



**KAP SURVEY FOR IYCF IN KAJIADO AND LOITOKITOK
DISTRICTS**

MAY 2012

ACKNOWLEDGEMENT

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We are most indebted to the Communities and implementing partners in Kajiado and Loitokitok districts through whom we were able to implement the project.

ACRONYMS

ANC	- Ante Natal Care
BCC	- Behavior Change Communication
CCE	- Community Capacity Enhancement
CHP	- Community Health Promoters
CHW	- Community Health Worker
FGD	- Focus Group Discussion
GAM	- Global Acute Malnutrition
IYCF	- Infant and Young Child Feeding
KAP	- Knowledge Attitudes and Practices
KII	- Key Informant Interviews
MCG	- Mother Care Groups
MCH	- Maternal and Child Health Clinic
MoH	- Ministries of Health
MtMSG	- Mother to Mother Support Group
MUAC	- Mid Upper Arm Circumference
NIA	- Neighborhood Initiative Alliance
OTP	- Outpatient Therapeutic Program
REF	-Replacement Exclusive Feeding
SAM	- Severe Acute Malnutrition
SFP	- Supplementary Feeding Program
TIPS	- Trials for Improved Practices

EXECUTIVE SUMMARY

According to Jones et al (2003) exclusive breast feeding to six months prevents 13% of all deaths of children under five years, with appropriate complementary feeding saving 6% under five mortality. When the two are combined, 19% of child deaths become preventable. In Kenya, more than 10,000 child deaths annually are attributable to poor IYCF practices (GoK, 2007). Research further indicates that social support, especially family, peer, and health professional support and breastfeeding knowledge, intentions, and self-efficacy are necessary to achieve optimal practice (Aidam et al, 2005; Menon et al, 2005).

This Knowledge Attitudes and Practices (KAP) survey covered Kajiado and Loitokitok Districts found in the Southern part of the Rift Valley Province bordering Tanzania. Located in the Arid and Semi-Arid Lands (ASALs), pastoralism dominates in both areas with some agro-pastoralist areas in Kajiado and some distinct agrarian areas in Loitokitok; agricultural produce from these areas in Loitokitok also supplies markets in Kajiado district. The area is predominantly inhabited by the Maasai but changes in the traditional land tenure system (shift from communal to individual and increase in privatisation) are causing them to consider selling the land. This implies a threat to the traditional communal grazing arrangements that enabled livestock to be moved around flexibly to good grazing areas.

Purpose and scope of the survey

The purpose of the study was to conduct a Knowledge Attitudes and Practices survey in Kajiado and Loitokitok districts.

The specific objectives of the proposed assessment were as follows:

1. To assess knowledge and practice levels and progress on maternal and child feeding practices and health seeking behaviours in villages receiving nutrition and health education in relation to the KAP baseline survey conducted in 2009.
2. To compare the level of knowledge and practices between the villages receiving nutrition and health education and those that are not receiving.
3. To identify knowledge and practice gaps on maternal and child feeding practices in both villages receiving and those not receiving nutrition and health education.
4. To determine the level of coverage of the villages receiving nutrition education and identify possible constraints/barriers to attendance of education sessions.
5. To guide on the review and development of new delivery mechanism and approach to be used in the delivery of health and nutrition messages for behaviour and attitude change in future interventions.

IYCF Intervention Kajiado and Loitokitok

Concern Worldwide in collaboration with partners (Ministry of Health –MoH, African Inland Church –AIC, the Catholic Diocese of Ngong and Neighbourhood Initiative Alliance have, since

2009, been supporting the implementation of a *Cross Sectoral Emergency Response Programme* in Kajiado and Loitokitok districts. Under the health and nutrition education component Concern started with the implementation in 12 villages within Kajiado and Loitokitok Districts, followed by scaling up to additional 35 villages which sought to address issues on exclusive breastfeeding, appropriate complimentary feeding and maternal nutrition during pregnancy, Micronutrients, health seeking behavior for common diseases and hand washing.

Health and Nutrition education component had two dimensions: education at static health facilities targeting care takers, beneficiaries' mothers and others seeking services and at the community level using active participatory approach targeting village level audience. Community participation was strengthened by training and use of community health workers attached to the Ministry of Health community unit strategy and village volunteers.

Methodology

A mixed methods approach involving both qualitative and quantitative methods was used. Both process and impact assessments were done. Quantitative data collection through questionnaire was conducted to measure the IYCF indicators, while qualitative methods involving Focus Group Discussions (FGD) among 2 community groups attending Mother to Mother Support Groups (MtMSG's) and 2 groups of CHW's, and Key Informant Interviews (KII) among Concern staff, MoH, and NIA using a checklist were done to assess the perceptions and opinions on IYCF as well as the intervention model experiences.

Evaluation of implementation process

A review of the project documents indicates that the concept of Health and nutrition education based on a two pronged approach (education at static health facilities, and community approach) was rolled out. With 10 MtMSG linked to the facilities and 15 MtMSG at the community level. A total of 60 CHWs were recruited and trained. The only major drawback noted in the implementation was the late commencement of activities. According to the annual reports, during the first quarter no MtMSG were formed due to high nutrition education staff turnover leading to minimal or no capacity to undertake support and formation of groups. There was also a delay in conducting IYCF training for MoH staff.

During the second quarter only 2 MtMSG were formed, and in the 3rd quarter 7 MtMSG were formed with three of them being community based. In fact at the time of the KAP surveys the three MtMSG that were visited were only 3 months in existence. This poses a challenge on the effectiveness of the education sessions on knowledge, attitudes and practices considering more time and contact with the communities is needed for meaningful change to occur.

During qualitative assessment it was reported that dependency syndrome as well as high expectations among the community members were among the challenges on the ground, as one respondent reported '*formation of new support groups becomes challenging as there is a history of unmet needs and expectations hence community reluctance*'.

Challenges encountered

1. Low male turn-out during health and nutrition awareness creation sessions.
2. Quite low numbers of mother and community members attending rural health facilities at the same time. This makes it difficult to accumulate enough community so as to have trainable quorum. As one respondent reported there is need to educate the community on why some of the intervention measures are being undertaken so as demystify any misconceptions *‘every month we do growth monitoring, community members cannot understand why every time you are measuring and not intervening’*
3. Migration especially during dry periods makes it difficult for the groups to be accessed and consistency of attendance of the sessions is hampered.
4. Late formation of MtMSG in some of the sites delayed delivery of messages.
5. Lack of access to safe and adequate water for domestic and livestock consumption in most villages. This leads to less time available for women thereby affecting their participation during health and nutrition awareness creation sessions and mother to mother support groups.
6. Poor road net –work which makes it difficult for even the CHWs to access the villages. When it rains the situation gets even worse as not even bicycles can access.
7. Most community members expect to be given hand-out after attending health and nutrition awareness creation sessions. This is due to the fact that some partners have been giving them some hand-outs as a motivation to attend meetings. In some cases the CHWs are seen as benefiting more than the recipients, as one CHW reported *‘CHWs are seen as middlemen/women benefiting on their behalf’*
8. In some of the facilities the MCH days and nutrition days are set differently leading to low turn-out.
9. Frequent drought and overreliance on cattle as the only source of livelihood. There was a feeling that multidisciplinary projects food production are needed, as reported in an FGD *‘Involve Ministry of Agriculture to focus on food gardening education and demonstrations in areas where farming can be done so as to help influence community on nutritional sustainability.’* This will also improve the limited variety of dietary sources especially proteins and Vitamins.
10. Development of an attendance list at the village level to verify attendance was a major challenge in that it raises expectations by the community members thereby affecting attendance in the subsequent meetings.

Lessons learnt

1. Although behaviour change communication (BCC) is essential in increasing the level of knowledge and encouraging behaviour change it is not enough in handling issues of pertinent importance to health such as cultural beliefs and norms. We therefore recommend use of social mobilization/participatory techniques such as community conversation enhancement (CCE), Mother Care Groups (MCG), Trials for Improved Practice (TIPs), and any other such tools that allow the community to reflect on the effects of their actions and also encourage them to generate their own solutions. The need for community involvement is noted in some of the respondent conversations, one CHW reported *‘engaging with community members will yield results..’*, another indicate the results of engaging in some cultural change discussions to deter negative influence from the mother in law by saying that *‘after marriage a new wed would stay with her mother*

in law for even a year, today we encourage the young men to build a house and stay with the wife’.

2. Formation of support groups is easier at the village levels, compared to those formed at the facility level, because it only involves strengthening of the already available social structures rather than forming new structures. The only challenge however is the sustainability if formed without consulting with the health persons in which the village falls under and the village power structure. As reported by a CHW during an FGD *‘There is a serious challenge of forming mothers group at the facility as it hard for mothers to bond, share and come to the clinic at the same time, so we decided to form at the village level’*
3. Involvement of men is key to fastening the adaptation of relevant behaviour changes in health and nutrition. This, therefore, calls for more male oriented programs and involvement of age set leaders. There were suggestions to go through the age set leaders, even though such an intervention would require funding for meals as reported by an implementing partner representative *‘it is expensive to bring men on board, you have to slaughter a goat since age set leaders normally when they sit must eat something.... but if we can facilitate meetings and make them champions it would be very helpful, because even a declaration meeting can be held after several sessions of sensitization’*. These will integrate IYCF interventions with an understanding of the socio-cultural context of the community. Deep understanding of the Maasai cultural practices is necessary for one to be able to effectively facilitate the community to shun the practices that may be detrimental to both health and nutrition. Involvement of men will also create support to the women, as one respondent said *‘men also do not give their women permission to go since they [men] have no idea what the women are doing [when they attend meetings]’*. In countries such as Tanzania they have renamed the MCH into *‘Kliniki ya Baba, Mama, na Mtoto’* as a way of encouraging male participation.
4. Timely roll-out of interventions and sustained contact with the community is needed for behaviour change to occur together with sustained follow up. As one respondent noted *‘we repeat a message three times in a village and no further follow up’*. There is further need to involve all the key stakeholders including the DHMT in the planning stage before implementation so as to ensure optimal implementation of the community strategy.

Key KAP survey findings summary

Indicator	KAP Survey December 2011		
	Intervention	Non-Intervention	End line
Demographic data			
Respondents with no years of schooling	54.1%	59.8%	57.0%
Respondents in polygamous marriage	19.9%	30.8%	25.4%
Respondents in single family units	9.9%	7.7%	8.8%
Purchase as usual main source of food	73.3%	70.7%	72.0%
Malnutrition			
Prevalence of GAM by MUAC (<12.5cm)	9.1%	8.8%	9.0%
Prevalence of SAM by MUAC (<11.5cm)	4.1%	2.8%	3.5%
Prevalence of MAM by MUAC (<12.5-11.5cm)	5%	6.0%	5.5%
Health, water and Sanitation			
Proportion of children sick with fever two weeks prior to survey	39.0%	21.6%	30.3%
Proportion of children sick with malaria two weeks prior to survey	11.2%	6.80%	9.0%
Proportion of caretakers seeking medical care when child is ill	93.5%	91.2%	92.4%

Proportion taught about nutrition during pregnancy	61.7%	57.9%	59.8%
Aware of need to take folic and iron tablets regularly	5.1%	5.7%	5.4%
Vitamin A supplementation coverage	51.8%	48.2%	50%
Takes 1 hour to and from main water source	21.4%	39.6%	27.8%
Takes 2-4 hrs to and from main water source	26%	38.9%	30.5%
Takes 5 hr and beyond	12.5%	17.1%	14.1%
Uses water and soap to wash hands	93.1%	91.2%	92.2%
Uses water and ash to wash hands	0.6%	1.1%	0.9%
Infant and Young child feeding practices 0-23months			
Knowledge on EBF with cessation at 6 months for HIV positive mothers	22%	17.9%	20%
Knowledge on no EBF at all to children for HIV positive mothers	69.2%	58.6%	63.9%
Timely initiation EBF within 30 minutes after birth	90.6%	90.6%	90.6%
EBF practice to six months	34.5%	33.9%	35.2%
Timely complementary feeding practice	53.6%	50.7%	52.2%
Continued breastfeeding at 1 year	38.9%	47.5%	43.2%
Minimum dietary diversity (at least four food groups)	23.3%	27.2%	25.3%
Timely introduction of solid/semi-solid foods	25.4%	29.6%	27.5%

Among the respondents 69.0% had received health and nutrition information. When analyzed by cluster, 62.5% (n=436) came from the intervention cluster with 65.7% (n=397) from non-intervention group, this difference was statistically significant (p=0.01).

Access to water sources indicated that the least proportion were those taking 5 hours and beyond (14.1%). Since the distance to water sources varies in this community dependent on prevailing weather conditions. These distances are moderate as the survey was conducted at the onset of the short rains.

Respondents were asked if they had ever heard about feeding a child when the mother is HIV positive, and 50% of the respondents reported to have heard. Analysis by clusters indicates that more respondents from the intervention cluster had heard at 54.2% compared to 45.8% among the non-intervention cluster, this was statistically significant (p=0.01). Among these respondents, when asked what they heard majority reported that they are not supposed to breastfeed at all among both health education (69.2%) and non-health education group (58.6%). This has implications on the likely IYCF in HIV practices adopted, considering AFASS criteria is not feasible in this region. And also considering that in some regions such as Mbirikina their are interventions promoting REF (replacement exclusive feeding).

When asked about signs of malnutrition, 75.1% reported knowing, compared to 86.3% at baseline. Thinness was the most sighted(21.9%), followed by weakness(18.6%) and a big belly (17.7%). There is need for continued education so that caregivers can detect early underlying signs and practices such as sickness, poor eating habits, poor food choices, since remedial action is easier then when signs of malnutrition present.

Kenya national guidelines on IYCF recommend initiation of breastfeeding at 30 minutes after birth. The survey findings indicate that 88.4% of the respondents reported that breastfeeding

should be initiated within 30 minutes after birth, compared to 79.7% at baseline, when compared among the two clusters the difference is 1.8% in favor of those receiving intervention, but is not statistically significant. When assessed for knowledge on the appropriate feed for a child immediately after birth, 96.4% reported breast milk, compared to 67.6% at baseline. When compared between clusters receiving nutrition education against those not receiving, there was a higher proportion of respondents from those receiving intervention by 1.4% and the difference was statistically significant ($p=0.005$).

When it comes to practice, 94.6% of the respondents gave breast milk after birth and the results further indicate a higher number among those receiving intervention by 2.6% and is statistically significant ($p=0.000$). There was however no statistical difference on initiation of breastfeeding within 30 minutes after birth among the intervention (89.3%) and non-intervention (87.5%) groups. This indicates that early initiation of breastfeeding among the community is not a problem.

When asked if it is possible to give breast milk (without even water) for the first six months, 74.8% of the respondents felt it was possible compared to 44.8% at baseline. When compared between the two clusters at KAPC, the difference is 6.6% in favor of those receiving intervention, and is statistically significant ($p=0.004$). When asked if they had received any health education on how to feed their child, the difference was 7% in favor of those who had received intervention, and was statistically significant ($p=0.004$) indicating higher awareness among those in the intervention.

At baseline 40.7% knew that complementary feeds need to be introduced after 6 months, with 29.1% introducing the complementary foods after 6 months. Whereas at endline survey 80.2% of respondents reported that complementary foods should be introduced after 6 months with 59.3% introducing complementary foods after 6 months. When compared amongst the two clusters the difference was a 5.9% difference in favor of those receiving intervention, and was statistically significant ($p=0.007$).

Postpartum Vitamin A supplementation (VAS) during baseline was 19.4%, compared to end line where the percentage had risen to 35.3% showing improvements in coverage. When analyzed by clusters, the intervention group had 36.4% ($n=231$) compared to non-intervention group at 34.2% ($n=215$), this difference between clusters was not statistically significant. This implies that knowledge/awareness was not the key determinant of the uptake of VAS in this group. Other factors, more significantly, delivery at a health facility and visiting the facilities within 4 weeks postpartum played a major role.

When asked whether they took action when the child was sick, 89.9% ($n=213$) respondents were from the intervention group compared to 86.6% ($n=168$) from the non-intervention group. The health facility was the area where help was sought most at 92.5% compared to 32.2% during baseline.

An end line comparison of GAM, SAM, and MAM reveals a prevalence of 9%, 3.5% and 5.5% respectively and edema at 0.4%. When compared to baseline prevalence of GAM, SAM, and MAM at 8.5%, 1.0%, and 7.9% respectively with edema at 0.5%. This shows that there was a 0.5% increase in GAM, 2.5% rise in SAM, and a 2.4% drop in MAM, and 0.1% drop in edema at end line, the high SAM cases could be associated with a high disease burden during the rainy season at the time of the KAP survey. A review of the same indicators by age categories indicates that the most affected age group is 6-11 months where half of the total cases reported fall under, followed by 18-23 months. This could be due to the fact that the 6-11 months are transitioning towards complementary feeding implying the practices at this transition phase are not very optimal, while the 18-23 month age category are also transitioning to regular family diets patterns and considering the food insecurity situation among pastoralists this is an age group that is vulnerable.

Conclusion

Three main conclusions emerge from this assessment of the KAP survey. First there is a high level of knowledge among the nutrition education group compared to the non-education intervention cluster. This indicates that awareness penetration was substantial and hence the high level of knowledge compared to the control group.

Secondly there was a significant improvement in some of the health seeking behaviors, nutrition knowledge, EBF to six months, and timely introduction of complementary feeding knowledge and practices. It is also possible to propose that 'spill-over effect' played a role in the indicators among the non-health education clusters since the separation between the intervention and control is not very distinct geographically, and considering this are pastoral communities always on the move hence sharing of information was very possible. Also considering the fact that MoPHS was also undertaking CHW training and CHU formation including in the non-intervention clusters.

Thirdly, compared to the baseline there is a drop in continued breastfeeding beyond one year, and no significant improvement in nutrition practices of older infant after 6 months. This is noted when we look at the drop or no difference in practices of the following indicators; foods first given to the child, introduction of solid/semi-solid foods, dietary diversity, and continued breastfeeding after one year. Hence a challenge in translating the acquired knowledge into practice for mostly IYCF practices for older infants. Even though there was an improvement in levels of knowledge and intervention aspects such as Vitamin A supplementation, taking sick child to health facility. This indicates a need for competency based interventions such as actual food choices and preparation training, besides tackling underlying socio-cultural constraints.

Recommendations

First, it indicates that the model of intervention currently used is successful in terms of awareness creation. The levels of knowledge were noted to be high among the intervention group. The

need to review the noted challenges and even synchronization with well known MtMSG models such as the Mother Care Groups (MCG) developed by World Relief.

However, the evidence now suggests that the intervention approach is not effective in tackling older infant's practices. This appears to suggest that a different approach is needed to tackle complementary feeding practices. There are two possible approaches to recommend, one is the use of trials for improved practices where mothers are practically engaged in food preparation and practices at home, secondly the Community Conversations approach since availability and access to food as opposed to breastmilk involved different decision makers and availability of resources, hence involvement of other community and household members as well as livelihood improvement and diversification measures.

There is therefore need to sustain the gains made while innovating based on lessons learnt for maximal optimal improvement in IYCF practices. Lastly there is a strong need for intervention designs to involve all stakeholders including the DHMT during the planning phases so as to ensure smooth harmonization of the community strategy roll out.

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1.0 INTRODUCTION

Evidence exists to show the value of exclusive breastfeeding to six months and thereafter optimal complementary feeding with continued breastfeeding of infants. According to Jones et al (2003) exclusive breast feeding to six months prevents 13% of all deaths of children under five years, with appropriate complementary feeding saving 6% under five mortality. When the two are combined, 19% of child deaths become preventable. In Kenya, more than 10,000 child deaths annually are attributable to poor IYCF practices (GoK, 2007). Research further indicates that social support, especially family, peer, doula, and health professional support and breastfeeding knowledge, intentions, and self-efficacy are necessary to achieve optimal practice (Aidam et al, 2005; Menon et al, 2005). Research also shows that breastfeeding promotion at national, health system and community level must be accompanied by programs to deliver such breastfeeding support if behavior change communication is to be effective in terms of increased EBF rates and improved maternal and infant health outcomes (Labbok, 2008).

As part of the government's efforts to tackle IYCF challenges, strong community and health facility linkages have been proposed through the Kenya Essential Package for Health (KEPH) community strategy. Here, child nutrition and exclusive breastfeeding are amongst the critical elements care for focus at level 1 (MoH, 2007). In order to articulate and realize benefits in community nutrition programming different models have been adopted by organizations to improve Knowledge, Attitude and Practices (KAP) of communities on IYCF.

1.1 Overview of Kajiado and Loitokitok districts

This Knowledge Attitudes and Practices (KAP) survey covered Kajiado and Loitokitok Districts found in the Southern part of the Rift Valley Province bordering Tanzania. Located in the Arid and Semi-Arid Lands (ASALs), pastoralism dominates in both areas with some agro-pastoralist areas in Kajiado and some distinct agrarian areas in Loitokitok; agricultural produce from these areas in Loitokitok also supplies markets in Kajiado district. The area is predominantly inhabited by the Maasai but changes in the traditional land tenure system (shift from communal to individual and increase in privatisation) are causing them to consider selling the land. This implies a threat to the traditional communal grazing arrangements that enabled livestock to be moved around flexibly to good grazing areas.

Major challenges in the districts besides the recurring drought that impacts on livestock levels and thus livestock prices and livelihoods capacities include the shift in income earning activities, for instance, to charcoal making, which further contributes to another major challenge, deforestation; deforestation in turn is closely related to the water holding capacity of the area, which yet again aggravates the drought. Changing livelihoods pattern also force the population to migrate thus increasing pressure further on urban settlements. According to the Nutrition

A survey report of June 2009 (MoPH) cites among the challenges from a health point of view include; an insufficiently decentralised health system with fairly poor coverage due to vast distances; high child morbidity; high prevalence of child malnutrition and poor infant feeding practices.

The health and nutritional status is also affected, esp. through the reduced access to/ availability of milk as livestock herds are diminished. The choice of foods is shifting towards foods that are not as nutritious as the pastoralists' usual diet (carbohydrate rich staples vs animal source foods). The health system is fairly centralised and operates predominantly through hospitals.

1.2 IYCF practices in Kajiado and Loitokitok

According to the IYCF baseline survey for the current intervention under evaluation (Concern Worldwide, 2009) almost all of the newborn babies were given colostrum and breastfed without any other food or liquid given before the baby was put to the breast. Breastfeeding was initiated within the first 30 minutes of birth by the majority of women; there was no knowledge-practice gap. However, after the first suckling, newborn babies are usually given some other feeds, e.g. fats/ butter but also sugary water and other liquids/ foods. The strict definition of 'prelacteals' is therefore hard to maintain due to the many 'foods given from early onwards'. This is in contrast to the third of women who believe that babies should be fed something else before breastfeeding. The food crisis seems to be one possible reason why women did not give anything else but breast milk to their baby.

Exclusive breastfeeding on the day before the interview was 46.5%. However, 55.2% of the women believe that it is not feasible to breastfeed a child for six months exclusively.

Foods first being introduced to the child are usually porridge, animal milk and mashed plantain; FGDs confirmed that vitamin and mineral-rich foods (variety of vegetables and fruits as well as animal source foods) were infrequently given. Prolonged breastfeeding at age 12-15 months was 75.4% and of the 6-8 mo old children, 76.2% consumed solid, semi-solid or soft foods on the day before the interview. Dietary diversity was very low with only 13.5% of children aged 6-23 months consuming four or more food groups out of a possible seven food groups, and 19.0% consuming four or more different food groups out of eight possible food groups, within the 24 hrs preceding the interview.

Vitamin A supplementation and de-worming coverage were fairly low (66.4% and 47.4% respectively); however, there is a positive attitude among mothers to bring their children to receive vitamin A supplementation.

The disease burden was very high with 58.7% of children being sick during the last two weeks before the interview. Despite this, health care was only sought for about half of these children; the majority of children who received help were brought to a health care facility.

The prevalence of global acute malnutrition (GAM, MUAC < 125mm) based on MUAC measurements was 8.9% (5.7 – 13.8%), the prevalence of severe acute malnutrition (SAM, MUAC < 115mm) was 1.0% (0.4 – 2.6%). The prevalence of oedema was 0.5%.

Most of the respondents (86.3%) knew some sign of malnutrition but over a third of all respondents could not name a cause of malnutrition. The most frequently mentioned causes of malnutrition were food shortage (28.0%), poor caring practices (14.5%), and lack of knowledge (8.1%). Malnutrition is regarded as a life-threatening condition and the care for a malnourished child is the responsibility of the mother.

1.3 Purpose and scope of the study

The purpose of the study was to conduct a Knowledge Attitudes and Practices survey in Kajiado and Loitokitok districts.

The specific objectives of the proposed assessment were as follows:

- To assess knowledge and practice levels and progress on maternal and child feeding practices and health seeking behaviours in villages receiving nutrition and health education in relation to the KAP baseline survey conducted in 2009
- To compare the level of knowledge and practices between the villages receiving nutrition and health education and those that are not receiving
- To identify knowledge and practice gaps on maternal and child feeding practices in both villages receiving and those not receiving nutrition and health education
- To determine the level of coverage of the villages receiving nutrition education and identify possible constraints/barriers to attendance of education sessions
- To guide on the review and development of new delivery mechanism and approach to be used in the delivery of health and nutrition messages for behaviour and attitude change in future interventions

1.4 IYCF intervention strategy in Kajiado and Loitokitok

Concern Worldwide in collaboration with partners (Ministry of Health –MoH, African Inland Church –AIC the Diocese of Ngong and Neighbourhood Initiative Alliance have, since 2009, been supporting the implementation of a *Cross Sectoral Emergency Response Programme* in Kajiado and Loitokitok districts. Under the health and nutrition education component Concern started with the implementation in 12 villages within Kajiado and Loitokitok Districts, followed by scaling up to additional 35 villages which sought to address issues on exclusive breastfeeding, appropriate complimentary feeding and maternal nutrition during pregnancy, Micronutrients, health seeking behavior for common diseases and hand washing.

Health and Nutrition education component had two dimensions: education at static health facilities targeting care takers, beneficiaries' mothers and others seeking services and at the community level using active participatory approach. Community participation was strengthened by training and use of community health workers attached to the Ministry of Health community unit strategy and village volunteers.

A health educator coordinated activities across selected villages, two health and nutrition promoters' and three community mobilizers were used. The health and nutrition promoters directly supervised the community health promoters who were community health workers recruited from the existing network of MOH community unit strategy. Twenty five percent of the community mobilizers time was proposed to be spent working with regular MOH health workers by screening and referral of malnourished children to nutrition sites while the rest of their working time in their regular community health work.

At the facility level the health and nutrition education team focused on essential messages involving SFP and OTP to assist the care givers to manage the children appropriately, but also aimed as a preventive measure directed at families accessing the routine medical services. This was done by giving health and nutrition talks to the mothers during ANC and MCH visits focusing on key topics like Maternal nutrition during pregnancy, Optimal infant feeding, Complementary feeding, Micronutrient supplementation – focusing on vitamin A, Zinc, Iodine, Iron folate and de-worming, health seeking behaviour for common diseases and hygiene and sanitation. The health and nutrition education team also helped form mother-to-mother support groups and supervised their activities and meetings. The health and nutrition team were to visit facilities on biweekly basis during Mother and Child Health (MCH) clinic days to reinforce messages to clients seeking those services. The Health facility staff on the other hand were to continue with delivering of messages on others days during routine day to day activities. Together with Concern staff, the team were to be supported to form 10 mother to mother support groups linked to health facilities, drawing membership from mothers attending MCH clinics and supervised by the health workers.

At the community level, villages that were within the coverage area of the selecting facilities, but furthest from the facilities so that the two strategies can complement each other to achieve maximum impact, were selected. At the community level, emphasis was on promoting behavioural change on maternal nutrition during pregnancy, breastfeeding, complementary feeding, micronutrient supplementation, hygiene and sanitation and dietary diversity. Nutrition messages were to be delivered in three cycles where a cycle took 6 weeks. Visits to a village would be made on a fortnightly basis, resulting in 9 team visits to each selected village over the course of the project. Within each cycle all the broad topic areas were promoted. There were 9 meetings scheduled to be conducted with women from each of the selected villages and 5 meetings with men. The cycles for the first 18 villages were to last from the second week of February to third week of March, from end of March to beginning of May and from then until second week of June. The cycles for the next 18 villages were to repeat from mid of June until the end of the program in September.

1.5 Proposed areas of focus during nutrition education

- Exclusive breastfeeding and appropriate complementary feeding
- Maternal nutrition
- Micronutrients
- De-worming
- Health seeking behavior for common diseases
- Hand washing

1.6 Session Content and Procedure

1. Overview of activities and problem Module 1
2. Repetition/ feedback of Module 1 and the in-depth discussion on Module 2
3. Repetition/ feedback of Module 1, Module 2, and in depth discussion of Module 3
Review of the overall process.

1.7 Evaluation of the IYCF process

The actual implementation of the intervention was meant to run according to the process outlined above. A review of the project documents indicates that the concept of Health and nutrition education based on a two pronged approach (education at static health facilities, and community approach) was rolled out. With 10 MtMSG linked to the facilities and 15 MtMSG at the community level. A total of 30 CHWs were recruited and trained.

The only major drawback noted in the implementation was the late commencement of activities. According to the annual reports, during the first quarter no MtMSG were formed due to high nutrition education staff turnover leading to minimal or no capacity to undertake support and formation of groups. There was also a delay in conducting IYCF training for MoH staff.

During the second quarter only 2 MtMSG were formed, and in the 3rd quarter 7 MtMSG were formed with three of them being community based. In fact at the time of the KAP surveys the three MtMSG that were visited were only 3 months in existence. This poses a challenge on the effectiveness of the education sessions on knowledge, attitudes and practices considering more time and contact with the communities is needed for meaningful change to occur.

During qualitative assessment it was reported that dependency syndrome as well as high expectations among the community members were among the challenges on the ground, as one respondent reported *‘formation of new support groups becomes challenging as there is a history of unmet needs and expectations hence community reluctance’*

1.8 Challenges encountered in the intervention delivery

- Low male turn-out during health and nutrition awareness creation sessions.
- Quite low numbers of mother and community members attending rural health facilities at the same time. This makes it difficult to accumulate enough community so as to have trainable quorum. As one respondent reported there is need to educate the community on why some of the intervention measures are being undertaken so as demystify any misconceptions *‘every month we don growth monitoring, community members cannot understand why every time you are measuring and not intervening’*
- Migration especially during dry periods makes it difficult for the groups to be accessed.
- Late formation of MtMSG in some of the sites delayed delivery of messages.
- Lack of access to safe and adequate water for domestic and livestock consumption in most villages. This leads to less time available for women thereby affecting their participation during health and nutrition awareness creation sessions and mother to mother support groups.
- Poor road net –work which makes it difficult for even the CHWs to access the villages. When it rains the situation gets even worse as not even bicycles can access.
- Most community members expect to be given hand-out after attending health and nutrition awareness creation sessions. This is due to the fact that some partners have been giving them some hand-outs as a motivation to attend meetings. In some cases the CHWs are seen as benefiting more than the recipients, as one CHW reported *‘CHWs are seen as middlemen/women benefiting on their behalf’*
- In some of the facilities the MCH days and nutrition days are set differently leading to low turn-out.
- Frequent drought and overreliance on cattle as the only source of livelihood. There was a feeling that multidisciplinary projects food production are needed, as reported in an

FGD *‘Involve Ministry of Agriculture to focus on food gardening education and demonstrations in areas where farming can be done so as to help influence community on nutritional sustainability.’* This will also improve the limited variety of dietary sources especially proteins and Vitamins.

- Development of an attendance list at the village level to verify attendance was a major challenge in that it raises expectations by the community members thereby affecting attendance in the subsequent meetings.

1.9 Lessons learnt

- Although behaviour change communication (BCC) as tool is essential in increasing the level of knowledge and encouraging behaviour change it is not enough in handling issues of pertinent importance to health such as cultural beliefs and norms. We therefore recommend use of social mobilization/participatory techniques such community conversation enhancement (CCE), Mother Care Groups (MCG), Trials for Improved Practice (TIPs), and any other such tools that allow the community to reflect on the effects of their actions and also encourage them to generate their own solutions. As one CHW noted engaging with community members will yield results, as one respondent noted mother-in laws influence has been cited as a hindrance to optimal IYCF practices, and interesting suggestions from the FGDs included *‘after marriage a new wed would stay with her mother in law for even a year, today we encourage the young men to build a house and stay with the wife’*.
- Formation of support groups is easier at the village levels because it only involves strengthening of the already available social structures rather than forming new structures. The only challenge however is the sustainability if formed without consulting with the health persons in which the village falls under and the village power structure. As reported by a CHW during an FGD *‘There is a serious challenge of forming mothers group at the facility as it hard for mothers to bond, share and come to the clinic at the same time, so we decided to form at the village level’*
- Involvement of men is key to fastening the adaptation of relevant behaviour changes in health and nutrition. This will there call for more male oriented programs and involvement of age set leaders. There were suggestions to go through the age set leaders, even though such an intervention would require funding for meals as reported by an implementing partner representative *‘it is expensive to bring men on board, you have to slaughter a goat since age set leaders normally when they sit must eat something.... but if we can facilitate meetings and make them champions it would be very helpful, because even a declaration meeting can be held after several sessions of sensitization’*. These will Integrate IYCF interventions with an understanding of the socio-cultural context of the community. Deep understanding of the Maasai cultural practices is necessary for one to be able to effectively facilitate the community to shun the practices that may be detrimental to both health and nutrition. Involvement of men will also create support to the women, as one respondent said *‘men also don not give their women permission to go since they have no idea what the women are doing’*.
- Timely roll-out of interventions and sustained contact with the community is needed for behaviour change to occur together with sustained follow up. As one respondent noted *‘we repeat a message three times in a village and no further follow up’*

2 METHODOLOGY

A mixed methods approach involving both qualitative and quantitative methods was used. Both process and impact assessments were done. Quantitative data collection through questionnaire was conducted to measure the IYCF indicators, while qualitative methods involving Focus Group Discussions (FGD) among 2 community groups attending Mother to Mother Support Groups (MtMSG's) and 2 groups of CHW's, and Key Informant Interviews (KII) among Concern staff, MoH, and NIA using a checklist were done to assess the perceptions and opinions on IYCF as well as the intervention model experiences.

2.1 Geographic Target Area and Population Groups:

The KAP Survey covered Kajiado and Loitokitok districts targeting infants and young children (0 – 23 months), and the caregivers of these children.

2.2 Sampling Frame for quantitative data collection

The sampling frame consisted of all the sub-locations that Concern Worldwide was running the nutrition programme

2.3 Sampling technique

The KAP survey followed a two stage cluster sampling design with clusters randomly selected from the sampling frame using the Probability Proportion to Size (PPS)

2.4 Sample Size Calculation

The sample size was calculated based on following indicators; Timely initiation of breastfeeding (0-23 months), Exclusive breastfeeding under 6 months, Timely complementary feeding, Introduction of solid, semi-solid or soft foods (6-8 months) and Minimum dietary diversity (6 – 23 months). Their baseline prevalence was listed against each indicator and then a 5% expected increment per year for two years was computed. This meant that for the three years the expected prevalence had increased by 10%. The sample size was calculated using the online calculator at <http://stat.ubc.ca/~rollin/stats/ssize/b2.html>. The other parameters which were put into consideration were: $\alpha = 0.05$ (precision 5%), Power = 0.80 (80%), and 2 tailed test

Table 1 Sample Size Calculation

Indicators	Prevalence (p1)	Expected Prevalence (p2)	Sample Size
Timely initiation of Breastfeeding (0-23 months)	77.9%	92.9%	86
Exclusive Breastfeeding under 6 Months	46.5%	61.5%	162
Introduction of Solid, Semi-solid or Soft Foods (6-8 months)	76.2%	91.2%	95
Minimum dietary diversity (6 – 23 months)	13.5%	28.5%	109

Based on the results above, the sample size was taken to be 162. However, this figure was multiplied by four to put into consideration the four distinct age groups namely 0 – 5, 6 – 11, 12

– 17, and 18 – 23. Therefore, the final sample size for the Kajiado KAP Survey came to 648. This meant that 648 children were to be included in the survey. From the above sample size and with an average of 1.6 children under two per household, the data would need to be obtained from approximately 405 households. Further, taking 30 clusters, this resulted to taking 22 children from every cluster. Finally, the same procedure was used for the second target group which did not receive health information giving a total sample size of **1296** respondents.

2.5 Sampling

As indicated earlier, the Kajiado KAP Survey applied the cluster sampling. The first stage was to sample the 33 (30 cluster and an addition 3 reserve clusters) clusters from the sampling frame. Then second stage was to randomly select the 14 households from each cluster. In this survey, the household was the primary sampling unit. In the second stage sampling (sampling the households), the SMART survey methodology was applied. Data collectors followed a random direction from the centre of the cluster until the end of that cluster. The direction was determined by spinning a pen and following the direction the pen pointed. At the end of the cluster, a second random direction was determined by spinning a pen again. Households for data collection were then sampled along this transect. Households were counted along the transect and the first household to be interviewed was identified by use of a random number table. From that household onward the enumerators kept right until they got the total number of children per cluster.

2.6 Training of the survey team members

The data collection team of 16 enumerators and 4 team leaders was taken through a 3 day data collection training seminar. The training aimed at enhancing the data collection knowledge and skills of the team. The method of training was participatory involving; presentations, group work, role play, demonstrations and a field trip to an adjacent village (separate from the selected clusters) for piloting.

2.7 Data entry and cleaning

Data entry for quantitative data was done using CSPro computer software, double data entry was made to help reduce transcription errors. The data was then transferred to SPSS, and data cleaning and analysis done.

For qualitative data the categories and themes for the FGD and KII guides were developed in advance based on the objectives and scope of the survey. Triangulation of the analysed themes and concepts were compared to the quantitative data output to establish if they complemented one another to confirm for validity.

3 KAP SURVEY FINDINGS AND DISCUSSIONS

3.1 Introduction

The KAPC survey assessed the mother/primary caregiver’s level of knowledge, attitude and practice of IYCF in Kajiado and Loitokitok. The analysis reviews the current state compared to baseline done in 2009 before commencement of the interventions, as well as a comparison between clusters where nutrition education has been implemented (Intervention) against those that have not received nutrition education (Non-intervention).

3.2 Household demographics and socio-economic status

The respondents for the survey were mothers or primary caregivers of the index child. The mean age of the respondents was 29.6 years (SD=15.2), and mean years of schooling at 3.9 years (SD=8.6). As shown below the predominant age group was 19 – 30 years for the respondents, with a near equal distribution amongst the 2 clusters (intervention versus non-intervention groups). Of all the respondents, 95.8% mothers of the children (n=1277) were interviewed, with the remaining 4.2% being grandmothers, mother in-law, sister in law and siblings.

On years of schooling the predominant level of education was the no schooling for 57% of the respondents. On marital status the majority of the respondents came from monogamous marriages (65.9%).

Table 2: Respondents age, years of schooling and marital status

Age categories	12-18	19-30	31-50	50 and above
Intervention	58 (9.4%)	427 (69.3%)	126 (20.5%)	5 (0.8%)
Non-intervention	60 (10%)	395 (66.1%)	135 (22.6%)	8 (1.4%)
Endline	118 (9.7%)	822 (67.7%)	261 (21.5%)	13 (1.1%)
Years of schooling	0	1-8	9-12	13 and above
Intervention	340 (54.1%)	214 (34.1%)	56 (8.9%)	18 (2.9%)
Non-intervention	382 (59.8%)	212 (33.8%)	35 (5.6%)	10 (1.6%)
Endline	722 (57%)	426 (33.6%)	91 (2.2%)	28 (7.2%)
Family status	Monogamous		Polygamous	Single
Intervention	448 (70.2%)		127 (19.9%)	63 (9.9%)
Non-intervention	393 (61.5%)		197 (30.8%)	49 (7.7%)
Endline	841 (65.9%)		324 (25.4%)	112 (8.8%)

The main source of livelihood for households was animal herding (51.1%); this is expected considering the community is largely pastoral. From the results in the table below the least sources of livelihood are relief food and formal employment.

Table 3: Main source of livelihood for the household

Livelihood	Animal herder	Formal salaried employment	Day labor income	Relief program	Others
Intervention	302 (47.3%)	66 (10.3%)	159 (24.9%)	0(0%)	111 (17.4%)
Non-intervention	351 (54.9%)	31 (4.9%)	150 (23.5%)	2 (0.3%)	105 (16.4%)
Endline	653 (51.1%)	97 (7.6%)	209 (24.2%)	2 (0.2%)	216 (16.9%)
Baseline	95 (32%)	24 (8.1%)	97 (32.7%)	22 (7.4%)	40 (13.5%)

A comparison of food sources consumed the previous day with usual source of food for the household shows the predominant source of food was purchase (82.4% and 72% respectively). As seen below and in line with animal herding pastoralist's markets play the biggest role in terms of food availability as own food production is fairly minimal. At the time of the study there was no relief supplies following a delay in the selection of a lead agency though Kajiado had qualified for relief food after the long rains assessment.

Table 4: Main source of food consumed yesterday

Main source of food consumed yesterday						
Source	Own production	Purchases	Gifts	Food aid	Borrowed	others
Intervention	81 (12.7%)	546 (85.6%)	3 (0.5%)	0 (0%)	7 (1.1%)	1 (0.2%)
Non-intervention	115 (18%)	506 (79.2%)	2 (0.3%)	5 (0.8%)	4 (0.6%)	7 (1.1%)
Endline	196 (15.3%)	1052 (82.4%)	5 (0.4%)	5 (0.4%)	11 (0.9%)	8 (0.6%)
Baseline	6%	80.5%	2.4%	12.7%	5.7%	2.6%

Usual main source of food						
Intervention	156 (24.5%)	467 (73.2%)	2 (0.3%)	0(0%)	1 (0.2%)	12 (1.9%)
Non-intervention	174 (27.2%)	452 (70.7%)	2 (0.3%)	2 (0.3%)	1 (0.2%)	8 (1.3%)
Endline	330 (25.8%)	919 (72%)	4(0.3%)	2 (0.2%)	2 (0.2%)	20 (1.6%)

At the time of the baseline the community had just come from a dry spell hence the low level of own production compared to the endline where their were rains.

3.3 Water and sanitation

The top three current main sources of drinking water as listed were: borehole, river and tap water. As seen below the number of respondents to the other drinking water sources were fairly low.

Table 5: Current main source of water for drinking by cluster

Source	River	Tap water	Borehole	Protected well	Unprotected well	Water tanker	dam	Digging from lagga	rain	other
Intervention	226 (35.1%)	133 (20.7%)	157 (24.4%)	47 (7.3%)	10 (1.6%)	14 (2.2%)	13 (2.0%)	14 (2.2%)	8 (1.2%)	22 (3.4%)
Non-intervention	108 (15.4%)	182 (26%)	224 (32%)	29 (4.1%)	26 (3.7%)	2 (0.3%)	20 (2.9%)	53 (7.6%)	35 (5%)	22 (3.1%)
Endline	334 (25.3%)	315 (23.4%)	381 (28.2%)	73 (5.5%)	36 (2.7%)	16 (1.3%)	33 (2.5%)	67 (3.6%)	43 (3.1%)	44 (3.3%)

Other sources included: flowing water, rain water and stagnant water.

On the duration it takes to the water source and back the majority of respondents reported taking between 2 to 4 hours (30.5%), the least proportion were those taking 5 hours and beyond (14.1%).

Table 6: Duration to and from water source by cluster

Duration (hrs)	Under 1 hr	1 hr	2-4 hrs	5 hrs and beyond
Intervention	259 (40.1%)	138 (21.4%)	168 (26%)	81 (12.5%)
Non-intervention	16 (4.6%)	139 (39.6%)	136 (38.9%)	60 (17.1%)
Endline	275 (27.6%)	277 (27.8%)	304 (30.5%)	141 (14.1%)

Hand washing

Respondents reported that they usually wash their hands before handling food (24.5%), after eating (26.7%) and after defecation (18.6%). This was one of the key messages delivered on health seeking behaviors. However, there was a low uptake of practices on cleaning child before eating (14.7%), and after cleaning the child's bottom (6.3%). When disaggregated by intervention, cleaning a child before feeding and after cleaning the child's bottom was rated highly among the intervention (15.3% and 7.4% respectively) compared to the non-intervention group (14% and 5.2% respectively). This shows a good uptake among the education group.

Table 7: Period when they usually wash their hands by cluster

Period	After defecation	Before handling food	Before feeding the child	After cleaning child's bottom	other
Intervention	320 (19%)	408 (24.2%)	257 (15.3%)	124 (7.4%)	171 (10.2%)
Non-intervention	260 (18.1%)	354 (24.7%)	201 (14%)	74 (5.2%)	124 (8.7%)
Endline	580 (18.6%)	762 (24.5%)	458 (14.7%)	198 (6.3%)	295 (9.5%)

Other periods included: in the morning, before and after milking, after coming from the garden

When asked what they use to clean their hands majority (92.2%) reported water and soap, of these, 93.1% were from the intervention group and 91.2% from the non-intervention group indicating parity among the two cohorts hence difficult to ascertain whether it was due to the intervention or already known information, besides through an independent line of activities the MoPHS was able to train 800 CHWs and establish Community Health Units (CHU) in villages including some of the non-intervention clusters.

Table 8: What they use to clean hands with water by cluster

Item	Water only	Water and soap	Water and ash	Other
Intervention	38 (6%)	591 (93.1%)	4 (0.6%)	2 (0.3%)
Non-intervention	48 (7.6%)	577 (91.2%)	7 (1.1%)	1 (0.2%)
Endline	86 (6.8%)	1168 (92.2%)	11 (0.9%)	3 (0.3%)

Among the other reasons included boiled water.

3.4 Index child characteristics

The index child covered during the evaluation was aged 0 to 23 months, therefore only households with a child(ren) within this age bracket qualified to be included in the survey.

Table 9: Distribution of child age by cluster

Age in months	0 - 5	6 - 11	12 - 17	18 - 23
Intervention	236 (37.8%)	143 (22.9%)	65 (10.4%)	181 (29%)
Non-intervention	249 (40.8%)	138 (22.6%)	80 (13.1%)	144 (23.6%)
Endline	485 (39.3%)	281 (22.8%)	145 (11.8%)	325 (26.3%)

When analyzed by gender of the index child for the end line survey, the results indicate a high proportion of boys to girls (71.5% and 28.5% respectively) across the four age categories.

Table 10: Percent age distribution of children by gender

Age in months	0 - 5	6 - 11	12 - 17	18 - 23	Total
Male	395 (45%)	195 (22.2%)	79 (9%)	208 (23.7%)	877 (71.5%)
Female	88 (25.2%)	85 (24.4%)	64 (18.3%)	112 (32.1%)	349 (28.5%)
Endline	483 (35.1%)	280 (23.3%)	143 (13.7%)	320 (27.9%)	1226 (100%)

3.5 Caregiver nutrition and health knowledge

When asked whether they had been taught about nutrition during pregnancy, overall 59.8% had been taught, among those that had been taught 61.7% (n=390) were from the intervention cluster compared to 57.9% (n=366) on non-intervention indicating a higher proportion among the intervention cluster group though the difference was not statistically significant.

When all the respondents were asked what they knew about nutrition during pregnancy majority of the respondents reported that pregnant women should eat food rich in energy and nutrients. A part from iron and folate supplementation awareness where the two groups were at par, the intervention group scored highly in all the other good nutrition practices in pregnancy compared to the non-intervention group that scored highly in the negative practices indicating that the intervention had an impact. Though the end line coverage is very low.

Table 11: Awareness and nutrition knowledge during pregnancy

Awareness								
	Taught							
Intervention	61.7% (390)							
Non-intervention	57.9% (366)							
Endline	59.8% (756)							
Knowledge								
	Eat food rich in energy and nutrients	Take folic and iron tablets regularly	Eat more food and not less	Avoid certain foods	Not eat a lot of food	Not eat fatty foods	Not eat traditional herbs	Others
Intervention	426 (31.1%)	70 (5.1%)	147 (10.8%)	72 (5.3%)	49 (3.6%)	9 (0.7%)	11 (0.8%)	587 (42.8%)
Non-intervention	351 (27.2%)	73 (5.7%)	85 (6.6%)	68 (5.3%)	101 (7.8%)	19 (1.5%)	54 (4.2%)	540 (41.8%)
Endline	777 (29.2%)	143 (5.4%)	232 (8.7%)	140 (5.3%)	150 (2.6%)	28 (1.1%)	65 (2.5%)	1127 (42.3%)

Under others, which took the highest response included: a lot of food, balanced diet and all kinds of food

Overall 66.3% of the respondents reported to have received nutrition education in lactation, when broken down by clusters 69.0% (n=429) came from the intervention cluster with 63.7% (n=396) from the non-intervention group with the difference not being statistically significant. This near equal coverage of awareness could help explain the close parity between the two clusters in terms of outcome indicators. On what they knew about nutrition in lactation the most

cited were; the need to eat food rich in energy and nutrients, and eating more food and not less. The table below gives a summary of the key findings.

Table 12: Percent level of nutrition in lactation knowledge between clusters

Knowledge	Eat food rich in energy and nutrients	Take folic and iron tablets regularly	Eat more food and not less	Avoid certain foods	Not eat a lot of food	Not eat fatty foods	Not eat soup	Not eat traditional herbs	Others
Intervention	444 (54.8%)	44 (5.4%)	235 (29%)	18 (2.2%)	10 (1.2%)	5 (0.6%)	6 (0.7%)	11 (1.4%)	37 (4.6%)
Non-intervention	397 (55.2%)	54 (7.5%)	197 (27.4%)	12 (1.7%)	6 (0.8%)	1 (0.1%)	4 (0.6%)	3 (0.4%)	45 (6.3%)
Endline	841 (55%)	98 (6.5%)	432 (28.2%)	30 (2.0%)	16 (1.0%)	6 (0.4%)	10 (0.7%)	14 (0.9%)	82 (5.5%)

Other factors included; a lot of food, balanced diet and all kinds of food.

Besides nutrition in pregnancy the evaluation sought to find out whether respondents had received any health and nutrition information. 65.7% responded to the affirmative. When analyzed by cluster, 69% came from the intervention cluster with 62.5% from non-intervention group, this difference was statistically significant ($p=0.01$).

The predominant sources of health and nutrition information included: health facility (48.9%), and Community Health Workers (CHW) (15.3%).

Table 13: Sources of information on health and nutrition by clusters

Source	Intervention	Non-intervention	End line
Health facility	47.8% (n=364)	49.9% (n=307)	48.9%
Family	0.9% (n=7)	0.7% (n=4)	0.8%
Women's group	1.8% (n=14)	1.6% (n=10)	1.7%
Other groups	0.1% (n=1)	0.2% (n=1)	0.2%
CHW	15.5% (n=118)	15% (n=92)	15.3%
NGO/CBO	7% (n=53)	0.2% (n=71)	3.6%
Church/Mosque	2% (n=15)	2.6% (n=16)	2.3%
Malezi Bora Week	0.9% (n=7)	1.1% (n=7)	1%
Other community/large events	0.7% (n=5)	0.8% (n=5)	0.8%
Radio	8.7% (n=66)	4.7% (n=29)	6.7%
TV	1.7% (n=13)	0.8% (n=5)	1.3%
Billboards	0.3% (n=2)	0.3% (n=2)	0.3%
Posters	2.4% (n=18)	2.9% (n=18)	2.8%
Leaflets	1.8% (n=14)	0.2% (n=1)	1%
Banners	0.3% (n=2)	0.3% (n=2)	0.3%
Schools	4.6% (n=35)	2.9% (n=18)	3.8%

Baraza's	0.4% (n=3)	1.3% (n=8)	0.9%
Workshops	0.9% (n=7)	0.2% (n=1)	0.6%
Others	2.4% (n=18)	2.9% (n=18)	2.7%

Other factors cited included: church, husband, mother, mother-in law, school teacher.

Respondents were asked if they had ever heard about feeding a child when the mother is HIV positive, and 50% of the respondents reported to have heard. Analysis by clusters indicates that more respondents from the intervention cluster had heard at 54.2% compared to 45.8% among the non-intervention cluster, this was statistically significant (p=0.01).

Table 14: Feeding a child when mother is HIV positive by cluster

Heard about feeding a child when mother is HIV positive	Intervention	Non-intervention	Endline
	54.2% (n=270)	45.8% (n=228)	50%
If YES, what did you hear?			
EBF with cessation at 6 months	22% (n=60)	17.9% (n=40)	20%
Not EBF at all	69.2% (n=189)	58.6% (n=160)	63.9%
EBF unless other foods AFASS	1.8% (n=5)	0%	0.9%
Feed other milk	1.5% (n=4)	4.4% (n=12)	3%
Heard but did not understand	3.7% (n=10)	2.2% (n=6)	3%
others	1.8% (n=5)	1.8% (n=5)	1.8%

Others included; boiling milk and getting advice.

The most cited information for practice was not breastfeeding at all, It is important to note that in some of the areas in Loitoktok like Mbirikani there are interventions promoting Replacement Exclusive Feeding (REF), hence the high proportion reporting Non-EBF at all, since also 48 of the 60 clusters selected randomly came from Loitoktok district. As to the feasibility and sustainability is beyond and outside the scope of this survey.

When asked if respondents knew any signs of malnutrition, 75.1% reported knowing, compared to 86.3% at baseline. When compared between the two clusters the intervention group had 78.6% compared to 71.6% in the non-intervention group, this difference was statistically significant (p=0.01). Thinness was the most sighted(21.9%), followed by weakness(18.6%) and a big belly (17.7%). There is need for continued education so that caregivers can detect early signs such as lack of appetite and low weight since remedial action is easier then when full signs of malnutrition present.

Table 15: Percent signs of malnutrition by cluster

Sign	Intervention	Non-intervention	End line
Thin	19.6% (n=265)	24.1% (n=260)	21.9%
Weak	19.3% (n=260)	17.8% (n=191)	18.6%
Big belly	16% (n=216)	19.4% (n=209)	17.7%
Brown hair	11.2% (n=151)	7.6% (82)	9.4%
Thin legs	6.5% (n=88)	5.6% (n=60)	6.1%
Low weight	5.8% (n=78)	6.9% (n=75)	6.4%

Looking sick	9% (n=122)	6.9% (n=75)	8%
Show apathy	3.3% (n=44)	2.3% (n=25)	2.8%
No appetite	5.6% (n=76)	6.9% (n=75)	6.3%
Others	3.7% (n=50)	2.6% (n=28)	3.2%

Among the signs listed under others included; white eyes, big head, diarrhea, dull child and fever.

When asked if they knew the causes of malnutrition overall 63.1% reported they knew compared to over a third of the respondents during baseline. Analysis by cluster indicates that 54.8% among the intervention cluster knew the causes of malnutrition compared to 45.2% among the non-intervention group, this difference was statistically significant ($p=0.00$). When broken down by actual causes, the top three causes cited included; shortage of food (56.4%), sickness(22.4%), and poor care practices (10.9%). The table below indicates the causes and the percentage by cluster.

Table 16: Percent reported causes of malnutrition by cluster

Cause	Intervention	Non-intervention	End line
Shortage of food	51.9% (n=332)	60.9% (n=249)	56.4%
Sickness	21.7% (n=139)	23% (n=94)	22.4%
Lack of knowledge	3.4% (n=22)	2.5% (n=10)	3.0%
Witchcraft	0.5% (n=3)	2% (n=8)	1.3%
Poor care practices	9.8% (n=63)	12% (n=49)	10.9%
Mother having no time to feed	5.2% (n=33)	2.2% (n=9)	3.7%
Mother getting pregnant too soon	0.9% (n=6)	4.7% (n=19)	2.8%
Other	6.6% (42)	4.9% (n=20)	5.8%

Under others the following were mentioned; type of food, dirt, when it is too cold, giving ghee, born with it, early feeding, eating only one type of food, if mother gets sick and worms.

When asked what should be done if a child is malnourished, most respondents listed taking the child to the health facility followed by giving a particular food. The table below indicates the other actions listed.

Table 17: Action to take when a child is malnourished

Action	Intervention	Non-intervention	End line
Take to health facility	72.9% (n=513)	69.6% (n=461)	71.3%
Take to a feeding program	2.3% (n=16)	7.6% (n=50)	5%
Seek spiritual help	0.6% (n=4)	0.2% (n=1)	0.4%
Take to a traditional healer	2.8% (n=20)	2.4% (n=16)	2.6%
Give particular food	13.9% (n=98)	14% (n=93)	14%
Do nothing	3.8% (n=27)	4.4% (n=29)	4.1%
Other	3.7% (n=26)	1.8% (n=12)	2.8%

Under others the following were mentioned; buy drugs, give dewormers, give fruits, give herbs etc.

When asked if malnutrition is life threatening, 83.1% responded that it is compared to 91.3% at baseline, this could be explained by the fact that at baseline there was severe drought with high levels of malnutrition and hence the perception was high due to the experiences the community was going through, compared to 2011 during the KAP survey when the drought response program had mitigated much of the

situation and food availability was good. When analyzed between clusters, 52.3% reported yes under the intervention group compared to 47.7% among the non-intervention group, this was statistically significant ($p=0.03$). When asked why, the following reasons were cited; it can kill, a lot of money is spent on management, it affects the babies growth, creates lameness, the child cannot play and it brings shame to the family.

3.6 Infant and Young Child Feeding (IYCF)

The IYCF indicators assessed during the survey included;

- Timely initiation of breastfeeding
- Exclusive breast feeding under 6 months
- Timely complementary feeding
- Introduction of solid, semi-solid, or soft foods
- Continued breastfeeding at 1 year
- Minimum dietary diversity

Table 18: Summary of key IYCF indicator findings

Indicator	Baseline	Endline	Intervention	Non-intervention	Statistical Significance
Timely initiation of EBF within 30 minutes after birth	79.7%	90.6%	90.6%	90.6%	Not sig.
EBF to six months knowledge	44.8%	50.0%	52.5%	47.5%	Significant
EBF to six months practice	46.5%	34.5%	33.9%	35.2%	Not sig.
Timely complementary feeds knowledge	40.7%	75.9%	79.2%	72.7%	Significant
Timely complementary feeding practice	29.1%	52.2%	53.6%	50.7%	Significant
Introduction of solid/semi-solid foods	76.2%	27.5%	25.4%	29.6%	Not sig.
Continued breastfeeding at 1 year	75.4%	43.2%	38.9%	47.5%	Significant
Minimum dietary diversity (4 food groups and above)	32.5%	25.3%	23.3%	27.2%	Not sig.

Timely initiation of breastfeeding

Kenya national guidelines on IYCF recommend initiation of breastfeeding at 30 minutes after birth. The KAPC findings indicate that 90.6% of the respondents reported that breastfeeding should be initiated within 30 minutes after birth, compared to 77.9% at baseline.

When assessed for knowledge on the appropriate feed for a child immediately after birth, 96.4% reported breast milk, compared to 67.6% at baseline.

Table 19: Knowledge and practice on first infant food immediately after birth

Food	Intervention	Non-intervention	End line	Baseline
Knowledge				
Breastmilk only	97.8% (624)	95% (607)	96.4%	67.7%
Others	2.2% (14)	5% (32)	3.6%	32.3%
Practice				
Breastmilk only	95.9% (612)	93.3% (596)	94.6%	96%
Others	4.1% (26)	6.7% (43)	5.4%	4%

Others included; animal fat, butter, water, gripe water, salt and sugar with water, powder milk.

When compared between clusters receiving intervention against those not receiving, there was a higher proportion of respondents from those receiving intervention by 2.8% on knowledge and the difference was statistically significant ($p=0.005$). When it comes to practice, 94.6% of the respondents gave breast milk after birth and the results further indicate a higher number among those receiving intervention by 2.6% and is statistically significant ($p=0.00$).

Table 20: Period after birth when a child should be placed on the mothers breast

Duration	Intervention	Non-intervention	End line	Baseline
Within 30 minutes after birth	90.6% (n=570)	90.6% (n=559)	90.6%	77.9%
Within 2 hours after birth	6.4% (n=40)	7% (n=43)	6.7%	17.3%
Within the first day	2.9% (n=18)	2.1% (n=13)	2.5%	2.7%
Within first 3 days	0.2% (n=1)	0.3% (n=2)	0.3%	0.3%

Kenya national guidelines on IYCF recommend initiation of breastfeeding at 30 minutes after birth, the survey reveals a good proportion of the respondents breastfeeding within 30 minutes after birth(88.4%).

Colostrum is the first milk released after birth, and is very rich in nutrients and immune factors. It is recommended that infants are fed colostrum. At baseline 97.1% fed cholostrum to their babies compared to 99.2% at endline. With a near equal level at 99.2% among those receiving intervention compared to 99.1% among those not receiving intervention, statistically there was no difference between the two groups.

Exclusive breastfeeding under 6 months

When asked if it is possible to give breast milk (without even water) for the first six months, 74.8% of the respondents perceived it is possible compared to 44.8% at baseline. When compared between the two clusters at KAP, the difference is 6.6% in favor of those receiving intervention, and is statistically significant ($p=0.004$) indicating the intervention group had a better perception. When asked if they had received any health education on how to feed their child, the difference was 5% in favor of those who had received intervention, and was statistically significant ($p=0.004$) indicating higher awareness among those in the intervention. When asked if they exclusively breastfed their child the previous day, the difference between the two clusters was 2% in favor of the non-intervention group and was not statistically significant this shows beyond nutrition education barriers still exist to EBF. Among those that felt it is not possible to breast feed exclusively up to six months the reasons stated and given during FGD's include; feelings of the milk being inadequate, busy schedules for mothers, lack of knowledge and perceived slow growth of infants. The table below present's knowledge and practice comparisons among the two clusters

Table 21: Knowledge of EBF and EBF practice in the last 24 hours

Cluster	Knowledge	Practice
Intervention	52.5% (n=455)	34.5% (n=216)
Non-intervention	47.5% (n=411)	33.9% (225)

Timely complementary feeding

At baseline 40.7% knew that complementary feeds need to be introduced after 6 months, with 29.1% introducing the complementary foods after 6 months. Whereas at KAP survey 75.9% of respondents reported that complementary foods should be introduced after 6 months with 52.2% introducing complementary foods after 6 months. When practice was compared amongst the two clusters the difference was 2.9% in favor of those receiving intervention as shown below, and was statistically significant (p=0.007).

Table 22: Knowledge and practice on time of complementary foods introduction

	Cluster	After 6 months	Btw 4 to 6 months	Within 1 st 3 months	Within 2 weeks
Knowledge	Intervention	79.2% (n=505)	10.5% (n=67)	5.3% (n=34)	2.5% (n=10)
	Non-intervention	72.7% (n=464)	10.0% (n=64)	5.5% (n=34)	4.7% (n=30)
End line		75.9%	10.3%	5.4%	3.6%
Baseline		40.7%	33.3%	21.5%	4.4%
Practice	Intervention	53.6% (n=342)	18.3% (n=117)	9.2% (n=59)	5.0% (n=32)
	Non-intervention	50.7% (n=324)	19.4% (n=124)	6.7% (n=43)	10.0% (n=84)
End line		52.2%	18.9%	8.0%	7.5%
Baseline		29.1%	35.4%	26.0%	9.5%

During baseline the top four foods given during introduction of complementary foods were: porridge (50.7%), animal milk (48.7%), mashed plantain (48.2%), and mashed potatoes (37.2%). Compared to the endline where animal milk (58.9%) was highest followed by porridge/gruel (25.1%) and butter (12.8%), this shift in food choices could be partly explained by the seasonal availability and access to food, during endline survey there was plenty of milk available as fodder was readily available compared to baseline which was conducted during a dry season.

Table 23: Foods first given to youngest child

Foods	Intervention	Non-intervention	Endline
Animal milk	62.6% (n=294)	55.2% (n=278)	58.9%
Porridge gruel	25.3% (n=119)	24.9% (n=125)	25.1%
Butter	8.7% (n=41)	16.9% (n=85)	12.8%
Mashed potatoes	3.4% (n=16)	3.0% (15)	3.2%

Introduction of solid, semi-solid, or soft foods

During KAP survey 27.5% of children aged 6 to 8 months consumed solid, semi-solid or soft foods on the day before the interview survey. When disaggregated by the two clusters, there was a 4.2% difference in favor of those not receiving intervention but was not statistically significant.

Continued breastfeeding at 1 year

The proportion of children aged 12-23 months old who were breastfed on the day before the interview was 75.4% at baseline compared to 36.5% during KAPC, this shows a decline between baseline and KAPC survey. When compared between those receiving intervention it was 32.9% compared to 40.1% among those not receiving intervention, a difference that was statistically significant (p=0.003). An

explanation could be that considering their was drought at baseline there is a possibility that cows milk was not available which is the replacement households opt for in place of breast milk at this age.

Table 24: Continued breastfeeding for children aged 12-23months yesterday

Practice	Intervention	Non-intervention	Endline
Breastfed	32.9% (248)	40.1% (303)	36.5%
Not breastfed	13.4% (101)	13.6% (103)	13.5%

Minimum dietary diversity

Dietary diversity is an important indicator of diet quality. Evidence indicates that the more diverse the diet the better quality the food. It is recommended that young children should receive a dietary diversity of at least four food groups. During baseline 96.2% of the respondents affirmed the importance of a diverse diet, during the KAP survey 93% reiterated the importance of a diverse diet. Among the perceived benefits of a diverse diet included; it leads to better health, good growth, boosts immunity, and reduces monotony. When compared among the two clusters there was a 3.6% difference in favor of the intervention cluster indicating a higher level of awareness this was not statistically significant.

On practice, during baseline 32.5% reported feeding children four or more food groups in the previous 24 hours to the survey, compared to the 25.3% at KAP survey, indicating a drop in dietary diversity between the two periods, when analyzed by cluster, intervention cluster had 23.3% giving more than four food groups compared to non-intervention group at 27.2%, though the difference was not statistically significant.

When a dietary diversity score was computed for the KAP survey the intervention group had a score of 4.4. compared to 3.6 for non-intervention out of a possible 8 food groups. A review of dietary diversity indicates that the intervention cluster had a higher percentage of respondents who consumed; legumes, meats, eggs, vitamin A rich fruits and vegetables and oils compared to the non-intervention group that had a higher percentage consuming; grains, dairy products, and RUTF.

Table 25: dietary diversity by cluster

Food	Intervention (n=389)	Non-Intervention (n=362)	End line
Grains	100% (n=389)	100% (n=362)	100%
Legumes	45.8% (n=178)	46.7% (n=169)	46.3%
Dairy products	100% (n=389)	100% (n=362)	100%
Meats	18% (n=70)	13.5%(n=49)	15.8%
Eggs	8% (n=31)	7.2% (n=26)	7.6%
Vitamin A rich fruits and vegetables	53.7% (n=209)	43.3% (n=157)	48.5%
Other fruits and vegetables	54.2% (n=211)	50% (n=181)	52.1%
Oils	81.5% (n=317)	50% (n=181)	65.8%
RUTF	4.1% (n=16)	6.6% (n=24)	5.4%

A review of the end line dietary diversity by age categories indicates that a higher percentage among the 18-23months olds with a higher dietary diversity compared to the other age categories.

Table 26: 2011 KAP dietary diversity by age category

Food	6-11mo	12-17mo	18-23mo
Grains	26.6% (n=227)	26.3% (n=224)	47.1% (n=401)
Legumes	27.5% (n=92)	22.5% (n=75)	50% (n=167)
Dairy products	31.6% (n=269)	26.2% (n=223)	42.2% (n=359)
Meats	20.3% (n=24)	22% (n=26)	57.6% (n=68)
Eggs	19% (n=7)	27% (n=10)	54% (n=20)
Vitamin A rich fruits and vegetables	19.4% (n=70)	28.5% (n=103)	52.1% (n=188)
Other fruits and vegetables	34.4% (n=132)	25.8% (n=99)	39.8% (n=153)
Oils	27% (n=165)	27% (n=165)	46% (n=283)
RUTF	27% (n=10)	21.6% (n=8)	51.4% (n=19)

The findings indicate better dietary diversity among the 18-23 month old children, it is expected they are getting their foods from the family pot, compared to the 6 – 17 months. Hence a need to re-inforce the messages on dietary diversity among the young children and infants. It is also the same group that has the highest number on RUFT implying that the diet may be diverse but not adequate in amounts

3.7 Vitamin A supplementation

Postpartum vitamin A supplementation during baseline was 19.4%, compared to end line where the percentage had risen to 35.3% showing improvements in coverage. When analyzed by clusters, the intervention group had 36.4% (n=231) compared to non-intervention group at 34.2% (n=215), this difference between clusters was not statistically significant.

When asked if they had ever heard about Vitamin A 65.8% overall reported they had. Among those that had heard about Vitamin A, when asked what they heard about vitamin A majority of the respondents reported the benefits of vitamin A as including; important for growth (31.1%) and improving immunity (24.9%).

Table 27: Importance of Vitamin A by cluster

Importance	Intervention	Non-intervention	End line
Prevents night blindness	6.5% (n=30)	6.1% (n=21)	6.3%
Improves immunity	20.9% (n=97)	32% (n=111)	26.5%
Good for eyesight	18.1% (n=84)	11% (n=38)	14.6%
Important for growth	29.5% (n=137)	35.5% (n=123)	32.5%
others	25.2% (n=117)	15.6% (n=54)	20.4%

Deworming is an important public health intervention to help reduce morbidity burden associated with worm infestation. Results indicate 43.4% (n=504) of the eligible children surveyed had received dewormers. When analyzed by cluster there were more children dewormed among the intervention group (53%) compared to the non-intervention group (47%) this was significant (p= 0.01).

Child morbidity

When respondents were asked about sickness in the past 2 weeks fever was the most common followed by diarrhea and pneumonia as shown below. The fever during baseline accounted for 58.3% of total illness compared to 30.3% during the KAP survey.

Table 28: Child illness in the past 2 weeks by cluster

Disease	Intervention	Non-intervention	End line
Fever	39% (n=118)	21.6% (n=79)	30.3%
Malaria	11.2% (n=34)	6.8% (n=25)	9%
Diarrhea	26.4% (n=80)	9.6% (n=35)	18%
Pneumonia	12.9% (n=39)	8.2% (n=30)	10.6%
Eye	2.3% (n=7)	0.6% (n=2)	1.5%
Skin	8.3% (n=25)	3.3% (n=12)	5.8%

When asked whether they took action when the child was sick, 88.4% reported that they took action. When disaggregated by cluster 89.9% (n=213) were from the intervention group compared to 86.6% (n=168) from the non-intervention group.

When asked where they sought assistance, the health facility was the area where help was sought most at 92.4% compared to 32.2% during baseline. Below are places where they sought help from.

Table 29: Area where assistance was sought when child was sick by cluster

Area	Intervention	Non-intervention	End line
Brought to health facility	93.5%(n=200)	91.2% (n=156)	92.4%
Traditional healer	0.9% (n=2)	1.2% (n=2)	1.1%
Used medication from previous illness	1.9% (n=4)	3.5% (n=6)	2.7%
Gave traditional herbs	3.7% (n=8)	4.1% (n=7)	3.9%

Zinc supplementation during diarrhea is encouraged as it has been found to have benefits. Among the children with diarrhea (n=80) 38.8% received zinc supplementation, this shows awareness among health workers and caregivers and most possibly commodity supplies are needed to improve on uptake. Their is need to incorporate the deworming and zinc supplementation into the CHW kit to assist with coverage and uptake.

3.8 Malnutrition prevalence, concepts and signs

An end line comparison of GAM, SAM, and MAM reveals a prevalence of 9%, 3.5% and 5.5% respectively and edema at 0.4%. When compared to baseline prevalence of GAM, SAM, and MAM at 8.5%, 1.0%, and 7.9% respectively with edema at 0.5%. This shows that there was a 1% increase in GAM, 2.5% rise in SAM, and a 2.4% drop in MAM, and 0.1% drop in edema at end line, it is worth noting that other than the SAM rates at endline, the other indicators were within the confidence interval limits seen at baseline. The high SAM cases could be associated with a high disease burden during the rainy season at the time of the KAP survey.

Table 30: Percent GAM, SAM, MAM and edema between clusters

Malnutrition	Intervention (n=360)	Non-Intervention (n=352)	End line
GAM	9.1% (n=33)	8.8% (n=31)	9% (n=64)
SAM	4.1% (n=15)	2.8% (n=10)	3.5% (n=25)
MAM	5% (n=18)	6% (n=21)	5.5% (n=39)
Edema	0.3% (n=1)	0.6% (n=2)	0.5% (n=3)

A review of the same indicators by age categories indicates that the most affected age group is 6-11months where half of the total cases reported fall under, followed by 18-23months. This could be due to the fact that the 6-11months are transitioning towards complementary feeding implying the practices at this transition phase are not very optimal, while the 18-23month age category are also transitioning to regular family diets patterns and considering the food insecurity situation among pastoralists this is an age group that is vulnerable.

Table 31: Percent GAM, SAM, MAM and edema by age categories

Malnutrition	6-11mo	12-17mo	18-23mo	Total
GAM	50% (n=23)	19.6% (n=9)	30.4% (n=14)	100%
SAM	50% (n=7)	21.4% (n=3)	28.6% (n=4)	100%
MAM	50% (n=16)	18.8% (n=6)	31.3% (n=10)	100%
Edema	33.3% (n=1)	0% (n=0)	66.7% (n=2)	100%

4.0 CONCLUSION

Three main conclusions emerge from this assessment of the KAP survey. First there is a high level of knowledge among the intervention group compared to the non-intervention cluster overall. This indicates that awareness penetration was substantial and hence the high level of knowledge compared to the control group.

Secondly there was a significant improvement in some of the health seeking behaviours, nutrition education, EBF to six months, and timely introduction of complementary feeding knowledge and practices. It is also possible to propose that ‘spill-over effect’ played a role in the indicators among the non-intervention clusters since the separation between the intervention and control is not very distinct geographically, and considering this are pastoral communities always on the move hence sharing of information was very possible. Also the roll out of CHW training in the district and establishment of CHUs even in non-intervention areas could explain the near parity or improvement of indicators even in the non-intervention clusters and the overall improvement in indicators compared to baseline.

Thirdly, there is a drop in continued breastfeeding beyond one year, and no significant improvement in nutrition practices of older infant after 6 months. This is noted when we look at the drop or no difference in practices of the following indicators; foods first given to the child, introduction of solid/semi-solid foods, dietary diversity, and continued breastfeeding after one year. Hence a challenge in translating the acquired knowledge into practice for mostly IYCF practices for older infants. Also there were other sources of information besides the nutrition and health education conducted that contributed to the level awareness in the target community. Also considering that baseline survey was done after the drought period compared to KAP endline done at a season of food availability.

5.0 RECOMMENDATIONS

First, it indicates that the model of intervention currently used is successful in terms of awareness creation. The levels of knowledge were noted to be high among the intervention group. The need to review the noted challenges and even synchronization with well known MtMSG models such as the Mother Care Groups (MCG) developed by World Relief.

However, the evidence now suggests that the intervention approach is not effective in tackling older infant’s practices. This appears to suggest that a different approach is needed to tackle complementary feeding practices. There are two possible approaches to recommend, one is the use of trials for improved practices where mothers are practically engaged in food preparation and practices at home, secondly the Community Conversations approach since availability and access to food as opposed to breastmilk involved different decision makers and availability of resources, hence involvement of other community and household members as well as livelihood improvement and diversification measures.

There is therefore need to sustain the gains made while innovating based on lessons learnt for maximal optimal improvement in IYCF practices.

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ANNEXES

HOUSEHOLD QUESTIONNAIRE

Concern Worldwide Household Data Collection interview schedule for Kajiado district KAP Survey November 2011.

BEFORE COMMENCING DATA COLLECTION THIS SECTION SHOULD BE FILLED

Cluster No. _____ Result _____ (1=complete; 2= partially complete; 3=refused to take the survey)

Team No _____ Team Leader No _____ Interviewer ID _____

Date of Interview ____/____/____ Household number:
 DD MM YY

Please read the following consent form:

My name is I am part of a team from MoPHS and CWW. We are conducting a KAP survey in I would like to ask you some questions.

Any information that you provide will be confidential and will not be discussed to other people. Your participation is voluntary and you can choose not to answer any or all of the questions if you wish; however we hope you will participate since your views are important.

Do you have any questions?

May I begin the interview?

YES: NO:

Sign of the interviewee:

Signature of interviewer:

1.0 RESPONDENTS DETAILS

1.1 Respondents Name:	
1.2 Is she the mother of the child?	1. Yes 2. No
1.3 If NO, what is relationship to the mother of the child/children?	2. Husband 3. Mother 4. Mother in law 5. Sister/sister in law 6. Other (specify)..... 88.Not Applicable
1.4 Respondents age in years?

2.0 CHILDREN UNDER 5 YEARS OLD

CHARACTERISTICS	Child 1	Child 2	Child 3	Child 4
A.Children name				
B.Sex (1=Boy, 2=Girl)2.2 Child ID 2				
C.Children age in months				
E.How was child's age confirmed? 1. Health card				

2. Birth certificate 3. Baptism card 4. Seasonal calendar 5. Other (Specify)..				
D.Relation to respondent (1=Child, 2=Sibling, 3=grandchild, 4=relative, 5=other (specify))				
D.MUAC (cm)if child is 6 – 59 months (if MUAC is <12.5cm refer child for treatment to the nearest health facility)				
E.Is edema present for child aged 6 – 59 months? (1 = Yes, 2 = No)If YES refer to the nearest health facility.				

3.0 HOUSEHOLD CHARACTERISTICS

3.1 Is the family single parent, monogamous or polygamous?	1. Monogamous 2. Polygamous 3. Single parent
3.2 Who is the head of the household?	1. Husband 2. Wife/self 3. Other (specify)
3.3 How many years of schooling does the mother/respondent have? (completed years of schooling)
3.4 Currently what is the main source of livelihood for the household?	1. Animal herds 2. Formal salaried employment 3. Day labor income 4. Food vouchers 5. Relief program 6. Begging 7. others (specify).....
3.5 What was the main source of the food consumed in the household yesterday?	1. Own production 2. Purchase 3. Gifts from friends/relatives 4. Food aid 5. Borrowed 6. Wild foods 7. Others (specify).....
3.6 What is the usual source of food consumed in the household?	1. Own production 2. Purchase 3. Gifts from friends/relatives 4. Food aid 5. Borrowed 6. Wild foods 7. Others (specify).....

4.0 INFANT AND YOUNG CHILD FEEDING KNOWLEDGE AND PRACTICES

4.1 What should a baby be fed immediately after birth?	1. Breast milk 2. Other
--	----------------------------

	(specify).....
4.2 What did you feed your youngest child immediately after birth?	1. Breast milk only 2. Butter/fat 3. Water 4. Sweetened water 5. Powdered milk 6. Gripe water 7. Tea/coffee 8. Nothing (not even breast milk) 9. Other (specify).....
4.3 After how long from birth should a baby be put to the mother's breast?	1. Within 30 min of birth 2. Within 2 hrs of birth 3. Within 1 st day Within 1 st 3days 4. Never 5. Don't remember
4.4 Did you feed the first breast milk to your youngest baby?	1. Yes 2. No discarded
4.5 If NO for 4.3 what was the reason?	1. Not good for the baby 2. Milk is too watery 3. Not culturally acceptable 4. other (specify) 88. NA
4.6 In your opinion, is it possible to give breast milk to a child (not even water) for the first six months of the baby's life?	1. Yes 2. No
4.7a If YES in 4.6, Why? 88. NA	
4.7b If NO in 4.6, why? 88. NA	
4.8 Was your child (0-5 months of age) exclusively breastfed yesterday (no food or even water given)?	1. Yes 2. No 88. NA
4.9 Did anybody talk to you about how to feed your baby?	1. Yes 2. No
4.10 If YES in 4.9 from whom?	1. Health staff 2. CHW 3. TBA 4. Women groups 5. Motherssupport group 6. Neighbors/friends 7. Own mother/mother in law 8. NGO/CBO workers 9. others (specify)..... 88. NA

4.11 At what age should you introduce foods other than breast milk to a baby?	1. After 6 months 2. Between 4 -6 months 3. Within first 3 months 4. Within 2 weeks. 5. Other (specify)..... 6. Don't know
4.12 When did you introduce foods other than breast milk to your youngest baby?	1. After six months 2. Between 4 -6 months 3. Within the 1 st 3 months 4. Within 2 weeks

	5. Not yet
4.13 What foods did you first give to your youngest child?	1. Porridge, gruel 2. Butter 3. Animal Milk 4. Mashed potatoes 5. Mashed plantain 6. Fruits 7. Ugali 8. Rice 9. Pumpkin 10. Legumes 11. Other vegetables 12. Meat 13. Bread 14. Eggs 15. other (specify)..... 88. NA
4.14 For children aged 12 – 23 months, was the child given any breast milk yesterday?	1. Yes 2. No 88. NA
4.15 For children 6 – 8 months old, did the child eat any solid, semi-solid or soft foods yesterday?	1. Yes 2. No 88. NA
4.16 For children aged 6 – 23 months, how many times did the child eat yesterday? (meals include main meals, snacks-but not extremely small amounts-, breast milk feeds not included, but milk feeds of non-breastfed children are included)Not applicable (NA) to children <=5months or >=24 months 88. NA
4.17 In your opinion, do you think it is important to eat a diverse diet?	1. Yes 2. No
4.18a If YES in 4.17 why?	88. NA
4.18b If NO in 4.17 why?	88. NA

5.0 CHILD DIETARY DIVERSITY FOR CHILD 6 TO 23 MONTHS

USE THIS SECTION TO ANSWER QUESTION 5.1 FOR CHILDREN AGED 6 TO 23 MONTHS ONLY

Please tell me everything that [NAME] ate yesterday during the day or night (whether at home or outside the home).

Think about when [NAME] first woke up yesterday. Did [NAME] eat anything at that time?

Keep probing 'Anything else?' until the respondent says 'nothing else.' If nothing else was given when the child first got up, ask:

What did [NAME] do after that? Did [NAME] eat anything at that time? If yes, ask: **Please tell me everything [NAME] ate at that time.** Probe: 'Anything else?' until respondent says 'nothing else.' If respondent mentions mixed dishes like a sauce or stew, probe: **What ingredients were in that [MIXED DISH]?** Probe: 'Anything else?' Until respondent says 'nothing else.' **As the respondent recalls each food, underline the food in the food group below and circle YES.**

5.1 How would you describe yesterday?		1. Normal day				
		2. Festive/Special day				
5.2a Did the CHILD aged 6 to 23 months eat any of the following in the last 24 hrs?						
Food group	Examples of foods	Child 1	Child 2	Child 3	Child 4	
Grains, roots and tubers	Sorghum, millet, maize, spaghetti, pasta, anjera, rice, bulga, wheat, bread, white tubers, white potatoes, white yams, cassava, foods from roots, white sweet potatoes	1. Yes 2. No 88. NA				
Legumes and nuts	Beans, peas, green grams, cowpeas, dried peas	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	
Dairy products	Milk from Cow, goat, camel. Fermented milk, powdered milk	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	
Meats	Meat, poultry, offals, liver, kidney, organ meats, blood based foods, fresh or dried fish or shell fish, or smoked salted, fried fish.	1. Yes 2. No 88. NA				
Eggs		1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	1. Yes 2. No	
Vitamin A rich vegetables	Pumpkin, carrots, yellow or orange fleshed sweet potatoes, ripe mango, papaya, dark green vegetables (cassava, pumpkin, cowpea, sukuma, managu, leaves)	1. Yes 2. No 88. NA				
Other fruits and vegetables	Banana, plantain, egg plant, watermelon, cucumber like vegetables, oranges	1. Yes 2. No 88. NA				
Oils and fats	Cooking fat, oil, butter, ghee, margarine	1. Yes 2. No 88. NA				
Child fed RUTF	Plumpy nut (show satchet)	1. Yes 2. No 88. NA				

6.0 IYCF IN HIV/AIDS

6.1 Have you ever heard about feeding a young baby when the mother is HIV positive?	1. Yes 2. No
6.2 If YES to 6.1, what did you hear?	1. Exclusively breastfeeding with early cessation at six months 2. Not breastfeeding at all 3. Exclusively unless other food is 'AFASS' (acceptable, feasible, affordable, sustainable and safe) 4. Feed other milk. 5. Ever heard but did not understand 6. Other (specify.....) 88. NA

7.0 HEALTH AND NUTRITION EDUCATION AND KNOWLEDGE

VITAMIN A AND DEWORMING

7.1 Have you ever heard about Vitamin A?	1. Yes 2. No								
7.2 If YES to 7.1, what is the importance? [Multiple response possible]	1. Prevents night blindness 2. Improves immunity 3. Good for eyesight 4. Important for growth 5. other (specify)..... 88. NA								
7.3 Would you take all your children under 5 yrs to a health facility or a campaign site to get vitamin A capsule?	1. Yes 2. No								
7.4 If NO to 7.3, why? 88. NA									
FOR CHILDREN <u>6 MONTHS AND OLDER</u> SHOW CAPSULE AND ASK Has CHILD received vitamin A within the last 6 months (since June this year)?	<table border="1"> <thead> <tr> <th><u>7.5a. CHILD 1</u></th> <th><u>7.5b. CHILD 2</u></th> <th><u>7.5c. CHILD 3</u></th> <th><u>7.5d. CHILD 4</u></th> </tr> </thead> <tbody> <tr> <td>1. Yes 2. No 88. NA</td> <td>1. Yes 2. No 88. NA</td> <td>1. Yes 2. No 88. NA</td> <td>1. Yes 2. No 88. NA</td> </tr> </tbody> </table>	<u>7.5a. CHILD 1</u>	<u>7.5b. CHILD 2</u>	<u>7.5c. CHILD 3</u>	<u>7.5d. CHILD 4</u>	1. Yes 2. No 88. NA			
<u>7.5a. CHILD 1</u>	<u>7.5b. CHILD 2</u>	<u>7.5c. CHILD 3</u>	<u>7.5d. CHILD 4</u>						
1. Yes 2. No 88. NA	1. Yes 2. No 88. NA	1. Yes 2. No 88. NA	1. Yes 2. No 88. NA						
FOR CHILDREN <u>12 MONTHS AND OLDER</u> SHOW DEWORMING TABLET Has CHILD received deworming tablets?	<table border="1"> <thead> <tr> <th><u>7.6a CHILD 2</u></th> <th><u>7.6a CHILD 3</u></th> <th><u>7.6a CHILD 1</u></th> <th><u>7.6a CHILD 4</u></th> </tr> </thead> <tbody> <tr> <td>1. Yes 2. No 88. NA</td> <td>1. Yes 2. No 88. NA</td> <td>1. Yes 2. No 88. NA</td> <td>1. Yes 2. No 88. NA</td> </tr> </tbody> </table>	<u>7.6a CHILD 2</u>	<u>7.6a CHILD 3</u>	<u>7.6a CHILD 1</u>	<u>7.6a CHILD 4</u>	1. Yes 2. No 88. NA			
<u>7.6a CHILD 2</u>	<u>7.6a CHILD 3</u>	<u>7.6a CHILD 1</u>	<u>7.6a CHILD 4</u>						
1. Yes 2. No 88. NA	1. Yes 2. No 88. NA	1. Yes 2. No 88. NA	1. Yes 2. No 88. NA						

8.0 MATERNAL NUTRITION NDURING PREGNANCY AND LACTATION

8.1 Have you been taught about nutrition during pregnancy?	1. Yes 2. No
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8.2 What do you know about nutrition of pregnant women? [Multiple response possible]	1. Need to eat food rich in energy and nutrients. 2. Take folic and iron tablets regularly 3. Eat more food and not less 4. Avoid certain foods 5. Should not eat a lot of food 6. Should not eat fatty/oily foods 7. Should not eat soup 8. Should not eat traditional herbs 9. other (specify).....
8.3 Have you been taught about nutrition during lactation?	1. Yes 2. No
8.4 What do you know about nutrition of lactating women? [Multiple response possible]	1. Need to eat food rich in energy and nutrients. 2. Take folic and iron tablets regularly 3. Eat more food and not less 4. Avoid certain foods 5. Should not eat a lot of food 6. Should not eat fatty/oily foods 7. Should not eat soup 8. Should not eat traditional herbs 9. other (specify).....
8.5 Did you receive vitamin A capsule within four weeks of your delivery of your last child?	1. Yes 2. No 3. Don't remember

9.0 MORBIDITY AND HEALTH SEEKING

9.1 Was any of your children aged 0 to 59 months sick in the last 2 weeks? 1. YES 2. NO				
9.1 If YES what illness? 1. Fever 2. Malaria 3. Diarrhea 4. Pneumonia 5. Eye infections 6. Skin infections 7. Brucellosis 8. other (specify)..... 88. NA	9.1a CHILD 1 ----	9.1b CHILD 2 ----	9.1c CHILD 3 -----	9.1d CHILD 4 -----
9.2 If child had diarrhea (3), SHOW ZINC TABLET and ask, was ZINC given?	1.YES 2.NO 88.NA	1.YES 2.NO 88.NA	1.YES 2.NO 88.NA	1.YES 2.NO 88.NA
9.3 For the sick child/children did you take any action?	1. Yes 2. No 88. NA			
9.4 If YES to 9.3, what did you do?	9.4a CHILD 1	9.4b CHILD	9.4c CHILD	9.4d CHILD

1.Brought child to health facility 2.Brought child to traditional healer 3.Bought drugs from pharmacy 4.Used medication from previous illness 5.Gave traditional herbs 88.NA	-----	2 -----	3 -----	4 -----
---	-------	------------	------------	------------

10. MALNUTRITION

10.1 Do you know any signs of malnutrition?	1. Yes 2. No
10.2 If YES TO 10.1, List some of the signs?	1. Thin 2. Weak 3. Big belly 4. Brown hair 5. Thin legs 6. Low weight 7. Looking sick 8. Showing apathy 9. No appetite 10. Others specify 88. NA
10.3 Do you know causes of malnutrition?	1. Yes 2. No
10.4 If YES to 10.3, what are the causes of malnutrition?	1. Shortage of food 2. Sickness 3. Lack of knowledge 4. Witchcraft 5. Bad eye 6. Poor care practices 7. Mother has not time for feeding 8. Mother got pregnant too soon 9. Other (specify)..... 88. NA
10.5 What should you do if a child is malnourished?	1. Take to health facility 2. Take to feeding program 3. Seek spiritual help 4. Take to traditional healer 5. Give particular food 6. Do nothing 7. Other (specify).....
10.6 Do you think malnutrition is a life threatening condition?	1. Yes 2. No
10.6a If YES to 10.6, why?	88. NA
10.6b If NO to 10.6, why?	88. NA

11. HEALTH AND NUTRITION INFORMATION

11.1 Have you received any information about health and nutrition	1. Yes 2. No
11.2 If YES to 11.1, where? [Multiple response possible]	1. Health facility 2. Family 3. Women's group 4. Other group 5. CHW 6. NGO/CBO staff 7. Church/mosque 8. Malezi bora week 9. Other community or large event/campaign 10. Radio 11. TV 12. Print media 13. Billboards 14. Posters 15. Leaflets 16. Banners 17. School 18. Barazas 19. Workshops 20. others (specify)..... 88. NA

12.0 WASH

12.1 What is your CURRENT main source of DRINKING water?	1. River 2. Lake 3. Tap water 4. Borehole 5. protected well 6. Unprotected well 7. Public pan 8. Water bowser/tanker 9. Dam 10. Digging along the Laga 11. Rain water 12. Other (Specify) _____
12.2 Approximately how long does it take to go to the MAIN source of water, fetch it and come back? (Including waiting time and queuing at the water point) in minutes/hours?	_____/_____ Hours/minutes
12.3 When do you normally wash your hands?	1. After

[Multiple response possible]	defecation/visiting toilet 2. Before handling food 3. After eating 4. Before feeding the child 5. After cleaning children's bottoms 6. Other (specify) _____
12.4 What do you use to clean your hands? [Multiple responses possible]	1. Water only 2. Water and soap 3. Water and ash 4. Other (specify) _____

THANK YOU VERY MUCH FOR YOUR TIME

PLEASE CHECK THAT ALL QUESTIONS ARE ANSWERED AND THAT ALL BOXES ARE FILLED				
Name	and	signature	of	Interviewer:
.....				
Name	and	signature	of	supervisor:
.....				

FGD GUIDE

CONCERN WORLDWIDE KAJIADO AND OLOITOKTOK KAP SURVEY FGD GUIDE FOR WOMEN AND MEN

The interview shall follow the following key questions to guide the discussion;

1. What can you remember about the health and nutrition education intervention offered in your community?
2. Which topics did you find most interesting? And which ones least interesting?
3. In your opinion what could have been some of the reasons for HIGH and LOW attendance to the education sessions in your community? (low male participation,..)
4. What would you list as some of the major facilitators/barriers and constraints to participation?
5. Which maternal and child practices do you consider hardest to change in your community and why? (maternal dietary restriction during pregnancy, fats and ghees after first breastfeeding initiation, complementary foods that are dense and diverse...)
6. What do you think can be done to change some of this practices?
7. What do you think of the nutrition education approach used? Do you think it could be made better? If yes how?

FACILITY QUESTION GUIDE

CONCERN WORLDWIDE KAP SURVEY FOR KAJIADO AND OLOITOKTOK DECEMBER 2011

HEALTH FACILITIES QUESTION GUIDE

FILL IN THE QUESTIONS BELOW AND SEAL THEM IN THE ENVELOPE TO ASSIST US WITH OUR PROJECT EVALUATION

1. How familiar are you with the Concern Worldwide Health and nutrition intervention project in terms of what it does and coverage?
2. To your understanding how were local beneficiaries and stakeholders involved in project design and implementation?
3. What changes could have been made (if any) to the design of the project in order to improve the achievement of the project's expected results?
4. Are there unanticipated results achieved or contributed to by the project?
5. Did the project contribute to local stakeholders' acceptance of effective IYCF practices? If YES how?
6. How would you rate the level of coverage of the mothers attending MCH receiving nutrition education?
7. What constraints and barriers to attendance of education sessions would you cite?
8. What NEW nutrition education delivery mechanisms and approaches would you propose for use in future interventions?

IMPLEMENTING PARTNERS QUESTION GUIDE

CONCERN WORLDWIDE KAP SURVEY FOR KAJIADO AND OLOITOKTOK NOVEMBER 2011

PARTNERS QUESTIONS (Neighborhood Initiative Alliance - NIA)

INSTRUCTIONS: To be filled by project officers in implementing organization then sealed in the envelope

1. Were local beneficiaries and stakeholders adequately involved in the design of the nutrition education intervention? If yes how?
2. Did NIA have the technical capacity for a nutrition education intervention when they came on board? if yes outline in detail the existing capacity at the time and now?
3. Are there any salient issues regarding project duration, for instance to note project delays, and how they may have affected project outcomes and sustainability?
4. In your opinion what nutrition practices have been changed positively by the nutrition education intervention?
5. Are there changes that in your opinion that could have been made (if any) to the design of the project approach in order to improve the achievement of the project's expected results? If yes, kindly explain in detail.
6. Were progress reports produced accurately, timely and responded to reporting requirements? If yes how often and which ones, IF no why?.
7. In your own views is the current nutrition education approach sustainable? if yes how? If No why?
8. Are there unanticipated results achieved or contributed to by the project intervention?
9. Did the project contribute to local stakeholders' acceptance of effective IYCF practices? If yes how? If No why?
10. Is the current nutrition education approach replicable or easy to scale up? If yea how? If NO why?
11. What would you consider the STRONGEST cornerstone of this nutrition education style?
12. What would you consider the WEAKEST part of this nutrition education style?
13. What were some of the constraints/barriers to attendance to education sessions?
14. Describe the technical support provided by Concern. Was it adequate?
15. What role did the CHWs play in this exercise and do you think those who were trained have the capacity to continue conducting nutrition and health in the villages?
16. What NEW nutrition education delivery mechanisms and approaches would you propose for use in future interventions?

DATA COLLECTION TEAM

NAME	DESIGNATION	ID NO	TEAM	TEAM LEADER (TL)	TL No.
Jonah Simanka	CHEW	01	1	James Kamotho DNO 0728353052	1
Nancy W. Kariuki	Nurse	02	1		
Leah Kamau	CHW	03	1		
Daniel Soipano	CHEW	04	1		
Grace Santamu	CHW	05	1		
George Kabiru	PHO	06	2	Amos Ngare 0723965811 Nurse	2
James Ndicu	CHW	07	2		
Florence Pose	Nurse	08	2		
Elizabeth Kileten	Nurse	09	3	Maurice Silas KNBS – Stat. Asst. 0728353052	3
Mark Kibui	CHW	10	3		
Sophia Njeri	CHW	11	3		
Pauline Serian	CHEW	12	3		
Regina Nailantei	CHW	13	3		
David Mumpe	CHW	14	4	Ruth Nasinkoi - Nutritionist	4
Moses Keyai	CHW	15	4		
Tiapatet	CHW	16	4		