables stakeholders to track progress in improving coverage of interventions needed to ensure the health of women and children across the continuum of care. These indicators included eight measures of intervention

coverage and three measures of impact. For all 11 indicators, the Commission urged that the data be disaggregated by gender and other equity considerations.

- Maternal mortality ratio
- Under-five child mortality (with the proportion of newborn deaths)
- ***Stunting prevalence***
- Demand for family planning satisfied (met need for contraception)
- ***Antenatal care (four or more visits)***
- Antiretrovirals for HIV-positive pregnant women
- Skilled attendant at birth
- Postnatal care for mothers and babies within two days of birth
- ***Exclusive breastfeeding (0–5 months of age)***
- Three doses of combined diphtheria-tetanus-pertussis vaccine (DTP3) immunization coverage
- Antibiotic treatment for childhood pneumonia
-

Of the 11 indicators the ARNI project used 3 to track performance: stunting prevalence (ultimate outcome); ante natal care (intermediate outcome 3) and EBF (intermediate outcome 1). Analysis related to changes in these indicators can be found in the performance section of this report. As recommended all data is disaggregated by sex.

CARE also partnered with Plan Canada, Save the Children and World Vision and contracted Sick Children's Hospital to develop a common indicator framework using key indicators including the COiA indicators in order to collectively report on Muskoka Initiative results. These collective results will be presented at a Symposium June 24-25, 2015 in Toronto at the Hospital for Sick Children.

7 Project Management

Under the terms of the Contribution Agreement between CARE Canada and CIDA (DFATD), CARE Canada bore overall legal responsibility for the project and was responsible for abiding by all contract terms and conditions. CARE Canada was responsible for the management of DFATD's resources and the coordination of project implementation. As such, CARE Canada was responsible for ensuring the project documents, semi-annual progress reports, financial reports and other documents conform to DFATD's requirements. CARE Canada provided oversight for project monitoring and provided the guidance on financial requirements and conditions.

Workplanning was conducted on an annual basis. CARE Ethiopia and CARE Zimbabwe met with government partners and establish workplans and integrate project activities into government district health authority workplans. An annual review meeting would be held between CARE Ethiopia/Zimbabwe and CARE Canada to finalize the workplan and ensure that project outcomes were being met through proposed activities. CARE Ethiopia and Zimbabwe would then prepare the relevant annual workplanning documents and submit to CARE Canada, which would then review, comment and submitted to DFATD on an annual basis. The project cycle was from December 1 to November 30, which did not conform to DFATD fiscal, CARE fiscal or normal financial quarters which made financial reporting

"off" quarter somewhat difficult for CARE and not recommended for future projects. The preferred workplanning cycle is DFATD fiscal April 1 – March 31.

The project's performance was monitored using the performance measurement framework's indicators and outcomes. Ongoing project monitoring through quantitative and qualitative methods included:

- Quarterly Outpatient Therapeutic Program Data (HMIS)
- Ongoing knowledge and practices survey (key indicators)
- Mid-term household survey and focus group discussion (Ethiopia only)
- Ongoing focus group discussion
- Site visits
- Key informant interviews

Regular mostly quarterly reflection meetings were held to review data and make program adjustments where necessary in Ethiopia and Zimbabwe. CARE Canada and CARE USA would review monitoring data and conduct site visits to provide feedback and suggest modifications to project implementation – mostly focused on technical areas related to best practices in nutrition programming.

Financial oversight was provided by CARE Canada. Financial reports and requests for advance were submitted by CARE Ethiopia and CARE Zimbabwe on a quarterly basis. Full project spending reviews were conducted on an annual basis to suggest any changes to the budget and suggest reallocations. IT was through this process that CARE Ethiopia's underspending was identified, which allowed reallocation to CARE Zimbabwe. Logistics were managed by CARE Ethiopia and CARE Zimbabwe and were governed by respective country office policies such as safety and security and travel.

8 Risk Management

Development risks associated with the project were food insecurity related to drought; the Zimbabwean Presidential election in 2011 limiting development and humanitarian space; and, the entrenchment of existing gender norms and stereotypes. The project had some direct influence in addressing risks associated with food security and gender, while the project could do little to impacts of the election. The following table outlines how the residual effects of the risks that had an impact on project programming and outcomes.

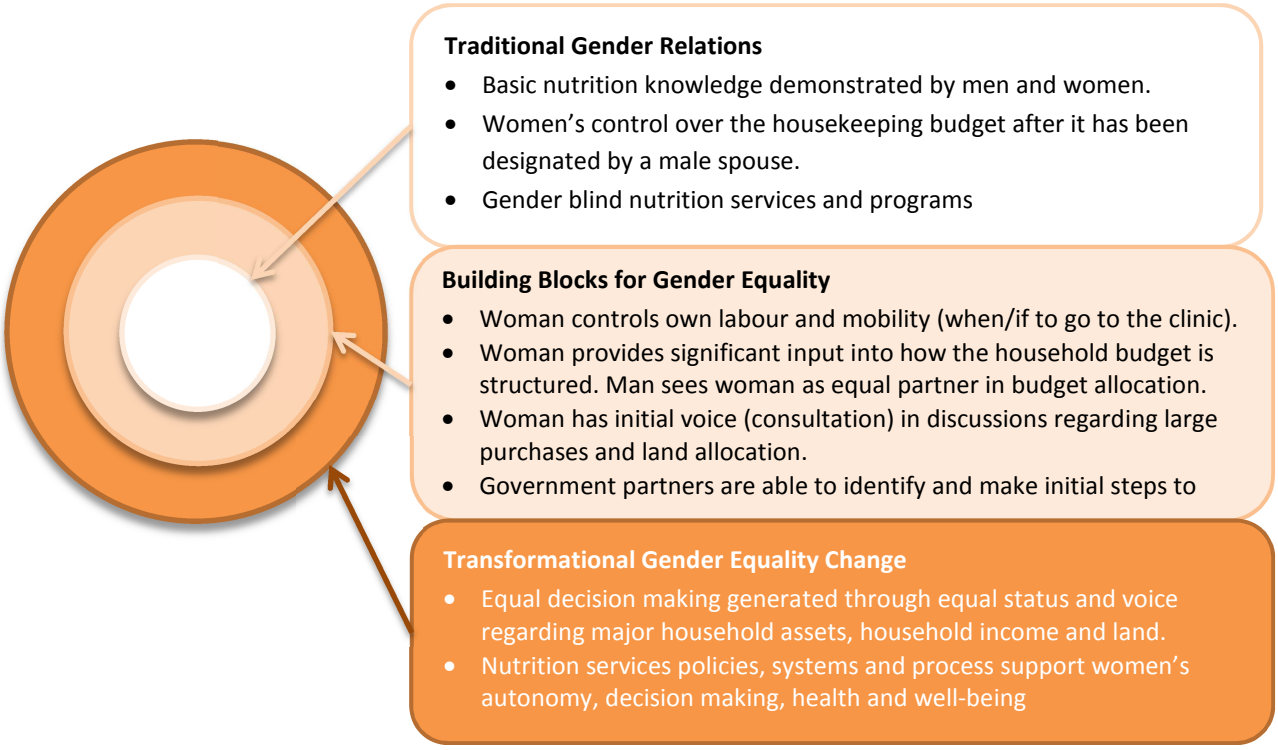
Risk	Risk Response	Risk Management	Residual Risk Level
Drought in project area	Ethiopia - Monitors early warning detection and links with emergency preparedness section of CARE and other development actors Zimbabwe – coping strategies in place with complementary initiatives	Ethiopia - the project implementation plan included targeting of inputs to vulnerable households to reduce effects of food insecurity. While in Ethiopia there was food insecurity the risk was mostly mitigated. Zimbabwe - following the Presidential elections and the	**Ethiopia** Impact 1 (low) Level 3 (high) **Zimbabwe** Impact 3 (high) Level 3 (high)

	in DRR, conservation farming, irrigation for vegetable production, and VSLAs will improve capacity to purchase foods	withdraw of WFP from Zaka and Gweru, CARE Zimbabwe had no programming or funding to address this risk. Programming such as cooking demonstrations took into consideration	
Zimbabwe 2011 Presidential and Parliamentary elections impede humanitarian space	Strong coordination and communication with local stakeholders, engagement in national forums, close cooperation with OCHA and other implementing agencies to continue to advocate for space	Zimbabwe – CARE Zimbabwe maintains an a-political position as an NGO and abides by government requirements for NGOs to be accompanied while conducting activities in certain districts including Zaka. The Baby Friendly Hospital Initiative was introduced to mitigate this risk by attempting to reach women via another entry point.	**Zimbabwe** Impact 3 Level 3
The existing gender division of labor, social norms and stereotypes are deeply entrenched, and may affect not only the rate of change but the degree to which women, girls, men and boys are able to avail themselves of project assets and benefits.	Ensure engagement of male leaders, fathers, husbands, men and boys in the awareness raising programs to challenge existing power relations. Gender issues are identified and strategies to address them are created across a broad spectrum of collectives, including in community groups, among community health workers and in clinics.	See Section 7 Gender Equality	**Ethiopia** Impact 2 (low) Level 3 (high) **Zimbabwe** Impact 3 (high) Level 3 (high)

9 Gender Equality Strategy

The strategic goal of the ARNI gender strategy was **to *support male and female health workers, AGRITEX staff, traditional leaders and other stakeholders to decrease gender gaps in knowledge, control and decision making created by cultural norms in relation to infant and young child feeding (g/b) and related maternal health and nutrition.***

The project decided to focus on these three areas of gender equality inquiry because equality in these areas is key to achieving the maternal and child health and nutrition outcomes associated with ARNI. For the purposes of measuring gender change over the life of the project, stages of change in gender dynamics from baseline to endline are envisioned as concentric circles with limited knowledge, control or decision making in the innermost circle (closest to the condition at baseline) and deep changes in gender relations and structure in the outermost circle (the hoped-for condition at endline). These stages, along with criteria describing change at each stage, are described in the diagram below. The project posits that gender change related to all three circles is necessary for project results to be sustainably achieved.



At the same time, given gender dynamics described at baseline, the project celebrates any change towards the outermost circle, especially in terms of women's autonomy and equal status as decision makers, men's awareness and attitude change towards gender issues in general, and service providers' will to identify and address gender issues in health service provision.

In order to make change at each of these levels, the project undertook the following **universal gender equality approaches:**

- Mainstreaming gender equality learning and action through the health cascade training-of-trainers;
- Engaging men, boys and male traditional leaders; and
- Social analysis and action (SAA).

The purpose of this section of the report is to reflect on the extent to which the three approaches listed above succeeded in creating gender change towards the outermost circle of knowledge, control and decision making. The section uses primary qualitative and some quantitative data collected at baseline, mid-term and end-line in the project, as well as project reports as secondary data. It attempts to focus on gender change data and analysis not already discussed in previous sections.

Gender Mainstreaming into Cascade Training of Trainers

Key Question: *Did the mainstreaming approach result in strengthened gender equality knowledge,*

attitudes and practices amongst stakeholders and beneficiaries at all levels of the cascade training ladder?

A contrast of Ethiopia's and Zimbabwe's experiences with mainstreaming gender equality content into the cascade training model highlights the conditions necessary to ensure that this approach creates effective gender change at all levels. The diagram below shows the flow of gender equality information and action in Zimbabwe by cascade cohort.

Members of the first cohort participated in initial gender equality training and planning activities to identify the gender issues the project would address. There is evidence that this first cohort and the MWAGCD provided training to health professionals on a variety of gender issues, but there is no indication that this information was cascaded down the training ladder. Testimonials from community health workers show that they were grappling with gender issues within the context of their work and evidence from FGDs shows that some gender equality knowledge was reaching the final cohort. At the same time, evidence from both quantitative data (presented elsewhere in this report) and FGDs shows such a low rate change in gender equality knowledge and practice amongst the final cohort as to call into question the ability of the Zimbabwe to affect change at the bottom levels of the cascade.

This contrasts with evidence from Ethiopia. There, the gender equality training that each cohort received and the roles that they each played in transmitting knowledge and supporting knowledge and attitude change is clearly outlined in reports and primary data so as to be able to link training activities to gender results achieved. Some of these results are descried in the diagram below. Activities that meet or exceed CARE's standards of good gender equality programming are highlighted in bold. These bolded results compare favourably with the types of results outlined in the second circle in the measurement diagram.

Woreda health service providers, other government officials at this level	Project staff established an ongoing relationship with this cohort in order to plan government-led activities that had a gender equality component. By the end of the project, ARNI staff observed this cohort **consistently including discussions on gender issues in regular training activities** and taking their own initiative to reinforce gender messages with the subsequent cohort.
AEWs, HEWs , home economics experts at kebele level	The cohort demonstrated comfort with gender equality training material, and showed some signs of routinely addressing basic gender issues in their regular training. **Male AEWs discussing gender issues with men (and women) and with supervisors provided a non-traditional mentoring and change avenue.**
Traditional leaders, elders	Testimonials show increased awareness of the effects of gender inequalities on community health generally, and an initial willingness to positively sanction planning activities that address inequalities in their areas of responsibility.
community health promoters M2M leaders, MDA leaders, VSLAs leaders	Men were exposed men to new concepts, ideas and practices and provided with a platform to apply these if they were willing. This has led to some cautious gains in key areas such as **decreasing women's work burdens** while pregnant and lactating and dynamics in household decision making around the assets required for maternal health. **Women received specific training on gender** and health care decision making, gender as a determinant factor of household and community health, decision making over individual health and household decision making and similar issues. Project results evidence shows that women have a stronger vocabulary to speak about gender issues in their daily lives, and that they are

A comparison of the approaches in Ethiopia and Zimbabwe shows that mainstreaming gender equality work into cascade training-of-trainers allows MNCH projects to achieve gender results under three conditions.

1. First, project staff and health officials need to be able to forge a close enough relationship to play joint mentoring and monitoring roles at *all* levels in the training ladder.

2. Second, project, partner and community structures need to be configured so as to be open to addressing the gender issues discussed in training. VSLAs, M2M groups, men's development armies and similar groups were much more prevalent in Ethiopia, providing an entry point from which health and development officials could engage large numbers of male and female beneficiaries.

3. Third, any monitoring system jointly established between the project and its key government partners needs to allow for the pathway of knowledge and change to be clearly identified.

Working with Traditional Leaders, Men and Boys

Key Question: *Did specifically working with men on non-traditional subjects catalyse a change in gender dynamics related to maternal and child health?*

Both projects show evidence that engaging men who are traditional leaders, religious leaders, spouses and technical staff catalysed results related to women's and men's more equal knowledge of maternal and child feeding practices and women's increased authority and capacity in project areas of concern.

The two projects used a combination of men's engagement methods as outlined in the box to the right. Ethiopia's strategy was clearly developed from the first year of the project, while Zimbabwe consolidated their strategy in the latter half of the project. Nevertheless, both used a mix of methods at multiple levels.

What Worked to Engage Men?

- ✓ Direct conversations with men's groups (Ethiopia)
- ✓ SAA
- ✓ Cooking demonstrations, public recognition days, drama and key messages
- ✓ Involving village leadership in gender equality training and in planning related to women's health
- ✓ Cascade training of trainers (with men trained on gender issues at multiple levels)
- ✓ CHWs counselling men (Zimbabwe)

In Zimbabwe, engaging male village leaders in planning and SAA increased their awareness on and commitment to discussing the links between socio-cultural norms and women's health and nutrition. Other strategies show some change in community attitude or awareness, but less change amongst individual men. Qualitative monitoring shows CHWs, PLW and others engaging men in discussions or community activities, but FGDs reflect a relatively low level of change in knowledge and control patterns. This indicates that the Zimbabwe project's activities and resources did not necessarily strengthen men's knowledge in this non-traditional area.

Mid-term and final FGDs from Ethiopia show that their men's engagement strategies were relatively successful in overcoming the knowledge gap and in changing some men's attitudes towards their role in resource control and decision making. By the end of the project, women were able to consistently demonstrate correct knowledge in IYCF and related areas and were able to manage conversations so as to show attitudes consistent with this knowledge. Results from men were more mixed. For every man who demonstrated correct knowledge related to maternal and child health and related gender issues and who demonstrated a change in attitude, one man showed good knowledge but no change in attitude and another showed neither good knowledge nor a change in attitude. This contrasts with baseline qualitative findings in which women's knowledge was inconsistent and men's was largely non-existent.

The experiences in Ethiopia and Zimbabwe show that a men's engagement is a strong catalyst for reaching results under all three circles when:

- Deliberately implemented from the beginning of the project.
- Implemented at multiple levels and through multiple entry points.

- There is a specific and designated platform through which to continually engage men.

Social Analysis and Action (SAA)

Key Question: *Did the SAA as applied to ARNI contribute to change in gender **relations** and **structure** (needed to achieve results in the outermost concentric circle)?*

ARNI Ethiopia adapted CARE's general SAA manual to the local context and language, provided cascade training using the same structure as for the TOTs, and held continual conversations in VSLAs, men's groups and M2M groups. Local government officials and development army leaders took on support roles as community groups used SAA to explore gender issues in maternal and child health. In the first year of the project, Ethiopia trained Zimbabwe staff, AGRITEX and MOHCW partners. ARNI Zimbabwe in turn adapted the manual, undertook cascade training, established three pilot SAA groups in Zaka and began to use the approach or its activities as the key method through which the project did gender work. Reporting from both projects mentions the formation of action plans, but does not note the extent to which plans were implemented (to complete the action-reflection cycle).

The mix of qualitative and quantitative data from project mid-term and endline shows the degree to which decision making and control patterns changed over the life of the project. As SAA is specifically designed to mobilise project male and female beneficiaries around these issues, gains in these areas can be linked to the use of the approach.

Person Making Decisions About Key Assets for Maternal Health in Ethiopia

	Respondent	Husband	Joint	MIL	Other
Decisions over large household purchases?	3%	13%	**83%**	1%	0%
Decisions over household purchases for daily needs?	13%	15%	**71%**	1%	0%
Decisions over money that woman brings into household?	15%	3%	**79%**	3%	0%
Decisions over money that man brings into household?	6%	6%	**87%**	1%	0%
Decision over large purchase?	4%	8%	**87%**	2%	0%
Decision over small purchase?	**71%**	1%	28%	1%	0%

Mid-term FGD analysis showed that 58% of women's statements on decision making over large expenses was carried out in a traditional manner (where the woman is consulted and the man has final say). 27% of statements described more mutual household decision making. At endline 40% of women's statements described traditional patterns and the other 60% showed some increased voice for women, where discussions are more vibrant and women's position on entering the conversation is stronger (usually due to increased confidence as well as men's willingness to enter into *mutual* discussion). Comparison of the same data for men shows a reduction in traditional decision making patterns over large household purchases from 75% at mid-term to 40% at endline. Forty percent of men's statements

showed them willing to entirely leave small purchases in women's hands. At mid-term, 38% of men's statements regarding decision making showed resistance to gender equality. No statements showed resistance at endline.

An analysis of the quantitative and qualitative data presented above shows that while there has been an increase in "joint" decision making between mid-term and endline, there is still a need to be cautious about exactly what "joint" decision making means to both women and men. Although women's voice in decision making may have increased in comparison to the beginning of the project, FGD statements continued in at least one third of cases to describe a situation in which men continued to dominate. At the same time, both women and men are relatively consistently describing greater autonomy for women in decision making over small household purchases.

Person Making Decisions About Key Assets for Maternal Health in Zimbabwe

	Respondent	Husband	Joint	MIL	Other
Decisions over large household purchases?	19%	35%	**38%**	1%	7%
Decisions over household purchases for daily needs?	**70%**	7%	13%	3%	7%
Decisions over money that woman brings into household?	**56%**	10%	30%	0%	3%
Decisions over money that man brings into household?	32%	12%	**47%**	0%	8%
Decision over large purchase?	11%	**41%**	39%	1%	8%
Decision over small purchase?	**50%**	15%	27%	2%	6%

Qualitative information from baseline FGDs compares with the quantitative data above. At baseline, 53% of women's statements referred to a pattern in which women make suggestions or provide information to guide men on apportioning the overall household budget, but men make final decisions. Thirteen percent of women's statements indicate that they have only have full control over the portion of budget *that they are allocated*. Seventeen percent of men's statements, on the other hand, portrayed them as exclusive decision makers, and 50% showed men consulting before having final say. When asked what local culture says about household budget management, 100% of men's statements described traditional roles in which men had a say over the overall budget, and women either guarded family cash or controlled their allotted portion.

This contrasts with the figures above, where women report that men are less frequently (at 38%) sole decision makers over large assets. Fifty percent of women reported able to make decisions over small purchases (contrasted with 13% reporting similar power in baseline FGDs). The real win for Zimbabwe is, however, the change in women's autonomy over their own earnings. At baseline, the majority of both women and men reported that men had primary control over women's earnings, while here 56% of women note they have control over their own earnings.

While these findings do not show strong and significant changes to structure, or lasting change in the area of relations, **they do show significant change in attitudes and behaviours related to key control and decision making activities amongst a good enough proportion of the beneficiary population (both women and men) to show sufficient movement into the middle circle of gender equality results, and to suggest a potential sustained gender change.** While some few men, for example, may still report in FGDs that they control what food their wives cook or buy or when their wives go to the clinic, a significant enough majority have moved away from this level of micro-control to allow women autonomy in some of the key areas tested under the "autonomy and capacity" immediate outcomes. The evidence for sustained change comes in that both women and men are relatively consistently reporting that the dynamics described in circle one are no longer part of their lives, but are showing a high degree of variation and flux in their descriptions of how gender dynamics under the middle circle are playing out. Through its consistent discussions, gender-specific activities, role plays and dialogues all focused on drawing links between gender equality and maternal and child health, SAA (along with men's engagement and other factors) contributed to this change. This is a result to be celebrated in a project ARNI's scope.

Conclusion

This discussion has demonstrated a number of ways in which three approaches were used to make gender change towards more equal knowledge, control and decision making needed for women, girls and boys to be sufficiently and equally healthy, especially during pregnancy and until two years of age. The discussion demonstrates the efficacy of all three approaches, but also implies that each approach supported the other in creating sustained initial gender change. For example, Zimbabwe was able to reinforce gender equality content that flowed from the top of a training ladder down in the cascade approach with SAA activities and messages that were the main medium of gender work with lower level partners and beneficiaries. Ethiopia was able to use the cascade structure to implement SAA and provide continued and multi-level support as beneficiaries took on new gender equality concepts and materials. The multi-level approach in Ethiopia (and, to a lesser extent Zimbabwe) also meant that men's engagement happened anywhere where men are key gatekeepers, and provided an entry point for doing gender work with audiences that traditionally show low political will for the subject. Finally, project gender equality results show that these approaches work best when they are applied consistently, when strong gender equality planning and training is completed within the first year to 18 months of the project, and when the project includes a strong combination of gender integrated and gender specific activities.

10 Environment

CAREs *Improved Health and Nutrition of Vulnerable Women and Children* project was a locally based project that worked within the constructs of established government strategies and interventions and had minimal environmental impact. It provided locally available and approved seeds to mother groups to plant as a means of improving dietary diversity among their children under 2 years and themselves. The small household and community gardens had no environmental impacts on soil, air, water quality,

or wildlife. These small gardens allowed mothers to grow nutritiously diverse crops which established the foundation for the infant and young child feeding program. CARE utilized conservation agriculture principles to protect the environment and the local community members; natural methods used in other CARE agriculture projects were exchanged with this project. In addition, CARE linked with local agriculture and environment officers as necessary. Mothers were taught efficient and effective gardening and water management to minimize waste without decreasing yield. These practices were shared with the larger community through community dialogue sessions designed to address malnutrition and gender equality issues in the community. The local CARE food security and agriculture experts supported the project with information and best practices to ensure success. They assisted the field team and managers to manage and monitor the project activities in order to minimize any potential environmental harm and maximize environmental benefit.

11 Success Factors

11.1 Relevance

In both Ethiopia and Zimbabwe the ARNI project responded to a major health priority in terms of health status of mothers and children and also aligned with national priorities in Ethiopia and Zimbabwe as both countries joined the SUN Movement in recent years. Stunting rates in children under 5 years of age globally have declined 33% between 1990 and 2010 to 27%. In Ethiopia there has been a 34% decrease since 1992 and 2011 but remains very high at 44% percent of children under 5 years of age who are stunted. In Zimbabwe stunting in children under 5 years of age has actually increased slightly from 29% in 1994 to 32% in 2011.[2]

There are generally recognized causes of stunting which include breastfeeding practices and inadequate complimentary feeding; household and family factors; and, infection. The four intermediate project outcomes address these causes of stunting. Intermediate Outcome 1 *Improved under two child feeding practices by mothers and caregivers* specifically focuses on instilling optimal breastfeeding and complimentary feeding practices through community health education. Intermediate Outcome 3 *Increased use of nutrition and health services by women, girls and boys* supports nutrition system strengthening by developing health service provider skills in the areas of nutrition counselling for pregnant and lactating women and children under 5 as part of ANC and PNC. Intermediate Outcome 2 *Equal increased consumption of healthy and nutritious foods be men, women, boys and girls* addresses the contextual factors of stunting related to household and family factors in the contexts of Ethiopia and Zimbabwe the focus was on increasing household food security. We know that improved nutrition does not lead to improved health outcomes unless the body can absorb nutrients. Intermediate Outcome 4 *Improved hygiene practice by men, women, boys and girls to prevent diarrhea among boys, girls, and pregnant women* improved the sanitary and hygiene conditions within the household and community to prevent fecal-oral transmission of infectious diseases causing diarrhea.

[2] Ethiopia and Zimbabwe DHS

11.2 Appropriateness of Design

Interventions used to promote improved nutrition practices and health outcomes in pregnant and lactating women and children under 2 are consistent with those recommended by the 2013 Lancet Series on Maternal and Child Nutrition and the SUN Movement 13 interventions that address the 'window of opportunity" for improved nutrition based on the first 1000 days (between a women's pregnancy and the child's second birthday), hence the projects focus on pregnant and lactating women and children under 2.

Using the right delivery model for the context

In Ethiopia where access to communities was essentially unfettered, project staff could support a community based model for peer to peer nutrition education through M2M groups. For Zimbabwe, working through the existing government VHW system allowed the necessary participation by government staff, while providing access to individual households. However, limited supportive supervision opportunities weakened the effectiveness of this approach in Zimbabwe, yet other more community intensive options would likely not have been successful.

Combined nutrition specific and nutrition sensitive programming

Both Ethiopia and Zimbabwe implemented nutrition sensitive agriculture through agricultural extension worker program using training on backyard gardens, cooking demonstrations and provision of inputs. Ethiopia included a WASH component that was missing from Zimbabwe, which may have impacted the results achieved in Zimbabwe. Lastly, supporting women's empowerment through platforms like SAA and VSLA is an important first step in addressing the cultural and behavioural norms that underlie many harmful nutrition practices.

- Cooking and feeding demonstrations proved to be a particularly low-cost, community led platform for maternal nutrition and IYCF education

11.3 Sustainability

It must be recognized that the implementation period from when the PIP was completed in July 2012 and end of project activities in December 2014 was only 2.5 years. The only way it was possible to bring these projects to scale in such a short amount of time was due to CARE's existing presence in the implementation areas of Ethiopia and Zimbabwe and the integration of programming with government structures and priorities. While the project showed good results to date both the sustainability in the long-term in terms of outcomes and ability of government services to absorb the interventions may be dependent on continued support.

Because of CARE Ethiopia's programmatic approach and continued investment in food security in the ARNI areas of intervention and ambitions to continue to support scale up of the ARNI project design, there is good potential for maternal, infant and child nutrition programming to continue. In Zimbabwe, as the health authorities hold on to a great degree of control of community education programs,

sustainability will be somewhat dependent on not only the priority that maternal, infant and child nutrition is given along with the resources committed both government and donors. While ODA in Zimbabwe has grown steadily it has not kept pace with the economic decline of the country and while CARE Zimbabwe has pursued opportunities to continue supporting maternal, infant and child nutrition in Gweru and Zaka, donor support for Zimbabwe for nutrition is limited.

In both Ethiopia and Zimbabwe the projects supported national objectives related to health and nutrition specifically the roll out and scale up of national level programs. In the case of Ethiopia, the ARNI project was done in tandem with the roll out of the women's and men's development armies, which will be a permanent government supported structure within Ethiopia. In Zimbabwe, CARE focused mostly on supporting health system strengthening the system's ability to provide counselling on optimal breastfeeding and complimentary feeding, but determinants of nutrition will be more difficult to sustain such as nutrition sensitive agriculture in Zimbabwe.

11.4 Partnership

Collaborative partnership with government sector ensures enhanced capacity and ownership of the program

From the inception, the project has been implemented with line ministries in such a way that their capacity was built and ownership of the project was realized. In Ethiopia, this ownership helped expanding the project lessons beyond the geographic scope of ARNI. It also allowed implementing the project with fewer CARE staffs while reaching brilliant and sustainable outcomes. This has been a win-win situation as the Muskoka project contributed also to the implementation of the National Nutrition Plan. The Health/Agriculture Extension Programs and Community Development Army created robust models for partnership and collaboration between the government sectors and CARE. A relationship of trust has been built resulting in reducing duplication and harmonizing processes such as: financing, program implementation, monitoring and evaluation, reporting and budget allocation. Political leadership and champions at higher levels are a critical success factor in improving health outcomes.

- It is the combination of multiple activities using different entry points that made this project successful in Ethiopia. On top of educating the community and raising awareness through the existing platforms, the provision of seeds, poultry and goats helped the families consuming a more diversified diet.

- CARE Ethiopia uses a programmatic approach whereby projects are implemented in similar geographic and sectoral areas allowing a depth of penetration into communities on an ongoing basis. In this way the ARNI project was able to programmatic saturation in the implementation sites.

11.5 Innovation

The 2013 Lancet Series on Maternal and Child Nutrition identified nutrition specific and nutrition sensitive programs to support achievement of improved nutrition practices and health outcomes in

pregnant and lactating women and children under 5. While evidence to support nutrition specific programming is well established the evidence linking nutrition sensitive programs and approaches are less well established. CARE's nutrition sensitive approaches utilize a variety of innovative interventions to support achievement of nutrition outcomes. In and of themselves the interventions are not new, but we now increasingly recognize that innovative integrated approaches to nutrition programming are needed to achieve long-term nutrition goals.

- Women's Empowerment: Using social analysis and action (community dialogues) to address harmful traditional norms and practices rooted in gender inequality.

- Women's Economic Empowerment: Village savings and loans associations to promote women's economic independence as we know that household spending on basic education and nutrition increases with women's increased control over household budget. Moreover, VSLAs support resilience of families during lean periods in the use of loans and social funds.

- Nutrition Sensitive Agriculture: Linking Agricultural Extension Workers to the health system to support planting of diverse crops to support dietary diversity for pregnant and lactating women and children under 5 and encouraging the household consumption rather than sale of nutritious foods.

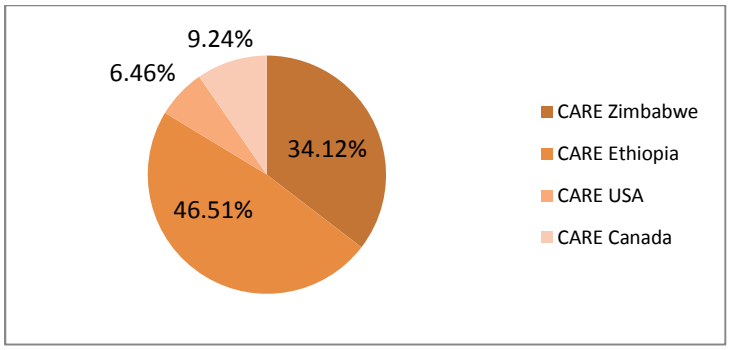
- Nutrition Sensitive Water, Hygiene and Sanitation: Linking hygiene and sanitation programs directly to health outcomes in the context of nutrition programming provided a platform for village-level engagement to support improved nutrition.

11.6 Appropriateness of resource utilization

From ARNI Final Financial Report submitted April 22, 2015

Due to the budget structure it is not possible to disaggregate the expenditures by project outcome. Budget changes by country did change with a reallocation from CARE Ethiopia to CARE Zimbabwe. Total budget in the Contribution Agreement for outcomes (budget lines 1.6.4 – 1.6.8) was $2,128,820 and actual expenditures were $2,157,206. Total expenditures for Ethiopia were $2,362,489 and for Zimbabwe were $1,733,297. The cost per direct project beneficiary (person who participated in a project activity such as M2M groups, was home visited by VHW etc…) over the life of the project in Ethiopia was approximately $162/person and in Zimbabwe was $314/person which is commensurate with the relative purchasing power within the respective countries (although administrative data from Zimbabwe is limited).

Project Expenditures by Country



Less than 15% of the total project was spent between CARE Canada and CARE USA to support the management and oversight and monitoring and evaluation of the program. As this project was implemented in conjunction with a DFATD bilateral nutrition project in Malawi, economies of scale were realized support provided to the projects, which were all similar in nature.

11.7 Informed and timely action

The project's monitoring systems allowed for ongoing assessment of changes to project context and potential factors that would affect achievement of results. For both Ethiopia and Zimbabwe ongoing monitoring of GE was critical as entrenched social norms and behaviours related to gender inequality affected the ability of project interventions to influence behaviour change related to optimal breastfeeding and complimentary feeding practices and maternal nutrition.

- In Ethiopia efforts were made to engage at the household level through SAA and community level through engagement of traditional and religious leaders to address these barriers.

- The main area for action was responding to the limitations posed by the political situation in Zimbabwe, particularly the 2013 constitutional referendum and presidential election and resulting constraining of political and social space in the country. As a result CARE Zimbabwe proposed working more closely with government partners and helping implement government priorities through the BFHI.

Overall, risks were managed well and those beyond control of the project monitored well and mitigated where possible.

12 Lessons Learned

- In complex political environments such as Zimbabwe where community access is limited, finding multiple entry points such as health facilities, VHWs and cooking demonstrations to educate men and women on maternal nutrition and IYCF is essential.

- Behaviour change takes time particularly when addressing the deeply held beliefs, norms and values related to maternal nutrition and IYCF. In three years it is possible to fully address social change at the lowest levels of social change as described in the gender equality section through intensive effort such as in Ethiopia, but in Zimbabwe where community access was limited these norms and values still persist.

- A combination of gender specific and gender mainstreamed approaches is necessary to address women's empowerment in the context of maternal nutrition and IYCF.

- Seasonality plays a huge role in the nutritional status of mothers and children in the food insecure areas where the project was implemented. Timing of activities such as surveys, cooking demonstrations and inputs needs to be considered carefully. Targeting of vulnerable households as was done in Ethiopia can support some of the most at risk households from severe acute malnutrition during lean periods and support resiliency at the community level.