



## **MATERNAL INFANT AND YOUNG CHILD NUTRITION**

### **KNOWLEDGE, ATTITUDE AND PRACTICES (KAP) SURVEY**

#### **WAJIR NORTH, ELDAS AND WAJIR WEST SUB-COUNTIES, WAJIR COUNTY**

**29<sup>th</sup> August – 9<sup>th</sup> September, 2014**

**Survey done by Islamic Relief in collaboration with Ministry of Health Wajir and with  
funding from DFID and ECHO**



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## ACRONYMS

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CSPRo:	Census and Survey Program
DHIS:	District Health Information System
EBF:	Exclusive Breastfeeding Rate
ENA:	Emergency Nutrition Assessment
FTC:	Feed the Children
GAM:	Global Acute Malnutrition
HiNi:	High Impact Nutrition Intervention
IDA:	Iron Deficiency Anemia
IYCN:	Infant and Young Children Nutrition
KAP:	Knowledge Attitude and Practice
KNBS:	Kenya National Bureau of Statistics
MIYCN:	Maternal Infant and Young Children Nutrition
MtMSGs:	Mother to Mother Support Groups
MUAC:	Mid-Upper Arm Circumference
OPV:	Oral Polio Vaccine
PPS:	Probability Proportion to Population Size
SAM:	Severe Acute Malnutrition
SD:	Standard Deviation
SPSS:	Statistical Software for Social Sciences
UNICEF:	United National Children Education Fund
WHO:	World Health Organization

## ACKNOWLEDGEMENTS

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Special appreciation goes to Wajir County, Wajir North, Eldas, and Wajir West Health Management Teams under the Ministry of Health for their active role and support during the entire process

Finally, we acknowledge Islamic Relief Kenya Nutrition Staffs who coordinated, supervised and supported the KAP Survey and also for their technical review of both the methodology and the report.

**Report by: *SMARTSTAT Limited, Nairobi-Kenya***

## EXECUTIVE SUMMARY

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Wajir County in the former North Eastern Province has a total population of 661,941<sup>1</sup> and is ranked 27<sup>th</sup> in the country in terms of population. The county has a surface area of 56,686 KM Squared and is ranked 3<sup>rd</sup> in the country in terms of surface area. Wajir County has a population density of 12 people per kilometer which is ranked 43<sup>rd</sup> in the country. According to the Kenya integrated Household and Budget Survey (2006), Wajir County has a poverty rate of 84.0% which is ranked 45<sup>th</sup> in the country and almost twice the country poverty rate of 47%. The county is classified as Arid and Semi-Arid Lands (ASALs).

IRK with funding from ECHO and DFID has been supporting the County Ministry of health to implement nutrition activities in Wajir County (Wajir West, Eldas and Wajir North sub counties) to reduce morbidity and mortality in children under 5, pregnant and lactating mothers associated with malnutrition. The programs have adopted an integrated emergency and rehabilitation approach to prevent malnutrition and treat the acutely malnourished. Within the project, IRK is implementing Maternal, Infant and Young Child Nutrition (MIYCN) activities whose primary goal is to improve child survival through appropriate Maternal Infant and Young Child Nutrition by capacity building and providing technical support to the Department of Health at the County Level. IRK is also carrying out various health, nutrition and hygiene promotion activities in the region. To better, address the behaviors that act as barriers to adequate infant young child nutrition; IRK undertook a Knowledge, Attitude and Practice (KAP) Survey in Wajir North, West and Eldas Sub-Counties as one survey area with the aim of measuring knowledge, attitudes and practices of the target communities in relation to MIYCN, sanitation and hygiene.

The survey applied a two stage cluster sampling with the clusters being selected using the probability proportional to size (PPS) and households being selected using the simple random sampling. The overall sample size was 820 children aged between 0 and 23 months from the survey area. Both qualitative and quantitative data was collected by a set of six teams of 2 enumerators and 1 team leader. The teams were given a four days training including the piloting exercise.

The table below presents the summary of the indicators collected during the assessment:

Indicators	Statistic/Prevalence
<b>Demographic Characteristics</b>	
Number of Children Sampled	796
Sex Ratio: Boys: Girls	0.88
Age Distribution	
0-5 Months	27.6%

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<sup>1</sup> 2009 Kenya Population and Housing Census, KNBS

6-11 Months	25.6%
12-17 Months	27.5%
18-23 Months	19.2%
Proportion of Caregivers who have even been to School	4.8%
Mean Age of Primary Caregivers	28.0 (SD: 6.9)
Proportion of Unemployed/Housewives	98.8%
<b>Birth History</b>	
Ever been Pregnant	98.7%
Ever Given Birth and Child is not Alive	14.0%
<b>Infant and Young Children Nutrition</b>	
Proportion of Children Ever Breastfed	99.2%
Early Initiation of Breastfeeding	
Knowledge	83.5%
Attitude	78.6%
Practice	66.1%
Colostrum Feeding	
Knowledge	97.1%
Attitude	94.8%
Exclusive Breastfeeding	
Knowledge	83.2%
Attitude	68.2%
Practice	43.6%
Continued Breastfeeding at 2 Year	41.5%
Bottle Feeding	
Knowledge	44.2%
Practice	41.6%

Timely Introduction to Solid, Semi-Solid and Soft Foods	
Knowledge	86.8%
Practice	48.8%
Proportion of Children Meeting the Minimum Dietary Diversity	42.0%
Proportion of Children Meeting the Minimum Meal Frequency	46.5%
Proportion of Children Meeting the Minimum Acceptable Diet	26.1%
Proportion of Children Given Iron Rich Foods	27.8%
Child Nutrition by MUAC	
Severe Acute Malnutrition	0.8%
Moderate Acute Malnutrition	8.1%
At Risk	27.0%
<b>Maternal Nutrition</b>	
Proportion of Women Supplemented with Iron for 90 days in the Last Pregnancy	53.9%
Proportion of Women who Attended ANC at any Time in their Last Pregnancy	81.7%
Proportion of Women who Attended ANC for at least 4 Times in their Last Pregnancy	36.4%
Proportion of Women who Delivered in a Health Facility in their Last Delivery	9.2%
Maternal Nutrition by MUAC	
Malnourished	4.7%

In conclusion, the survey established that there was a gap between knowledge on Maternal and Infant Nutrition and the practice. It was found that there is relatively high knowledge but the practice was found to be relatively lower. The major barriers to breastfeeding practices (exclusive breastfeeding, continued breastfeeding, timely initiation of breastfeeding and colostrum feeding) were as follows:

1. A majority of the mothers interviewed in the FGDs believed that the mothers' milk wasn't sufficient to feed a healthy child

2. The grandmothers influence was also found to inhibit proper breastfeeding practices in the survey area
3. Workload (which involved fetching firewood and water) was also cited to be a major barrier to breastfeeding practices since the caregivers usually left their children with the grandmothers while away and the grandmothers usually fed the children.
4. Short birth spacing was also found to be a big barrier to proper breastfeeding

The survey also noted the following as the major barriers to the feeding practices (minimum dietary diversity, minimum meal frequency, minimum acceptable diet and iron rich foods)

1. Unavailability of the diversified food in the market coupled with high cost of purchasing the available diversified food
2. Prolonged drought in the survey area coupled with overreliance on livestock products such as milk and meat have hindered greatly on the diet diversification since most of the animals had moved in search of pasture and water
3. It was also determined that the food consumed at the household level was based on the *family pot* and no special foods were prepared for the child and due to the cultural preference of foods high in starch (rice, pasta, *anjera*) and milk (cow/camel) which are easily available and affordable.

Based on the conclusions of the survey, the following are recommended:

1. Strengthening the existing mother-to-mother support groups (MTMSGs) and involving a component of cooking demonstrations in order for the caregivers to accept and adopt a variety of foods to feed their children.
2. Scale up the kitchen gardens initiative as an initiative to curb the low dietary diversity which is a proxy indicator of micronutrient deficiency. These can be linked with the MTMSGs.
3. Scale up community strategy which supports community level health and nutrition. The community units should then be utilized to spearhead MIYCN activities at the community level.

# CHAPTER ONE – BACKGROUND AND METHODOLOGY

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## 1.1 Background

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Wajir County in the former North Eastern Province has a total population of 661,941<sup>2</sup> and is ranked 27<sup>th</sup> in the country in terms of population. The county has a surface area of 56,686 KM Squared and is ranked 3<sup>rd</sup> in the country in terms of surface area. Wajir County has a population density of 12 people per kilometer which is ranked 43<sup>rd</sup> in the country. According to the Kenya integrated Household and Budget Survey (2006), Wajir County has a poverty rate of 84.0% which is ranked 45<sup>th</sup> in the country and almost twice the country poverty rate of 47%. The county is classified as Arid and Semi-Arid Lands (ASALs).

According to National Draught Management Authority (NDMA), Wajir County has five main livelihood zones namely; Agro-pastoral, Pastoral–camel, pastoral– cattle, pastoral- all species and irrigated farming/ mixed farming in parts of Wajir North Sub County. SMART nutrition surveys conducted in June, 2014 showed GAM rates were ranging from 8.8% to 20.6% in Wajir North and Wajir West/ Eldas Sub-Counties respectively. This indicated the nutrition situation was classified as *serious* for Wajir West/Eldas according to WHO classification. Among the key factors associated with high malnutrition rates are poor Maternal Infant and Young Child Nutrition (MIYCN) practices, poor hygiene and sanitation with sub-optimal hand washing practices and minimal treatment of drinking water at the household level. In response, Islamic Relief together with other non-governmental organizations (NGOs) have established operations in the counties to support the County governments to scale up delivery of high impact nutrition interventions.

IRK with funding from ECHO and DFID has been supporting the County Ministry of health to implement nutrition activities in Wajir County (Wajir West, Eldas and Wajir North sub counties) to reduce morbidity and mortality in children under 5, pregnant and lactating mothers associated with malnutrition. The programs have adopted an integrated emergency and rehabilitation approach to prevent malnutrition and treat the acutely malnourished. Within the project, IRK is implementing Maternal, Infant and Young Child Nutrition (MIYCN) activities whose primary goal is to improve child survival through appropriate Maternal Infant and Young Child Nutrition by capacity building and providing technical support to the Department of Health at the County Level. IRK is also carrying out various health, nutrition and hygiene promotion activities in the region.

To better, address the behaviors that act as barriers to adequate infant young child nutrition; IRK undertook a Knowledge, Attitude and Practice (KAP) Survey in Wajir North, West and Eldas Sub-Counties as one survey area with the aim of measuring changes in the knowledge, attitudes and practices of the target communities in relation to MIYCN, sanitation and hygiene.

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<sup>2</sup> 2009 Kenya Population and Housing Census, KNBS

## **1.2 Survey Objectives**

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### **1.2.1 Rationale of the Survey**

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The main purpose of this KAP survey is to generate and document evidence on existing knowledge, attitudes and practices towards MIYCN among communities in Wajir County (Wajir North, West and Eldas), with a focus on factors of influence (predisposers, reinforcers, facilitators or inhibitors). The survey will create better understanding of existing knowledge, attitudes and practices on pre-and post-natal nutritional care, dietary practices during pregnancy, post-natal dietary practices, breastfeeding (initiation of breastfeeding, exclusive breastfeeding, and continued breast feeding with complementary food), complimentary feeding, Water, Sanitation and Hygiene practices, and obstacles to MIYCN practices

### **1.2.2 Objective of the Survey**

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The general objective of this KAP survey is to generate and document evidence on existing knowledge, attitudes and practices towards MIYCN among communities in Wajir North, Eldas and Wajir West Sub-Counties

1. To determine existing knowledge, attitudes and practices on MIYCN, sanitation and hygiene among the target population
2. To identify primary and secondary barriers to adequate MIYCN, sanitation and hygiene practices.
3. To generate baseline data on existing attitudes and practices in MIYCN, and as part of a framework for monitoring progress.
4. To provide essential data for formulation of key messages and required areas of focus for county MIYCN interventions
5. To determine community awareness/knowledge on other HINI services

### **1.2.3 Area Surveyed**

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The survey was conducted in Wajir North, Eldas, and Wajir West Sub-Counties in Wajir County, North Eastern region.

## **1.3 Survey Methodology**

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### **1.3.1 Survey Design**

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The survey applied a two stage cluster sampling with the clusters being selected using the probability proportional to size (PPS). Stage one sampling was the selection of the clusters included in the survey while the second stage sampling was the selection of households from the sampled clusters.

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### 1.3.2 Target Population

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The target population for this survey was the children aged between 0 and 23 months and their primary caregivers residing in the survey area.

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### 1.3.3 Sample Size Calculation

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The sample size is a function of three parameters namely: Prevalence of Indicator of Interest, Design Effect and the Precision. The table below presents the 7 indicators which were considered for the calculation of the sample size. This was based on the *Infant and Young Children Feeding Practices: Collecting and Using Data; A Step-by-Step Guide by Care USA (2010)* and the *Kenya Nutrition Survey Guidelines (2012)*.

Table 1: Sample Size Calculation

Indicator	Age Group	Estimated Prevalence	± Desired Precision	Design Effect	Sample Size in No. of Children
Exclusive Breastfeeding	0 to 6	58.4	8	1.2	191
Bottle Feeding	6 to 23	50.0	8	1.2	196
Timely Initiation to Breastfeeding	0 to 23	88.1	8	1.2	83
Iron-Rich Food	6 to 23	50.0	8	1.2	196
Minimum Meal Frequency	6 to 23	47.8	8	1.2	196
Minimum Dietary Diversity	6 to 23	8.5	4.5	1.2	193
Minimum Acceptable Diet	6 to 23	8.8	4.5	1.2	199

The overall sample size for this survey was 199 which was multiplied by 4 to put into consideration the indicators with narrow age groups. This yielded a sample size of 796 which was also adjusted upward by 3% to cater for the non-response rate and hence the overall sample size for this survey was 820.

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### 1.3.4 Cluster and Households Selection

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All villages from the survey area were included in the initial sample selection with each village considered a cluster. The clusters were sampled with probability proportional to size. All villages along with their respective populations were entered into the ENA software and 42 clusters selected accordingly. At stage two each team used the simple random sampling technique to select households. The survey teams thereafter administered the questionnaire in the households which has the target population.

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### 1.3.5 Data Collection

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The survey adopted the KAP Survey Tool recommended by the Nutrition Information Working Group. Qualitative was collected through Focus Group Discussion (FGDs), Key Informant Interviews (KIIs) and Observations. Data was collected by 6 teams of 2 Enumerators and 1 MoH Staff who was the Team Leader/Supervisor. The data collection teams were trained for 4 days

which also included the piloting of the data collection tool while data collection took place for 7 days.

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### 1.3.6 Data Entry and Analysis

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Quantitative Data Entry was done using CSPro Version 5.0.2 while Data Analysis was done using SPSS Version 17. On the other hand, the qualitative data was analyzed through content analysis and triangulated with the quantitative data.

## CHAPTER TWO: FINDINGS AND DISCUSSIONS

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### 2.1 Introduction

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The Knowledge, Attitude and Practice (KAP) survey intended to generate and document evidence on existing knowledge, attitudes, and practices towards Maternal, Infant and Young Children Nutrition among the communities living in Wajir North, Eldas, and Wajir West Sub-Counties of Wajir County in Northern Kenya. Nutrition is very important for everyone and especially for children because it is directly linked to all aspects of their growth and development<sup>3</sup>. Most importantly, the period from conception to two years of age (the first 1000 days) is important for optimal growth, health, and development. Nevertheless, this period is often marked by growth faltering, micronutrient deficiencies, and common childhood illnesses such as diarrhea and acute respiratory infections (ARI). On the other hand, a woman's nutrition status has important implication for her health as well as the health of her unborn child. Malnutrition, in women results in reduced productivity, an increased susceptibility to infections, slow recovery from illnesses and heightened risks of adverse pregnancy outcome<sup>4</sup>. This chapter therefore presents the results of the survey findings as well as the discussions.

### 2.2 Households Demographics and Economic Characteristics

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This section summarizes the demographic and socio-economic characteristics of the population in the households sampled for the MIYCN KAP Survey. In this survey, a household was defined as a group of people, either related or not-related, who live together and share a common cooking pot.

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#### 2.2.1: Demographic Characteristics

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Among the demographic characteristics included in the analysis are marital status, age, religion, and level of education.

Table 4 below shows that majority (97.5%) of the primary caregivers reported that they were married while 1.1% reported that they were currently living<sup>5</sup> together with the spouse. The results also showed that 95.2% of the caregivers have never been to school which then may imply that the literacy level among the caregivers in the survey area is quite low. Further, out of the caregivers who reported having gone to school, 57.9% reported that the highest level of education they achieved was "*less than primary school*" and hence may imply that they dropped out of school before sitting for their primary certificate education. This also demonstrates low literacy among the caregivers which may have a negative implication on the feeding practices for their children, and finally impact negatively on the nutrition outcome of the children. This may

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<sup>3</sup> <http://www.childrensheartcenter.org/whyisnutritionimportantforchildren.html>

<sup>4</sup> Kenya Demographic Health Survey, 2008/2009

<sup>5</sup> Currently living together meant that the spouse and the respondent were not "traditionally married" but cohabiting together

be supported by various authors who have documented that maternal literacy is associated with the nutrition outcome of the children (Parul C. et.al<sup>6</sup>)

Finding of the survey showed that the mean age of the primary caregivers was 28.0 (SD: 6.9) years with the median age also being 28 which imply that 50% of the caregivers in the sample were aged below 28 year with the other 50% being aged above 28 years. Finally, 97.9% of the caregivers were Muslims with a small proportion of 2.0% being Christians.

Table 2: Demographic Characteristics

		Percentage	n	N
Marital Status	Currently Married	97.5%	776	796
	Currently Living Together	1.1%	9	796
	Separated/Divorced	0.5%	4	796
	Widowed	0.3%	2	796
	Single/Never Married	0.6%	5	796
Ever Been to School	Yes	4.8%	38	790
	No	95.2%	752	790
Highest Level of education	Less than Primary School	57.9%	22	38
	Primary School	28.9%	11	38
	Secondary/High School	13.2%	5	38
	College/Pre-University/University	0.0%	0	38
	Postgraduate Degree	0.0%	0	38
Mean Age of Primary Caregiver		28.0 (SD: 6.9)		
Religion	Christian	2.0%	16	795
	Muslim	97.9%	778	795
	Traditional	0.0%	0	795
	Hindu	0.1%	1	795
	Other	0.0%	0	795

### 2.2.2: Economic Characteristics

Finding of the survey showed that the major source of livelihood in the survey areas was pastoralism (63.5%) followed by informal businesses (23.1%). Wajir being an Arid County has its main source of livelihood being pastoralism just like other arid counties of Kenya. The major livestock kept in the area include camels, goats and sheep and to a lower extent cattle.

The survey results also established that 98.8% of the caregivers were housewives which imply that they spend much of their time carrying out household chores such as fetching water and firewood. The fact that most of these caregivers are housewives would act as a booster toward

<sup>6</sup> The role of maternal literacy and nutrition knowledge in determining children's nutrition status:  
<http://archive.unu.edu/unupress/food/8F104e/8F104E06.htm>

improving the breastfeeding and feeding practices for the children aged 0 to 23 months since they are at home most of the time. However, according to the focus group discussions conducted with the caregivers, this was hampered by the competing household chores which took much of their time like fetching water which was found to relatively be between four and five hours, with the high time taken being attributed to the continued dry season in the area

Table 3: Household Economic Characteristics

Indicator	Category	n	N	%
Main Source of Livelihood	Informal Business	161	695	23.1%
	Formal Business	13		1.9%
	Agriculture	2		0.3%
	Remittances	65		9.3%
	Employment	12		1.7%
	Pastoralism	442		63.5%
Current Occupation	Unemployed/Housewife	686	694	98.8%
	Employed Formal	3		0.4%
	Student	4		0.1%

## 2.3 Birth History

This section presents the results of the birth history for the caregivers. Among the areas reviewed include physiological status and past deliveries.

The results of the survey found that 98.7% of the caregivers interviewed had ever been pregnant prior, while 1.3% reported that they had not been pregnant before and hence their current pregnancy was the first. The results further established that 97.2% of the caregivers have given birth and their children are still alive. On the other hand, 14.0% of the caregivers reported that they have ever given birth in the past though the children are not living.

Table 4: Birth History

Indicator	Category	Percentage	n	N
Ever Been Pregnant		98.7%	789	799
Ever Given Birth		98.7%	789	799
Ever Given Birth and Child is Alive		97.2%	777	799
Given Birth and Child is Not Alive		14.0%	112	799
Current Physiological Status	Pregnant	12.2%	86	706
	Lactating	82.4%	582	706
	Pregnant and Lactating	0.4%	3	706
	Not Pregnant/Not Lactating	5.0%	35	706

On the current physiological status of the caregivers, 12.2% of them reported that they were pregnant, 82.4% reported that they lactating while 0.4% reported that they were pregnant and lactating and 5.0% reported that they were neither pregnant nor lactating.

## 2.4 Index Child Characteristics

This survey targeted children aged between 0 to 23 months. When the distribution of children was analyzed by gender, the results showed that 53.1% were males while the rest (46.1%) were female. The sex ratio was found to be 0.88 in favor of boys which is within the acceptable range of 0.8 and 1.2<sup>7</sup>. The age distribution showed that the four distinct age groups were well represented as shown in the table below. Majority of the children's age was verified by card (54.1%), 37.3% of the age being verified through the calendar of local events, 4.4% were verified through birth certificates and the other 4.1% were verified through the use of baptism calendar. Of all the children included in the survey, 99.2% of them had ever been breastfed which is considered high. However, 0.8% (n=6) reporting that the children were never breastfed. For those not breastfed, 3 of them were due to the children being sick, 2 were never breastfed since the mother was sick while 1 of the child was never breastfed since the mother didn't have milk.

Table 5: Index Child Characteristics

Indicator	Category	Percentage	n	N
Gender	Male	53.1%	423	796
	Female	46.9%	373	796
Verification of Child's Age	Health Card	54.1%	431	796
	Birth Certificate	4.4%	35	796
	Baptism Calendar	4.1%	33	796
	Seasonal Calendar	37.3%	297	796
	Don't Know	0.0%	0	796
Child Age	0 - 5 Months	27.6%	220	796
	6 - 11 Months	25.6%	204	796
	12 - 17 Months	27.5%	219	796
	18 - 23 Months	19.2%	153	796
Child Ever Breastfed	Yes	99.2%	790	796
	No	0.8%	6	796
Reasons for Never Breastfed	Baby Ill	50.0%	3	6
	Mother was Sick	33.3%	2	6
	No/Inadequate Milk	16.7%	1	6

<sup>7</sup>Sex ratio as recommended by Nutrition Survey Guideline: SMART Survey Methodology

## 2.5 Breastfeeding Characteristics

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Optimal breastfeeding of infants under two years of age has the greatest potential impact on child survival of all preventive interventions, with the potential to prevent over 800,000 deaths (13 per cent of all deaths) in children under five in developing world<sup>8</sup> (Lancet, 2013). Studies have shown that breastfed children have at least six times greater chance of survival in the early months than non-breastfed children<sup>9</sup>. United Nation Children Fund (UNICEF) notes that breastfeeding has extraordinary range of benefits. According to UNICEF, breastfeeding has profound impact on a child's survival, health, nutrition and development. Breast milk provides all of the nutrients, vitamins and minerals an infant needs for growth for the first six months, and no other liquids or foods are needed. In addition, breast milk carries antibodies from the mother that help combat diseases. The act of breastfeeding itself stimulates proper growth of the mouth and jaw, and secretion of hormones for digestion and satiety. It has also been documented that breastfeeding creates a special bond between mother and baby and the interaction between the mother and child during breastfeeding has repercussions for life, in terms of stimulation, behavior, speech, sense of wellbeing and security and how the child relates to other people<sup>10</sup>. Further, studies have shown that in the short term, breastfeeding delays the return to fertility and in the long term, it reduces type 2 diabetes, breast, uterine and ovarian cancer. Studies have also found association between early cessation of breastfeeding and post natal depression in mothers<sup>11</sup>.

The World Health Organization (WHO) and UNICEF recommends initiation of breastfeeding within the first hour after birth, exclusive breastfeeding for the first six months and continued breastfeeding for two years or more. On this note, this section will present the findings for timely initiation to breastfeeding, exclusive breastfeeding and continued breastfeeding.

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### 2.5.1 Timely Initiation to Breastfeeding and Colostrum Uptake

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Timely initiation of breastfeeding is defined as putting the newborn to the breast within one hour of birth. The Kenya National Guidelines on IYCN recommends initiation of breastfeeding at most one hour after delivery which is also recommended by WHO and UNICEF. UNICEF notes that timely breastfeeding also contributes to maternal health immediately after the delivery because it helps reduce the risk of post-partum hemorrhage<sup>12</sup>. Timely initiation of breastfeeding is not only the easiest, cost effective and most successful intervention; it also tops the table of life-saving interventions for health of the newborn<sup>131415</sup>. Studies have also shown that 22 per cent of neo-natal deaths could be prevented, if all infants are put to the breast within the first one hour of birth.

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<sup>8</sup> Eiger M, Wendkos S. The Complete Book of Breastfeeding. 3rd ed. New York, NY: Workman Publishing; 1999.

<sup>9</sup> Nacimiento MB, Issler H. Breastfeeding: making the difference in the development, health and nutrition of term and preterm newborns. Rev Hosp Clin Fac Med S Paulo. 2003;58:49-60.

<sup>10</sup> [http://www.unicef.org/nutrition/index\\_24824.html](http://www.unicef.org/nutrition/index_24824.html)

<sup>11</sup> [http://www.unicef.org/nutrition/index\\_24824.html](http://www.unicef.org/nutrition/index_24824.html)

<sup>12</sup> [http://www.unicef.org/nutrition/index\\_24824.html](http://www.unicef.org/nutrition/index_24824.html)

<sup>13</sup> Edmond KM, Zandoh C, Quigley MA: Delayed breastfeeding initiation increases risk of neonatal mortality.

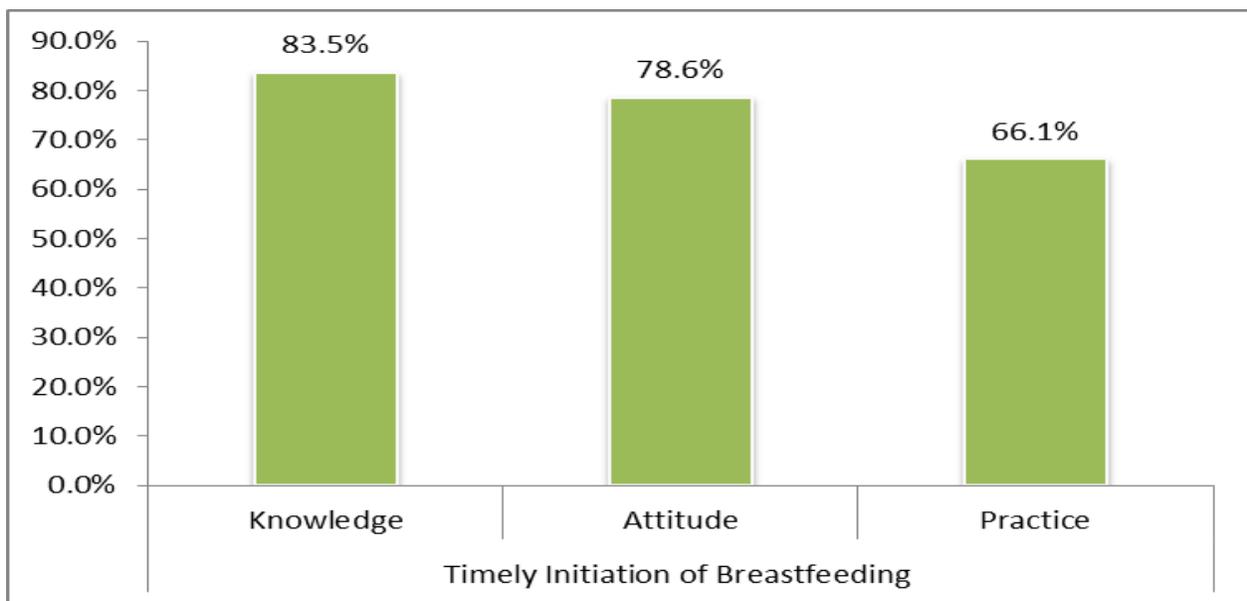
<sup>14</sup> Du Plessis D: Breastfeeding: Mothers and health practitioners, in the context of private medical care in Gauteng.

<sup>15</sup> Koosha A, Hashemifesharaki R, Mousavinasab N: Breast-feeding patterns and factors determining exclusive breast-feeding.

Findings of the survey showed that 83.5% (n=660) of the caregivers had knowledge that an infant should be initiated to breast milk with the first hour of birth. On attitude, 78.6% (n=621) of the caregivers reported that they had positive attitude towards early initiation of breastfeeding. The results also show that 66.1% (n=522) of the caregivers reported that they had practiced timely initiation of breastfeeding which is higher than the national average of 58.1% though it's slightly lower than North Eastern region average of 75.4%<sup>16</sup>.

According to the results, there was a significant difference between knowledge and practice (p=0.000) which implies that knowledge to timely initiation to breastfeeding did not translate fully to practice. The significant difference between knowledge and practice would be mainly attributed to several barriers gathered from the FGDs and KIIs conducted. These mainly included the preference of home deliveries by a majority of the mothers interviewed which inhibited access to health information and support on early initiation to breastfeeding. The cultural influence also played a major role in that the caregivers had to stay indoors for 40 days where the grandmother or mother in law had a strong influence towards giving the children pre-lacteals and their perception that the mother did not have enough breast milk for the first 3 days.

Figure 1: Knowledge and Practice to Timely Initiation to Breastfeeding

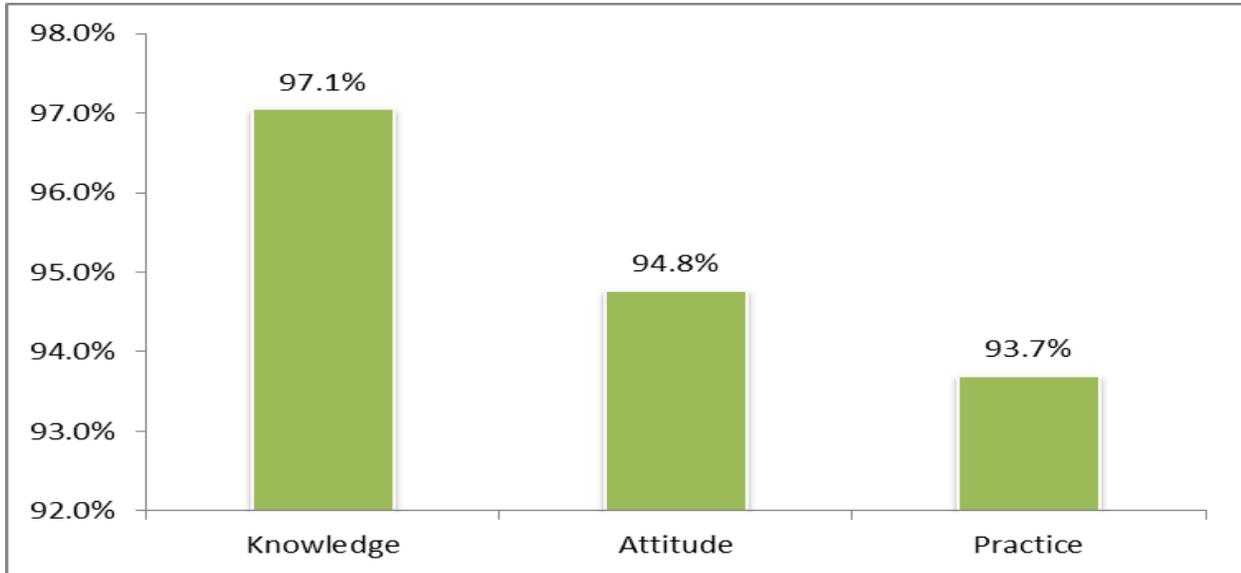


On the colostrum uptake, the survey established that there was near universal (97.1%) knowledge among the primary caregivers in the community about colostrum uptake which implies that the caregivers were aware that children should be given colostrum. Further, 94.8% of the caregivers had a positive attitude towards giving the infants colostrum while 93.7% reported that they had given their infants colostrum. The benefits of colostrum given by the caregivers include: nutrition value (60.9%), prevents diseases/infections (55.6%), cleans baby stomach (6.7%) and 1.1% had nothing specific on the importance of colostrum. On the other

<sup>16</sup> Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.

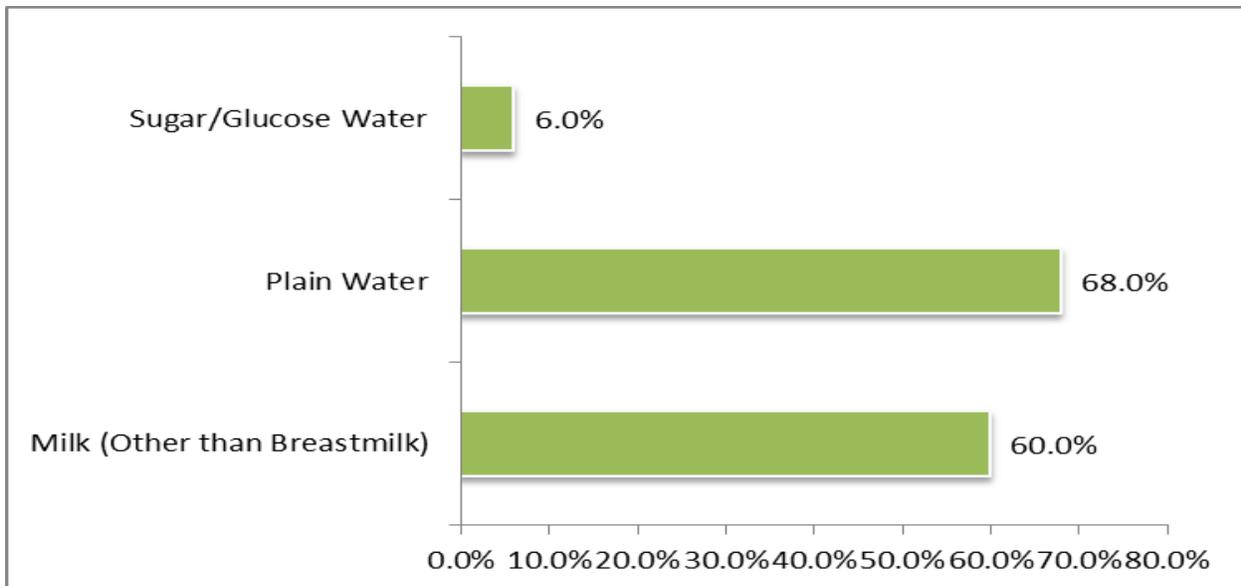
side, the main barriers towards universal uptake of colostrum were the belief that the colostrum was dirty. Other reasons highlighted from the FGDs and KIIs included the grandmother’s perception that the colostrum wasn’t really important since they had a strong influence on the caregivers especially in the first 40 days that they were expected to stay indoors.

Figure 2: Colostrum Uptake



Despite the high knowledge and uptake of colostrum, the survey established that 6.3% of the index children had been given other form of drinks besides breast milk within the first 3 days after birth. Among the drinks that they were given were: Plain Water (68.0%), Milk (60.0%), and Sugar/Glucose Water (6.0%) as shown in the figure below:

Figure 3: Drinks Given Within the First Three Days



Among the caregivers who give other fluids during the first three days after birth, 68.0% attributed this to “having no enough breast milk”, 20.0% attributed this to “baby crying too

much” while 4.0% attributed it to weather being too hot. Other reasons highlighted from the FGDs and KIIs included grandmothers’ belief that the mothers did not have enough breast milk in the first 3 days and hence babies had to be given camel milk.

## 2.6 Exclusive Breastfeeding Rate

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World Health Organization (WHO) recommends mothers worldwide to exclusively breastfeed infants for the child’s first six months to achieve their optimal growth, development and health<sup>17</sup>. A systematic review of the evidence on this issue was published in 2009 (“Optimal duration of exclusive breastfeeding (Review)”, Kramer MS, Kakuma R. The Cochrane Library, 2009, Issue 4). The finding of the review, which included two controlled trials and 18 other studies conducted in both developed and developing countries, support current WHO recommendation. Exclusive breastfeeding of infants with only breast milk, and no other foods or liquids, for six months is associated with a number of advantages. These advantages include a lower risk of gastrointestinal infection for the baby, more rapid maternal weight loss after birth, and delayed return of menstrual periods.

This survey found that there was high knowledge on exclusive breastfeeding among the primary caregivers in Wajir West, Wajir North and Eldas sub counties. According to the results, the knowledge on exclusive breastfeeding was 83.2% (n=183). This implies that majority of the primary caregivers in the area are aware that they should practice exclusive breastfeeding. On attitude of exclusive breastfeeding, the results found that 68.2% (n=150) of the caregivers expressed positive attitude towards exclusive breastfeeding. Comparison between knowledge on EBF and attitude on EBF showed that there was a significant difference between knowledge and attitude towards EBF among the caregivers in Wajir (West, North and Eldas) (p=0.000).

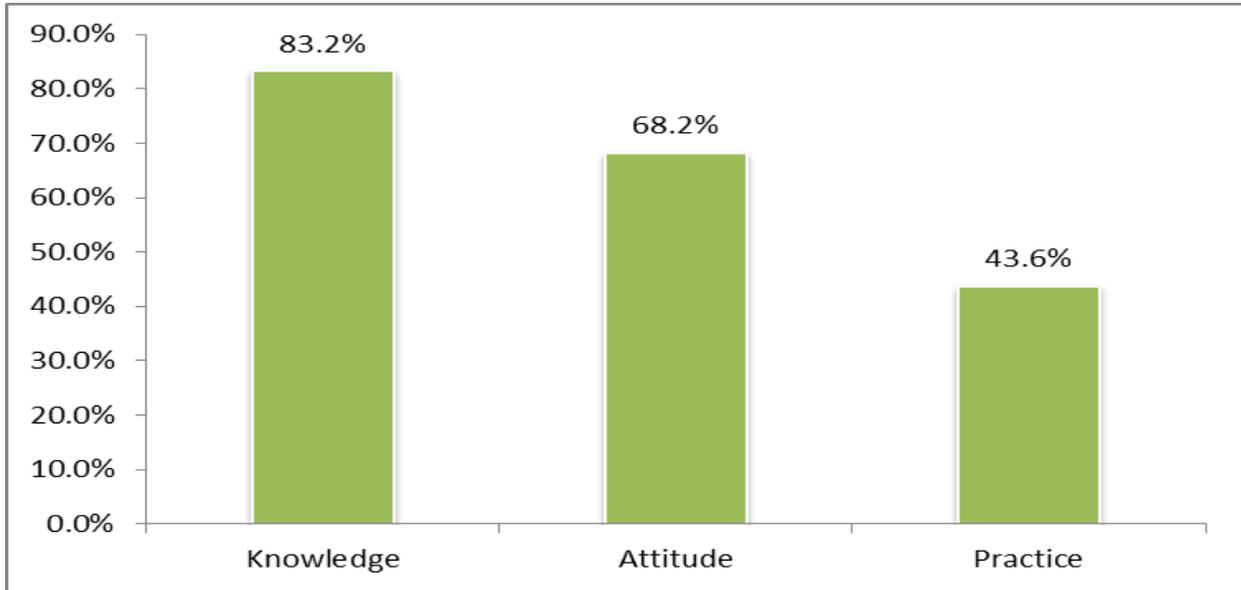
The survey established that the exclusive breastfeeding rate (EBF) in Wajir (West, North and Eldas) was 43.6% (n=96) which falls below the national target of 80%, however, the EBF Rate in the survey area was higher than the national rate of 31.9%<sup>18</sup>. The results show that the high knowledge and attitude towards EBF did not translate to practice of the same in the community. The low EBF rate in Wajir (West, North and Eldas) would mainly be attributed to the caregivers’ belief that it’s impossible to breastfeed a baby exclusively for 6 months, influence of grandmothers who usually advise the young caregivers to feed the baby on other foods and the workload of the caregivers which inhibited them from always being with the child to exclusively breast feed, and hence left some milk or soft food for them while they were absent.

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<sup>17</sup> [http://www.who.int/mediacentre/news/statements/2011/breastfeeding\\_20110115/en/](http://www.who.int/mediacentre/news/statements/2011/breastfeeding_20110115/en/)

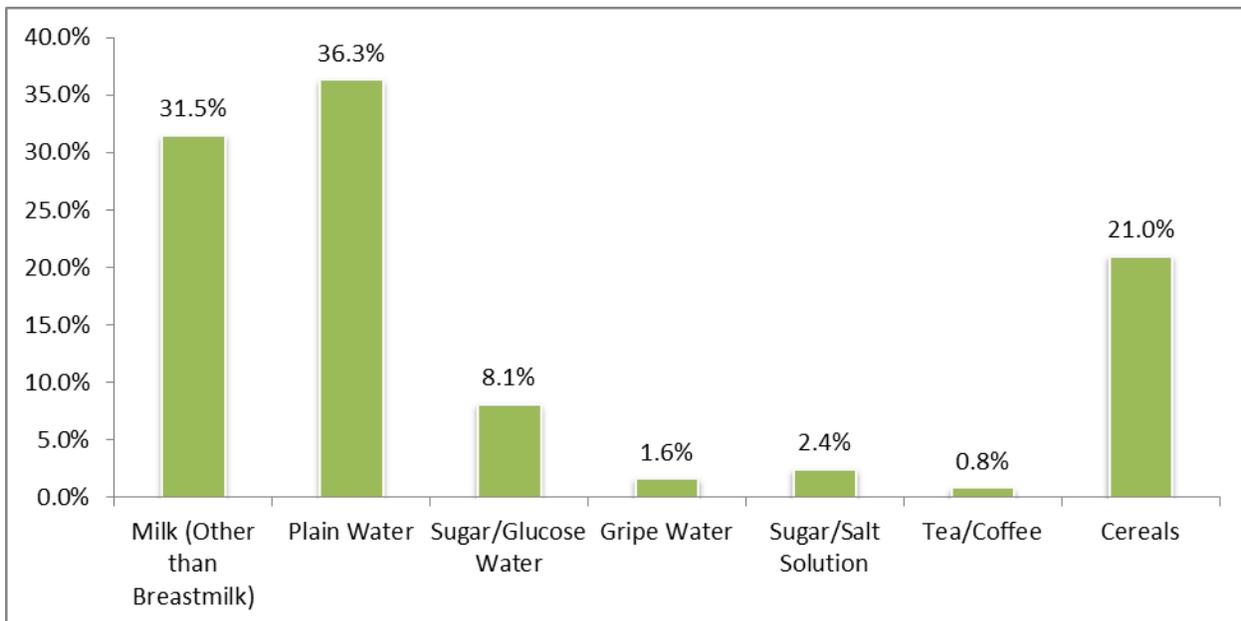
<sup>18</sup> Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.

Figure 4: Knowledge and Practice on Exclusive Breastfeeding



The survey further investigated the most predominant liquids and foods which are given to the children before they celebrate their 6 month birth date. The results showed that among the liquids and foods given to the children under 6 months included: Plain Water (36.3%), Milk (other than breast milk) (31.5%), cereals<sup>19</sup> (21.0%), Sugar/Glucose Water (8.1%) among others as highlighted in the figure below.

Figure 5: Drinks Given to Children Less Than 6 Months



<sup>19</sup> Cereals included porridge and 'ugali' mixed with

## 2.7 Continued Breastfeeding

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The World Health Organization recommends that a child should be breastfed up to 2 years of age or beyond<sup>20</sup>. Science has documented that some immune factors in breast milk that protect the baby against infection are present in greater amounts in the second year of life than in the first. This is, of course as it should be, since children older than a year are generally exposed to more infections than young babies. Further, it has been observed that breast milk still contains special growth factors that help the immune system to mature and which help the brain, gut and other organs to develop and mature<sup>21</sup>. Given the benefits of continued breastfeeding at two years, this survey sought to establish the knowledge and practice around continued breastfeeding among the caregivers in Wajir North, West and Eldas sub-Counties.

The survey established that 41.5% (n=56) practiced continued breastfeeding at 2 years at the time of the survey. The results imply that majority of the caregivers in the area stop breastfeeding before the children reach 20 months. The major reasons given by the primary caregivers for stopping breastfeeding before 2 years included: mother refused to breastfeed(43.1%), recommendation from spouse (38.2%), baby was old enough to stop breastfeeding (18.4%) and baby refused to suckle (11.9%).

## 2.8 Bottle Feeding

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Bottle feeding is considered a negative practice for feeding children. It is recommended to always feed the babies using clean open cups. Bottles which have nipples have been found to be difficult to clean and can consequently cause a baby to become sick. The Kenya Ministry of Health continues to discourage bottle feeding. The Ministry's aim is to reduce bottle feeding to less than 5% with the current national rate being estimated at 25%<sup>22</sup>.

The results of this survey established that 44.2% (n=208) of the primary caregivers were aware that bottle feeding which has teats was not supposed to be used to feed the children. Among the containers mentioned by the caregivers who should be used for feeding the child included: bottle with nipple/teat (20.0%), cup with nipple/teat (6.7%), cup with hole (12.4%) and cup/bowl with no cover and spoon (59.1%).

On practice, the results established that 41.6% (n=196) of the primary caregivers use bottles with teat to feed their children.

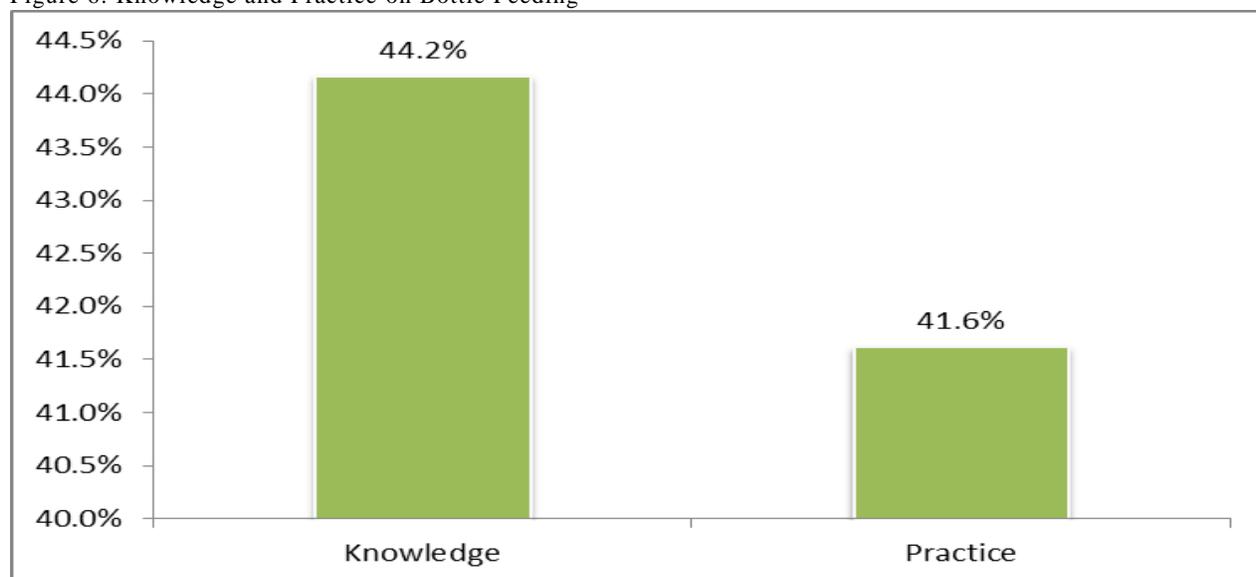
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<sup>20</sup> <http://www.who.int/nutrition/topics/infantfeeding/en/>

<sup>21</sup> <http://www.breastfeedinginc.ca/content.php?pagename=doc-BT>

<sup>22</sup> Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.

Figure 6: Knowledge and Practice on Bottle Feeding



## 2.9 Introduction to Solid, Semi-Solid and Soft Foods

The transition from exclusive breastfeeding to family foods is referred to as complementary feeding and it covers the period from 6 to 18-24 months of age which is a very vulnerable period. It is the time when malnutrition starts in many infants, contributing significantly to high prevalence of malnutrition in children under-five years of age worldwide. The WHO recommends that complementary feeding should be timely, meaning that all infants should start receiving foods in addition to breast milk from 6 months onwards. It should be adequate, meaning that the complementary foods should be given in amounts, frequency, consistency and variety to cover the nutritional needs of the growing child while maintaining breastfeeding.

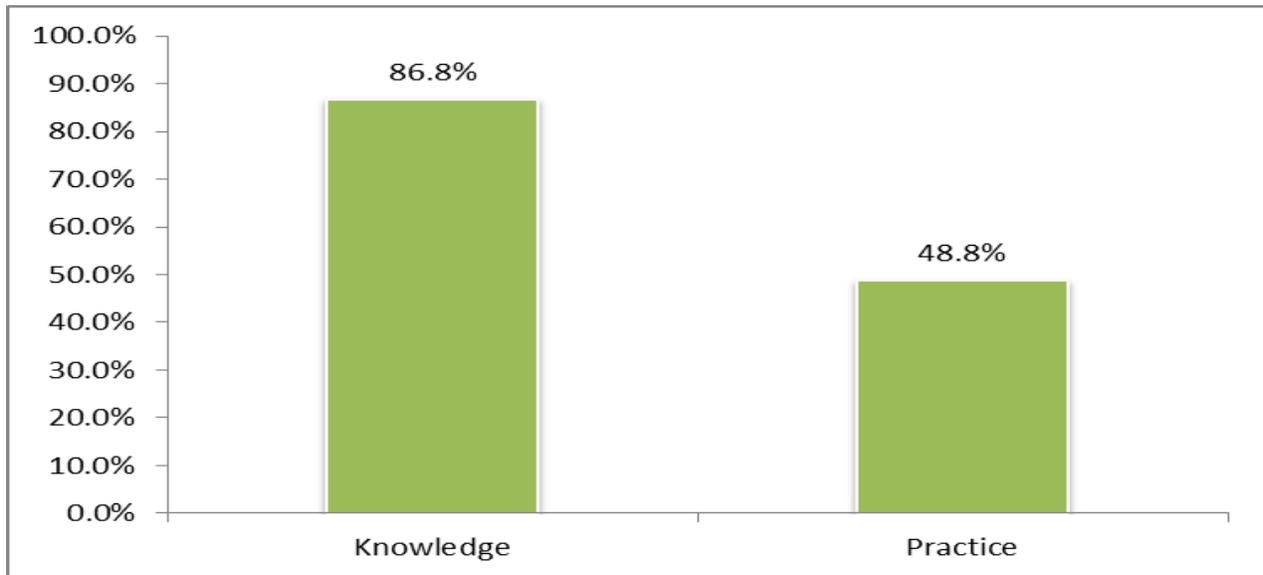
Further, WHO recommends that infants start receiving complementary foods at 6 months of age in addition to breast milk, initially 2-3 times a day between 6-8 months, increasing to 3-4 times daily between 9-11 months and 12-24 months with additional nutritious snacks offered 1-2 times per day, as desired.

The results of the survey show that 86.8% (n=105) of the primary caregivers in Wajir (West, North and Eldas) knew that they ought to introduce their children to complementary feeding soon after six months. The major sources of information about feeding practices in the area include mothers of the caregivers (51.5%), self-information (caregiver's themselves-23.9%), grandmothers to caregivers (17.0%), and other relative to caregivers (11.3%). As noted during the focus group discussions and key informants interviews, the 23.9% of the caregivers who reported self-knowledge on complementary feeding could have received the information from health workers and community health workers. These results imply that the mothers to the caregivers play a pivotal role in information dissemination on the feeding practices. Further, on the major decision maker on what foods to be eaten, the results established that the mothers to the caregivers reported to be the major decision maker by 83.7%, with self-decision contribution only on 12.5%. Other decision makers included father of the child (5.2%), grandmother to the caregivers (0.2%) and other relatives (0.7%). These results show that the greatest decision

makers in terms of the feeding practices of the children are the mothers of the caregivers (the grandmothers to the child).

On practice, the results showed that only 48.8% (n=59) of the complementary feeding was timely. According to the results, among the respondents who did not introduce their children to complementary feeding reported that they had introduced their children before the age of six months. The practice of timely complementary feeding is below the National Target of 80%.

Figure 7: Knowledge and Practice on Timely Complementary Feeding



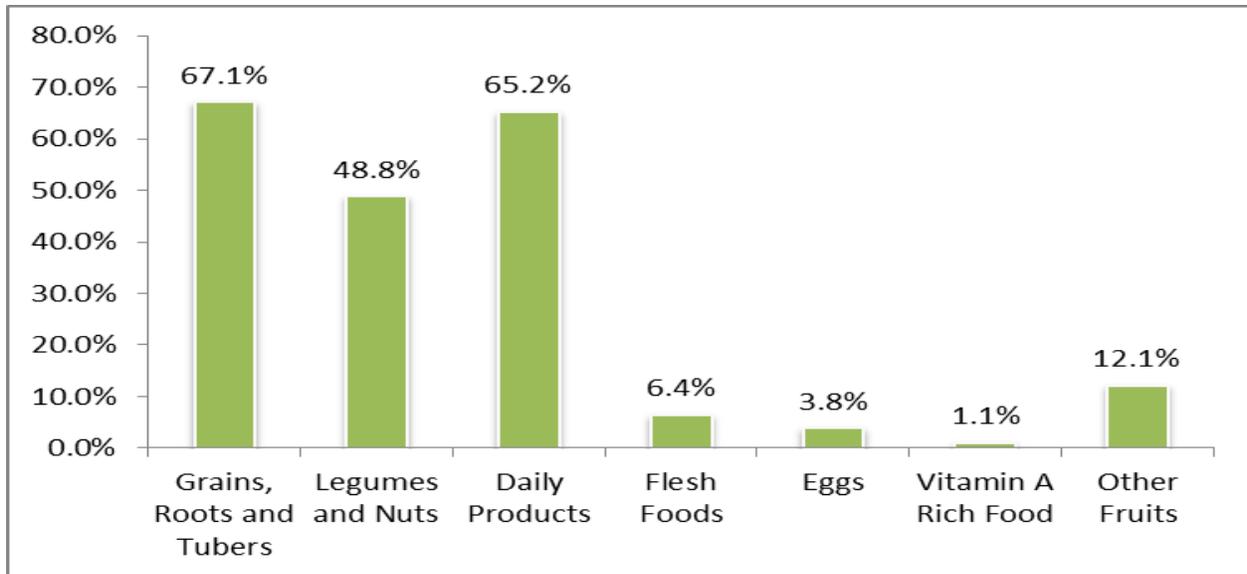
## 2.10 Minimum Dietary Diversity

All people need a variety of foods to meet requirement for essential nutrients, and the value of a diverse diet has long been recognized. Diversified diet is important for the infants and young children since they need energy and nutrient-dense foods to grow and develop both physically and mentally and to live a healthy life. Low dietary diversity has been associated with stunting. It is recommended that infants and young children should consume foods from at least four different food groups in addition to breast milk.

The results of the survey established that only 42.0% (n=198) of the children were found to have fed with the minimum diet within the 24 hours prior to the survey which is below the national target of 80%. This implies that only 42% of the children in the survey area met the minimum required diet diversity. The minimum dietary diversity is also an indicator of food accessibility, which in this context would mean that 42% of the children had poor accessibility to food. The low dietary diversity in the area would mainly be attributed to several reasons which were highlighted from the KIIs and FGDs and the literature review. These included: unavailability of a variety of foods at the local markets at the village level mainly attributed to the dry climate and water scarcity, cultural emphasis and preference on milk due to their pastoralist lifestyle of livestock keeping, poverty which made the available foods in the local markets to be costly to the communities and the provision of food rations which mainly comprised of carbohydrates, oil and legumes.

On the specific foods fed to the children aged between 6 and 23 months, the results show that the dominant food type was grains, roots and tubers (67.1%) followed by dairy products (65.2%), then legumes and nuts at 48.8%. It is worth to note that the community living in Wajir (West, North and Eldas) is pastoral hence this might explain the reason for the high uptake of milk and dairy products among the children in the sub-county. The results show low uptake of eggs and flesh foods among the children. Qualitative data collected through FGDs and KIIs showed that the low consumption of eggs in the county was due to cultural perceptions that they were not appropriate for consumption.

Figure 8: Dietary Diversity



## 2.11 Minimum Meal Frequency and Minimum Acceptable Diet

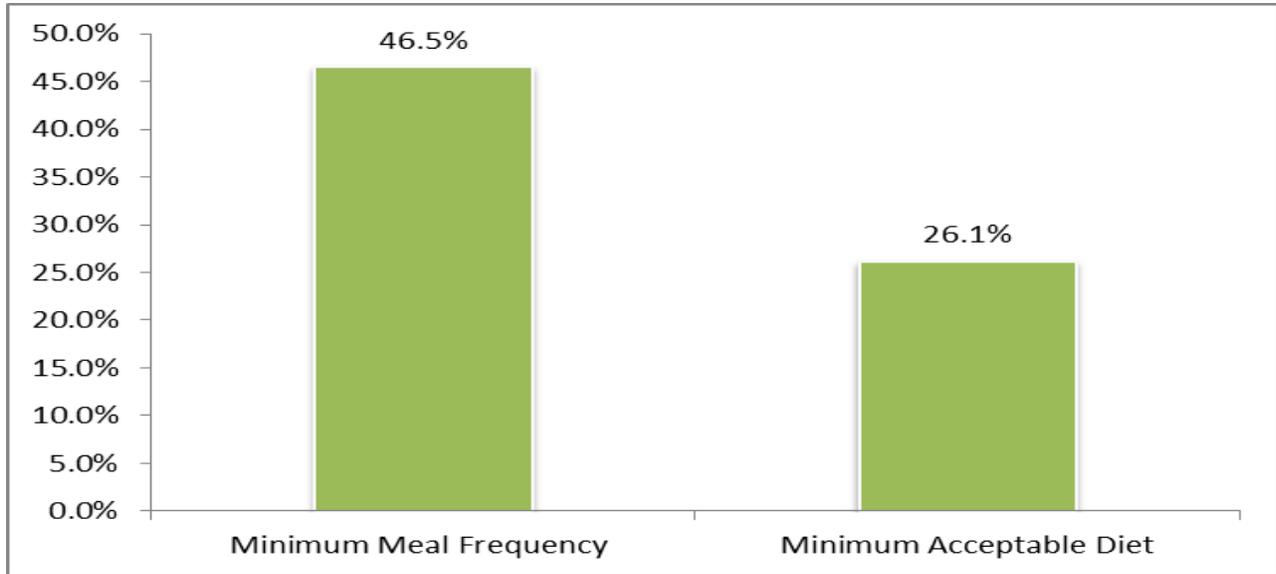
Besides meeting the minimum dietary diversity, a child aged between 6 and 23 months ought to feed for a minimum number of times in a span of 24 hours. For instance, a child aged between 6 and 8 months and is breastfeeding is supposed to feed at least twice per 24 hours, a child aged between 9 and 23 months and is breastfeeding is supposed to feed at least 3 hours in a span of 24 hours. This survey also measured whether the children aged between 6 and 23 months are meeting the minimum meal frequency as expected.

Additionally, appropriate feeding of children 6-23 months is multidimensional and hence a composite indicator that tracks the extent to which multiple dimension of adequate child feeding are being met is required. The minimum acceptable diet indicator which is a composite indicator combines standards of dietary diversity dietary diversity and feeding frequency by breastfeeding status.

Findings of this survey showed that the 46.5% (n=219) meet the minimum meal frequency which is below the national target of 80%. Further, only 26.1% (n=123) of the children aged 6 to 23 months who met the minimum acceptable diet implying that they were able to meet the minimum meal and dietary diversity. The low proportion of children meeting both the minimum meal frequency and acceptable would mainly be attributed as noted during the FGDs and KIIs to

household food insecurity due to the prevailing drought situation which was also found by the National Drought Management Agency (NDMA), August, 2014 which also projected the drought situation to worsen over the coming few months.

Figure 9: Minimum Meal Frequency and Minimum Acceptable Diet



## 2.12 Iron Rich Foods

Iron is a key part of hemoglobin and myoglobin; proteins that carry oxygen in the blood and help deliver it to various parts of the body. In addition, iron is essential for the release of energy in the body and for a health immune system. Iron is obtained from iron rich foods and from the breakdown of red blood cells in our body. When our diet lacks iron, the body uses its stored iron to meet needs. When these reserves get depleted, hemoglobin levels decrease and over time a person develops iron deficiency anemia (IDA). The major sources of iron include red meat, poultry, seafood, beans and legumes, dark green leafy vegetables, such as spinach, dried fruits and iron fortified food.

This survey established that only 27.8% (n=131) of the sampled children had eaten food rich in iron within the 24 hours prior to the survey which is indicative of a high risk to iron deficiency among the children aged 6 to 23 months. The low consumption of iron rich food in the area could be as a result of unavailability of a variety of iron rich foods at the local markets and from the KIIs and FGDs, the high cost of these foods was highlighted with poverty as the underlying barrier to their access. Lack of knowledge about the different iron-rich foods among the caregivers and the cultural preference of specific foods were also highlighted as the other barriers.

According to the survey, the main food consumed with iron in the survey area included: infant/toddler formula available in local setting (38.2%), lipid based nutrient supplement (32.9%), corn soy blend (13.0%), cerelac (9.9%) and Weetabix (3.1%).

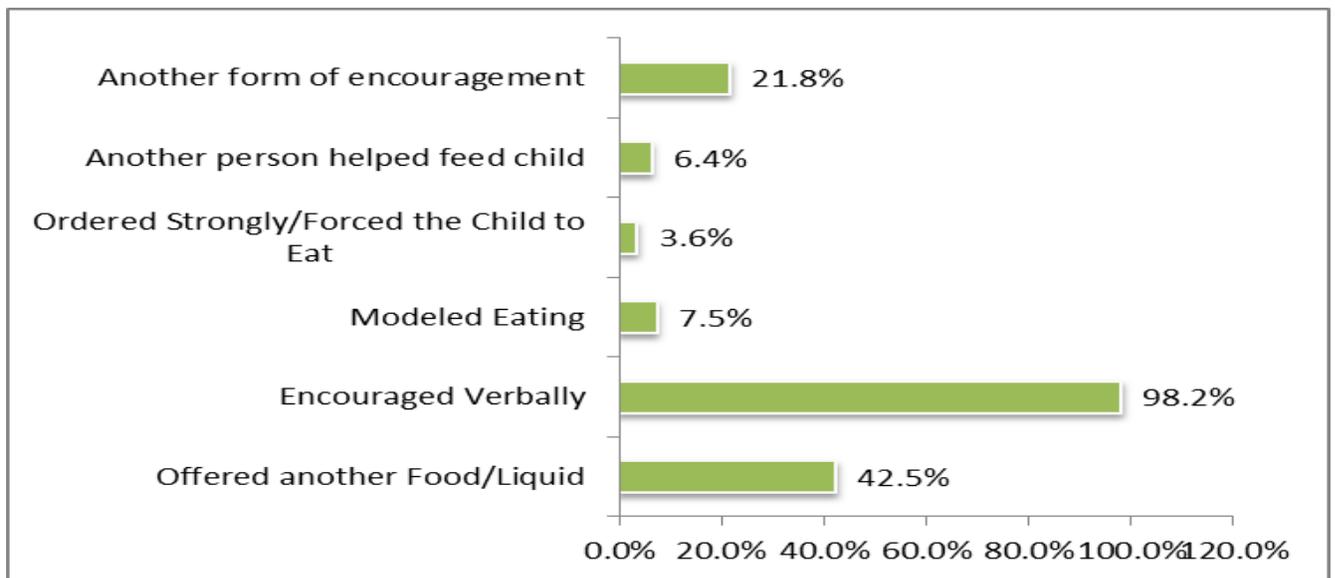
### 2.13 Responsive Feeding

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Responsive feeding is a method a mother or child caretaker can use to encourage the child to eat and to finish his/her meals. This is a child feeding mode that emphasizes attention and a positive reaction to the child's hunger and satiety cues.

The results of this survey showed that responsive feeding was high at 76.4% (n=360). Among the things which the respondents reported that they do to encourage the children to feed included praising the child (80.3%), rewarded the child (20.8%), and talked about other things while the child was eating (10.0%). It is also important to note that 12.5% of the caregivers reported that applied force (ordering the child to eat) to make the child eat. It is important to note that majority of these things said to the child were positive. Additionally, 98.2% of the caregivers reported that they encouraged the child to eat verbally, 42.5% reported that they offered other liquids/foods and 6.4% reported that they had another person help in feeding the child.

Figure 10: Methods Used for Responsive Feeding

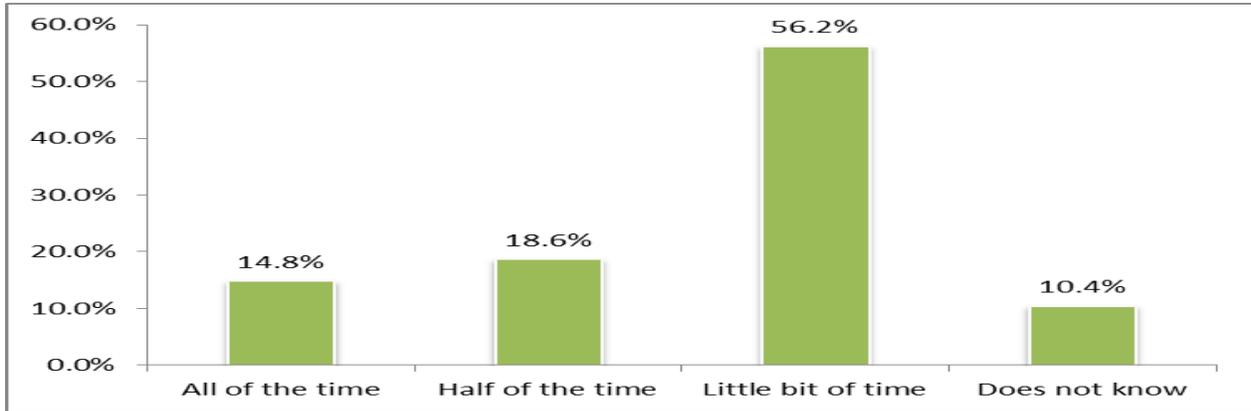


### 2.14 Self-Feeding and Feeding During Illnesses

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The survey established that 77.5% (n=365) of the children in the survey area had fed themselves within the past 24 hours prior to the survey. The major reasons highlighted from the qualitative information were due to the caregivers' lack of time to feed their children due to the workload and household chores. On the frequency of self-feeding, the results found that majority (56.2%) of the children fed themselves little bit of time, 18.6% fed themselves half of the time, and 14.8% fed themselves all the time.

Figure 11: Frequency of Self-Feeding



Caregivers are always encouraged to continue feeding children with sickness normally and to increase the amount of fluids. These practices help to reduce dehydration and minimize the adverse consequences of any sickness on the child’s nutritional status. The table below presents feeding practices during illness:

Table 6: Feeding During Illnesses

		Percentage	n	N
Child offered less, more or the same amount of breast milk as when healthy	Less, because the child did not want it	62.8%	296	471
	Less, because mother’s decision	1.1%	5	471
	More	4.7%	22	471
	The same	8.7%	41	471
	Child never breastfed or child breastfeeding before last illness	0.8%	4	471
	Child has never been sick	1.1%	5	471
Child offered less, more or the same amount of non-breast milk as when healthy	Less, because the child did not want it	46.9%	221	471
	Less, because mother’s decision	2.8%	13	471
	More	4.2%	20	471
	The same	20.4%	96	471
	Child never breastfed or child breastfeeding before last illness	0.2%	1	471
	Child has never been sick	3.2%	15	471
Child offered less, more or the same amount of food as when healthy	Less, because the child did not want it	29.7%	140	471
	Less, because mother’s decision	2.1%	10	471
	More	7.6%	36	471
	The same	32.1%	151	471
	Child Never Fed Food	7.0%	33	471
Amount of food offered to the child after the illness as when healthy	Less, because the child did not want it	8.1%	38	471
	Less, because mother’s decision	0.8%	4	471
	More	48.4%	228	471
	The same	21.4%	101	471

## 2.15 Maternal Characteristics

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This section presents the results of the maternal indicators which were assessed during the survey. These includes: physiological status, antenatal visits, post-natal visits, iron supplementation and place of delivery.

### 2.15.1 Antenatal Clinic

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Proper care during pregnancy and delivery are important for the health of both the mother and the baby. Among the services provided to pregnant women is the Antenatal Care (ANC) whose major objective is to identify and treat problems such as anemia and other infections. ANC is also an opportunity to promote the use of skilled attendance at birth and healthy behaviors such as breastfeeding, early postnatal care, and planning for optimal pregnancy spacing. It is during an antenatal care visit that screening for complications occurs and advice is given on a range of issues, including place of delivery, and referral to mothers.

In this survey, mothers of children below 23 months were asked whether they received antenatal care for their most recent birth, the duration of pregnancy at the 1<sup>st</sup> ANC Visit, the number of times they attended the ANC Visits, measurements taken during the ANC Visits and for the women who reported that they had not attended any ANC Visit, then they were asked the reasons for non-attendance.

Results of the survey showed that 81.7% (n=505) of the mothers in the Wajir North, West and Eldas Sub-Counties had received antenatal care. Of these mothers, 31.3% reported that their 1<sup>st</sup> ANC visit was at the 4<sup>th</sup> Month of pregnancy. When desegregated by trimester, the results indicate that 73.9% of the women received their 1<sup>st</sup> ANC during the 2<sup>nd</sup> trimester, 18.2% received their 1<sup>st</sup> ANC during the 1<sup>st</sup> trimester while 7.9% received their 1<sup>st</sup> ANC during the 3<sup>rd</sup> trimester. The ANC coverage in Wajir was found to be above the 69.5% ANC Coverage identified for the North Eastern Region during the 2008-09 KDHS Survey.

Additionally, the results of the survey show that only 36.4% (n=184) of the mothers reported having visited ANC clinics for the recommended 4 times. This imply that majority of the mothers attend the ANC clinics for less than the recommended 4 times. This may be partially attributed to the late attendance of the 1<sup>st</sup> ANC clinic which was found to be after the 4<sup>th</sup> month of pregnancy. Other reasons highlighted from the qualitative information associated with low coverage of ANC for the recommended 4 times included cultural and religious barriers of a male staff at the health centers assisting the caregivers which made a majority of the caregivers shy away from the health centers, long distances that they had to cover to access the health centers, caregivers attitude that the health centers are always closed and not in operation and the long queues and waiting time at the health centers before they got assistance.

On iron supplementation, 88.1% (n=415) of the caregivers reported that they were supplemented with iron in their pregnancy of the last born child. Nevertheless, among the women supplemented with iron, only 53.9% of them reported having taken iron for the minimum recommended 90 days. The major reasons for non-compliance include ignorance of the health workers advice of taking iron continuous for 90 days (35.0%), reacting to the iron supplement (19.7%), and late attendance of ANC (10.0%).

Finally, the major reasons associated with non-attendance of ANC visits included: distance (60.2%) i.e. the health facility is too far, not aware of the importance of ANC Visits (43.4%), preference to TBAs (15.9%), unfriendly health workers (13.3%) and cultural factors i.e. staff is too young or male staffs (11.5%).

Table 7: Antenatal Clinics

Indicator	Category	Lactating		
		Percentage	n	N
Antenatal Care		81.7%	505	618
Duration of Pregnancy at 1st ANC Visit	1 Month	1.0%	5	505
	2 Months	10.5%	53	505
	3 Months	6.7%	34	505
	4 Months	31.3%	158	505
	5 Months	29.5%	149	505
	6 Months	13.1%	66	505
	7 Months	5.7%	29	505
	8 Months	1.2%	6	505
	9 Months	1.0%	5	505
ANC Visits Attended	1 Times	7.7%	39	505
	2 Times	21.6%	109	505
	3 Times	32.9%	166	505
	4 and More Times	36.4%	184	505
Reasons for Not Attending ANC	Not aware of existence/importance of ANC	43.4%	49	113
	Health facility too far	60.2%	68	113
	Unfriendly health workers	13.3%	15	113
	TBA services adequate	15.9%	18	113
	Cultural barriers e.g. staff too young, male staff etc	11.5%	13	113
Iron Supplementation		88.1%	415	471
Iron Supplementation for 90 Days		53.9%	254	471

## 2.16 Nutrition Status of Children and Caregivers using MUAC

A large proportion of maternal and neonatal deaths occur during the first 48 hours after delivery. Thus, postnatal care is important for both the mother and the child to treat complications arising from delivery, as well as to provide the mother with important information on how to care for herself and her child.

Results of the survey showed that majority (82.5%) of the mothers delivered at home by traditional birth attendants (TBA). Only 9.2% of the mothers reported delivering at the health facilities which is quite a major challenge in the survey area. The major reasons for low facility delivery highlighted from the KIIs and FGDs in the area included: the cultural and religious barriers of a male staff at the health centers assisting the caregivers in conducting deliveries

which made a majority of the caregivers shy away from the health centers and prefer home deliveries, the mothers and TBA's perception that hospital deliveries led to caesarean section which was unpopular at the village level. The facility delivery obtained in this survey is slightly higher than the county average facility delivery of 5.1% which is the worst in the country. On the time taken to present the child for the 1<sup>st</sup> time in the clinic, the results show that 30.6% of the mothers presented their children within the 1<sup>st</sup> 24 hours, 25.1% presented their children to the clinic within the first 2 weeks while 19.4% reported that they were taken between 2 weeks and 1 month.

Finally, on the nutrition situation of the caregivers and children aged below 2 years, the results show that 4.7% of the women were malnourished based on MUAC with the Global Acute Malnutrition (GAM) using MUAC for the children under 2 years was 8.9% with 0.8% being severely wasted.

Table 8: Post Natal care and Anthropometric Measurements

			Percentage	n	N
<b>Post Natal Care</b>	Place of Delivery	At home by TBA	82.5%	528	640
		At home by Nurse	3.6%	23	640
		At home without assistance	4.4%	28	640
		Hospital	9.2%	59	640
	Time Taken before Taking Child to the Child	Immediately (within first 24 hours)	30.6%	188	614
		Within first 2 weeks	25.1%	154	614
		Between 2 weeks and 1 month	19.4%	119	614
		After 1 month	17.3%	106	614
		Child not taken	5.2%	32	614
		Does not intend to take child to clinic.	2.4%	15	614
<b>Anthropometric Measurement</b>	Maternal Nutrition	Malnourished (<21.0 cm)	4.7%	31	658
		At Risk (21.0 - 22.9 cm)	16.1%	106	658
		Normal (23.0 cm and above)	79.2%	521	658
	Child Nutrition	Severe Acute Malnutrition (<11.5 cm)	0.8%	4	471
		Moderate Acute Malnutrition (11.5 cm - 12.4 cm)	8.1%	38	471
		At Risk (12.5 cm - 13.4 cm)	27.0%	127	471
		Normal (13.5 and above)	66.0%	311	471

## 2.17 BARRIER ANALYSIS

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The qualitative information collected through KIIs and FGDs were analyzed through content analysis using emerging themes and issues highlighted by different stakeholders to generate a detailed report on issues related MIYCN. Qualitative data was first transcribed, summarized and thematically analyzed according to the specific objectives. The analysis process entailed:

- Content analysis of information gathered from secondary data sources (desk/ literature reviews);
- Manual analysis of qualitative data from KIIs, which included coding, summarizing, categorizing, direct quoting and comparisons;
- Categorization and recording the information collected as per the laid out format and then analyzing them. The findings were then summarized in terms of the various MIYCN as well as water; sanitation and hygiene (WASH) emerging themes.

The respondents included multi-sectorial groups which had the potential to influence the MIYCN activities in the survey area. These included the following: Caregivers (N= 95), fathers (N= 41), TBAs (N= 37), CHWs (N= 39) and KIIs (N= 17) which ranged from health workers, County health management team (CHMT), religious leaders, partner NGOs, public health officers, World Food Programme (WFP), National Drought Management Authority (NDMA) and Islamic Relief –Kenya (IRK) personnel.

The barriers identified were then divided into either primary or secondary barriers

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### 2.17.1 Primary Barriers

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The respondents were interviewed to give their opinion on the main barriers which inhibited ideal MIYCN practices in their areas. Three main reasons were highlighted by the majority of the respondents which included:

- a) **Heavy workload**- This was especially emphasized by the caregivers (N=95) where the majority (76%, n=72) highlighted the main household chores e.g. fetching water and firewood inhibited them from providing the proper care to their children and were forced to leave them behind with their grandmothers/ mother-in-law who did not know about the proper infant and young care and feeding practices taught at the health centers. This was also because the survey area had a patriarchal society where most of the household chores were carried out by the women
- b) **Lack of food**- This was emphasized by the majority of the caregivers (69%, n=66) and fathers (59%, n=24) during the FGDs and the KIIs with the partner organizations. At the household level, it was apparent from the discussions that there was household food insecurity and that the caregivers did not have to eat and had scaled down the feeding frequency of the meals at the household level. This was evidenced by the prevailing drought (*National Drought Management Authority [NDMA] - Aug bulletin*). The

caregivers reported that lack of food inhibited them from practicing exclusive breastfeeding and hence gave their children camel milk. From the FGDs conducted with the fathers, they highlighted the high cost of food as an inhibiting factor to food availability at the household level and hence even the children were not able to access a variety of nutritious food e.g. fruits and vegetables. This had ‘forced’ them to rely on the World Food Programme (WFP) which was mainly comprised legumes and starches. However, the situation was slightly different in Wajir North sub-county where food was available, partly attributed to the favorable climate and proximity to Moyale town, which provided a ready market and supply of food stuffs.

- c) ***Livelihood/ lifestyle of the community***- This was emphasized from both the FGDs and KIIs conducted. A majority of the mothers (65%, n=62) and the fathers (90%, n= 37) highlighted that the nomadic nature of the communities in the survey area caused frequent migration (due to insecurity/ tribal clashes or in search of pasture) of the people which caused constant disruption of structures that supported ideal MIYCN situation. The structures included inaccessibility of healthcare services and outreach activities which provided the largest platform for MIYCN interventions e.g. HINI activities and mother support groups that supported MIYCN component. The nomadic lifestyle also predisposed the communities to over-reliance of livestock and livestock products, especially milk, which composed the main food in their diets and hence also influenced the feeding of the infants and young children hence their diets being nutritionally inadequate.

In addition, the following reasons were also highlighted by most of the respondents as the barriers to ideal MIYCN practices

- a) ***Home deliveries***- This was reported to be quite prevalent in the survey areas as evidenced by the FGDs of caregivers, traditional birth attendants (TBAs) and KIIs of the health personnel. This proved to be a barrier to MIYCN since the health facility provides the single-largest platform for MIYCN interventions which ranges from supplementation to health education and counseling. The main reasons highlighted by a majority of the caregivers (68%, n=65) and the TBAs (86%, n=32 ) was the stigma and fear of male nurses at the health facilities due to cultural and religious taboos and the misconception of both the caregivers and TBAs that hospital deliveries meant caesarian section surgeries.
- b) ***Poor child spacing***- was also cited as a barrier from the FGDs and KIIs to ideal MIYCN since poor birth spacing led to inadequate care of the infants and young children in terms of proper feeding and care. This was mostly highlighted by a majority of the KIIs (94%, n=16) . At the household level, this led to the competition of food by the older children for the food prepared for the younger children causing the caregivers to adopt the ‘family pot’ for feeding the whole family including the young children. This becomes a barrier since the young children require nutrient dense foods due to the increased nutritional needs. This was also evidenced by the low family planning uptake in the survey area mainly attributed to a conflict with the religious beliefs.

The others reasons that were mentioned included:

- a) ***Distance to health center*** – This was highlighted by some caregivers (36% n=35) as a barrier since the health facilities available were far and not easily accessible. This inhibited important MIYCN interventions that were mainly offered at the health facilities.
- b) ***Maternal health***- This was cited by some caregivers (17%, n= 16) who reported that their own illness inhibited them from practicing ideal MIYCN e.g. they could not breastfeed their children when sick for fear of transmitting the disease into their children. This was further aggravated by the poor health-seeking behaviour of the caregivers.
- c) ***Personnel absenteeism at health centers***- This was reported by some caregivers (12%, n= 11) who were constantly discouraged by the absenteeism of the health care personnel at the local health centers to access information on MIYCN and hence promoted the poor health seeking behaviour of the community members.

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### 2.17.2 Secondary Barriers

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The respondents were interviewed to give their opinion on the main barriers which inhibited ideal MIYCN practices in their areas. Three main reasons were highlighted by the majority of the respondents which included:

- a) ***Mothers' perception***- This was a major hindrance reported by a majority of the caregivers (91%, n=87) to ideal MIYCN practices which could be mainly related to the low education and literacy levels of the caregivers which left them prone to believing misconceptions on MIYCN issues. The main perceived barriers related to MIYCN which were mostly mentioned included the following:
  - Mothers avoided eating adequately for the perceived 'fear' that the child will grow bigger
  - Mother's perception that their health and nutrition status isn't as important as their child's or husband
  - Mothers' belief that they do not have any/ adequate milk within the first 3 days and hence give pre-lacteals
  - Mothers' belief that the breast milk is poisonous for the child if mother is pregnant
  - Mothers' belief that breast milk only isn't enough for the baby for 6 months
  - Mothers' belief that breast milk is sugary for the child and hence give water
  - Mothers' perception that hospital deliveries **ARE** caesarian sections only
- b) ***Culture*** – This was gathered from the FGDs and KIIs conducted which identified culture as a main barrier to MIYCN. The main examples provided included:

- The 40 days after delivery requires the woman to stay indoors which predisposes infant to pre-lacteals since grandmothers/ mothers are the main caretakers. This is because a majority of the caregivers interviewed reported to have given birth at home and during the 40 days; the grandmother, mother-in-law or the TBAs were the main people who gave them advice the care and feeding of the child.
- Mothers avoid health centers and hospital deliveries due to male nurses which is culturally a taboo for male personnel to assist in birth.
- It's considered a taboo for man to assist woman take care of the child directly. This is due to the patriarchal society of the survey area
- *Grandmothers' perception*- This was also a critical influencer of MIYCN issues at the community and household level. This was majorly because they spent more time with the infants and young children in their formative years and hence influenced their feeding and care practices. They also spent time with the mother immediately after delivery and during the 40 days the mothers are culturally required to stay indoors. From the FGDs conducted with the grandmothers/ TBAs, it was determined that they believed that breast milk only is not enough for child and that child should be given camel milk to grow strong/ healthy.

The others reasons that were mentioned included:

- a) ***Poor health seeking behaviour***- It was reported from the FGDs at the community and the KIIs with health personnel and community health workers (CHWs) that the health seeking behaviour was poor only going to the hospitals as the last resort. This was partly attributed to the general attitude of the community that the health centers are not operational due to personnel absenteeism.
- b) ***Fathers' perception*** – From the FGDs conducted with the fathers, a majority (66%, n=27) believed that the mothers' breast milk was not enough for a healthy and strong child and had to be given camel milk in order to grow strong.
- c) ***TBAs perception***- From the FGDs conducted with the TBAs, the majority (70%, n=26) rejected hospital deliveries since they believed that hospital personnel only conducted caesarian section only and they disliked CS- operations. They in turn discouraged the caregivers from hospital deliveries.

## 2.18 Water, Sanitation and Hygiene (WASH) Knowledge and Awareness

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The WASH component and the level of knowledge and awareness at the community level is very crucial since it impacts the MIYCN practices either positively or negatively depending on the water, hygiene and sanitation situation at the community. This information was gathered from a variety of sources which included FGDs with community members, literature review, and KIIs with both County officials in public health and partner organization dealing in WASH activities in the survey area. From the qualitative data collected on WASH, the following observations were made:

- The main barrier to good WASH practices directly related to MIYCN is water scarcity in the survey areas. This was mainly highlighted by a majority of the caregivers (73%, n=69), the fathers (65%, n=27) and the KIIs conducted. Water accessibility is also difficult with distances to be covered to access a water point ranging from 6-15 km which was being exacerbated by the ongoing drought- *KII Public Health Officer*. This makes water to be a very precious resource that is reserved for the basic utilization i.e. drinking, cooking and for livestock's consumption. From the discussions with the survey respondents, a majority considered hand washing at the critical times a "luxury" and "water wastage" due to water scarcity. This has a negative impact on the MIYCN situation especially with a special focus on the complementary feeding and food preparation for children aged <2 years.
- The latrine coverage is very low (<20%) with a high rate of open defecation at the community level with the situation being worse in the rural areas- - *KII Public Health Officer*. The high rate of open defecation was attributed to the frequent migrations by the communities in search of better pasture for their livestock or due to insecurity hence giving rise to new unplanned settlements without latrines/ toilets.
- The poor WASH situation related to MIYCN was also due to the low literacy levels of the communities' hence giving rise to ignorance to hygiene and sanitation practices. From the qualitative discussions, most caregivers (>40%) reported that "*it wasn't very important to wash hands before feeding baby since it would lead to water wastage.*"
- From the KIIs conducted, it was established that a majority of the population (>60%) drew their water from the water pans which were being shared with the animals, therefore giving a high likelihood of water contamination. This was further exacerbated by the lack of water treatment for drinking water by the community members at the household level.

## **2.19 High Impact Nutrition Interventions (HiNi) Knowledge and Awareness**

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Islamic Relief-Kenya are implementing programs that have adopted an integrated emergency and rehabilitation approach to prevent malnutrition and treat the acutely malnourished in Wajir North, West and Eldas sub-counties.

In this regard, it's essential to determine the level of community awareness of the existing HINI activities that are being implemented. This was captured using qualitative data collection methods which involved FGDs and KIIs conducted at the community level and comprised of the caregivers with children aged less than 2 years, and fathers. The various HINI services offered and their level of community awareness is summarized below.

### ***a) Knowledge and awareness on malnutrition***

A majority (87%, n=83) of the respondents interviewed, which mainly included the caregivers had a good level of knowledge and awareness about malnutrition as they were able to give the signs and symptoms of malnutrition which included: the reduction of the child's body weight, lack of appetite, general body weakness and observable ribs (thinness).

### ***b) Knowledge and awareness on Integrated Management of Acute Malnutrition (IMAM) services***

The level of community knowledge and awareness on the IMAM services available was very high as evidenced by 80% (n=76) of the caregivers interviewed who had a high level of awareness of the nutrition programmes on Outpatient therapeutic programme (OTP) and the Supplementary feeding programme (SFP) and the services/ products provided. They were also aware that the OTP and SFP programmes were available to treat and reduce malnutrition.

On further discussions from the KIIs conducted, it was found out that the high level of community awareness of the IMAM programmes was directly linked to the nutritional products and supplements provided which were quite popular with the community e.g. plumpy nut, CSB flour etc.

### ***c) Knowledge and awareness on Vitamin A***

A majority of the respondents (76%, n=72) interviewed indicated a good level of knowledge and awareness on Vitamin A as they could easily identify the Vitamin capsule and provide the importance of giving the supplement to the children. Most of the caregivers interviewed reported that the Vitamin capsule boosted the immunity of the children, prevented diseases and for good eyesight for the children.

### ***d) Knowledge and awareness of deworming***

The level of community knowledge and awareness on deworming was found to be fairly low. This was evidenced by only 24% (n=23) of the caregivers interviewed could not easily identify the deworming tablets and most reported not to have given their children. However, some of the respondents identified the supplements and understood the importance of the de-wormers for treating the intestinal worms.

This shows a gap in the community sensitization on deworming activities as evidenced by the low level of community knowledge and awareness.

***e) Knowledge awareness on Zinc supplementation***

A majority of the respondents interviewed exhibited a low level of knowledge and awareness on zinc supplementation since they could not easily identify the zinc sample tablets. Most of the caregivers interviewed (82%, n=78) reported that they had not taken their children to a health center during the last diarrheal episode and hence were not able to access the zinc tablets. This is evidenced by the poor health seeking behavior of the surveyed communities.

***f) Knowledge and awareness on Iron and folic acid supplementation***

On IFAS, there was an exhibition of a good level of community knowledge and awareness especially the caregivers of children aged less than 2 years. This was evidenced by the fact that the most of the caregivers (64%, n=61) could easily identify the IFAS sample tablets showed to them. A majority of the caregivers also reported that the IFAS was to help in increasing the blood in the women while some reported that it helped to prevent anemia. From the KIIs conducted with the health personnel, this was mainly attributed to the attendance of the women for antenatal clinic (ANC) at least once partly attributed to the increased referrals by TBAs for the pregnant mothers to the health facilities for deliveries. However, the respondents, especially the caregivers reported not to like it due to its “bad” taste.

***g) Knowledge and awareness on Exclusive Breastfeeding***

There was reportedly a high level of community knowledge and awareness on exclusive breastfeeding and its importance. A majority of the caregivers interviewed (86%, n=82) indicated knowledge that a baby should be exclusively breastfed for 6 months since it was good for the baby’s growth and development. On further discussions, it was noted that EBF was advocated for by the Muslim religion (which a majority of the respondents were affiliated to) as per a KII performed with a Muslim religious leader who reported that the religion advocated for breastfeeding the children up to the age of 2 years.

***h) Knowledge and awareness on Complementary feeding***

The level of community knowledge and awareness on complementary feeding was poor as evidenced by lack of any information by the respondents on the timely introduction of complementary foods and the type of food to be introduced in terms of variety, consistency and frequency. A majority (74%, n=70) of the caregivers interviewed reported that they did not know the appropriate time and food to introduce to their children after the breastfeeding period. This highlights a gap in the MIYCN interventions and the need to focus on complementary feeding issues.

## CHAPTER NINE: CONCLUSIONS AND RECOMMENDATIONS

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### 9.1 Conclusions

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The conclusions for the MIYCN situation in Eldas, Wajir North and Wajir West are summarized per indicator as shown below:

a) **Indicator:** Early Initiation to breastfeeding

The knowledge (83.5%) did not translate into practice (66.1%) mainly because:

- From the FGDs, a majority of the caregivers believed that they did not have sufficient milk within the first 3 days and hence did not initiate breastfeeding as recommended. Some TBAs were reported saying: *‘the first 3 days was for the mother to rest and wait for the milk to flow in the breasts.’*
- In addition, a majority of the caregivers delivered at home where there was no emphasis on early initiation of breastfeeding by the people taking care of the mother.
- Low literacy levels as only as only 4.8% had ever attended school.

b) **Indicator:** Exclusive breastfeeding

The knowledge (83.2%) on EBF did not translate into practice (43.6%) mainly because:

- A majority of the mothers interviewed in the FGDs believed that the mothers’ milk wasn’t sufficient to feed a healthy child. This was also upon the strong influence of the mothers/ grandmothers who advised them to give the baby animal milk even from past experience.
- Most of the mothers reported that they did not have milk within the first 3 days and hence gave the child water and milk to quench their thirst.
- Workload (which involved fetching firewood and water) was also cited to be a major barrier to exclusive breastfeeding since the caregivers usually left their children with the grandmothers while away and the grandmothers usually fed the children.
- Mothers also reported that they themselves did not have adequate food to be able to breastfeed their children every time.
- Some mothers reported that they were having another pregnancy\* and hence wasn’t safe to breastfeed the child because they believed their milk was ‘poisonous’ for child.

*(\*The family planning uptake is very poor in the local community mainly due to the religious belief that it’s unacceptable- KII with County Nursing officer)*

c) **Indicator:** Introduction to solid, semi-solid foods

The knowledge (86.8%) also did not translate into practice (48.8%). This was mainly attributed to the following:

- From the FGDs, the caregivers reported that they introduced the other foods late (> 9 months) since the baby was too young to eat other foods due to lack of teeth. They reported that animal milk is the appropriate food to feed the young children.
- Most of the caregivers also reported that lack of other foods to give the child hindered them due to the prevailing drought\* situation. They said that milk was the only food available currently.

*\*(NDMA August bulletin reported that the County drought situation is at an early phase of alarm stage on a worsening trend following the depressed long rains)*

d) **Indicator:** Minimum dietary diversity

The dietary diversity performed poorly (42%) due to the following reasons:

- The prevailing drought\* situation which is causing most of the households to be food insecure. *\*(NDMA August bulletin reported that the County drought situation is at an early phase of alarm stage on a worsening trend following the depressed long rains)*
- The reliance of the community on food assistance which is mainly high on starches and legumes.
- From the FGDs with the fathers (who were the main providers of food at the household), they reported that the other foods (fruits, vegetables and meats) were too expensive for them to buy for their families and were not easily accessible at the village level.
- From the FGDs, it was also determined that the food consumed at the household level was based on the *family pot* and no special foods were prepared for the child. Due to the cultural preference of foods high in starch (rice, pasta, *anjera*) and milk (cow/camel) which are easily available and affordable, the child's diet is also influenced by the family meals.
- The prevailing drought\* situation which is causing most of the households to be food insecure. *\*(NDMA August bulletin reported that the County drought situation is at an early phase of alarm stage on a worsening trend following the depressed long rains)*

e) **Indicator:** Minimum meal frequency

The indicator was poor (46.5%) due to the following reasons:

- The prevailing drought\* situation which is causing most of the households to be food insecure. *\*(NDMA August bulletin reported that the County drought situation is at an early phase of alarm stage on a worsening trend following the depressed long rains)*
- Availability of the foods of the foods was cited as the main reasons for the decreased meal frequency.

f) **Indicator:** Consumption of Iron-rich foods

The indicator performed poorly (27.8%) mainly due to the unavailability of the iron-rich foods (esp. fruits and vegetables) at the village level (due to the prevailing drought situation).

- From the FGDs, the caregivers reported that their children were too young/ did not have teeth to consume meat (which is considered to be iron-rich)

g) **Indicator:** Feeding during and after illness

This performed poorly and is a major gap in the nutrition status of the child during or after illness.

- The major reason highlighted by the caregivers was that the child lacked appetite during illness.
- This highlights a major gap in the area of infant feeding during and after illness.

h) **WASH**

In terms of knowledge and awareness on WASH, there is a major gap in the practice of the ideal sanitation and hygiene components due to the various constraints highlighted above. It was also reported that hand washing at the critical times also performed poorly. This has a negative impact on MIYCN and especially on the complementary feeding of children <2 years which is a crucial phase of growth and development of the child.

**i) HINI**

With regard to knowledge and awareness on HINI activities being implemented, there was a gap in the deworming, zinc supplementation and complementary feeding at the community level. It was evidenced that more emphasis had been given to exclusive breastfeeding information while the complementary feeding component performed poorly in terms of awareness. For deworming and zinc supplementation, it was found out that it performed poorly due to the poor health seeking behaviour of the communities and the constant movements which made the outreach activities challenging in finding and retracing the communities.

## 9.2 Recommendations

RECOMMENDATIONS	Responsibility
<b>MIYCN</b>	
Strengthening the existing mother-to-mother support groups (MTMSGs) and involving a component of cooking demonstrations in order for the caregivers to accept and adopt a variety of foods to feed their children.	MOH, IRK and Partners
Support and motivate the health workers through trainings on MIYCN (capacity building). This would have a great platform to communicate and counsel the caregivers who visit the health facilities on MIYCN topics.	MOH, IRK and Partners
Scale up the kitchen gardens initiative as an initiative to curb the low dietary diversity which is a proxy indicator of micronutrient deficiency. These can be linked with the MTMSGs.	MOH, MOA, IRK and Partners
Scale up the community strategy which supports the community level health and nutrition. The community units should then be utilized to spearhead MIYCN activities at the community level.	MOH
Adoption of the new process of promotion of complementary feeding (ProPAN) developed by Pan-American Health Organization (PAHO) and UNICEF which involves a comprehensive assessment and intervention of the existing MIYCN gaps	MOH, IRK, Partners
Advocate for family planning (birth spacing) in order to enable good care practices for the child. This should adopt a multi-faceted approach to all the key influencers at the community level to include the religious leaders, social leaders and the community representatives.	MOH
To address the gaps identified in MIYCN KAP survey, the health system and partners should support the health workers and the community health workers (CHWs) to promote nutritious and affordable recipes which are rich in both energy and micro-nutrients (MNPs) through all contact points- health facility during antenatal clinic visits (ANC), child welfare clinics (CWC), maternal and child health (MCH) nutrition education sessions by the health workers, and community health workers (CHWs) and volunteers, and also utilize the social and religious leaders and forums.	MOH, MOA, IRK and Partners
Partners to work with the Ministry of Health to adopt innovative strategies develop and disseminate information, education and communication (IEC) materials on exclusive breastfeeding in the local languages targeting the community through radio, or innovative ways e.g. short message services (SMS) which include motivational messages for maternal health, exclusive breastfeeding and complementary feeding.	MOH, IRK and Partners

<b>HINI</b>	
Focus on awareness creation on zinc supplementation and deworming at the community level during the outreach activities and health facility visits. However, this should be with the increased sensitization on health seeking behaviour which was poor among the community members.	MOH, IRK and Partners
<b>WASH</b>	
Adopting the community total led sanitation (CLTS) which initiates a trigger response in a community in terms of WASH and has a high likelihood of positively impacting the communities' behaviour and perception towards WASH component.	Wajir County Public Health, Ministry of Water, IRK and Partners
To address the problem of water scarcity which was highlighted as a main barrier to improved hygiene and sanitation in relation to MIYCN activities at the community level which could involve water harvesting, water trucking, protected earth pans.	Wajir County Public Health, Ministry of Water, IRK and Partners
Improved focus on WASH education, hygiene promotion and water treatment activities as a behaviour change strategy.	Wajir County Public Health, Ministry of Water, IRK and Partners
Integrating the WASH activities with the HINI activities to maximize the impact of the effort at the community level.	Wajir County Public Health, Ministry of Water, IRK and Partners

## APPENDICIES

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### Appendix 1: Survey Teams

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	<b>Team 1</b>	<b>Team 2</b>	<b>Team 3</b>	<b>Team 4</b>	<b>Team 5</b>	<b>Team 6</b>
<b>Team Leader</b>	Linda Khabeko	Habiba Sharif	Abdihakim Adan Musa	Hussein Muhammad	Ibrahim Issack	Abdirahman Omar
<b>Enumerator 1</b>	Batula	Rahma	Ladhan	Habon	Ismail	Ali
<b>Enumerator 2</b>	Haska	Abdi	Hilow	Ahmed	Dunia	Habiba

Appendix 2: KIIs and FGDs conducted

	Mothers	Fathers	TBAs	CHWs	KIIs
Tulatula					
Boa					
Ganuyure					
Griftu					
Griftu					
Biyaad					
Matho					
Laghbogol					
Hadado					
Arbajahan					
Garsegoftu					
Ademasajida					
Eldas					
Wargadud					
Bearamu					
Basir					
Milseded					
Bute					
Batalu					
Bute					
Ajawa					
Danaba					
Dugo					
Gurar					
Gurar					
Dugo					
Ogomdi					
Qarsabula					

Appendix 3: Questionnaire

<b>MINISTRY OF HEALTH</b>										
<b>MATERNAL, INFANT AND YOUNG CHILD NUTRITION PROGRAM</b>										
<b>KAPS QUESTIONNAIRE 2014</b>										
QNNR ID:.....										
<b>1.0 BACKGROUND</b>										
1.0	COUNTY CODE									
1.1	START TIME (24HRS)									
1.2	DATA COLLECTOR'S CODE									
1.3	DATE OF INTERVIEW (DD/MM/YYYY)									
1.4	CLUSTER NUMBER									
1.5	HOUSEHOLD NUMBER									
<b>1.6 SURVEY RESULTS</b>										
									COMPLETED	
									INCOMPLETE	
01										
02										
<b>HOUSEHOLD ROSTER</b>										
Please tell me the name and sex of each person who lives here, STARTING WITH THE HEAD OF THE HOUSEHOLD										
List the head of the household in line 1. List the names of all household members. Then ask:										
Does anyone else live here, even if they are not at home now? These may include children in school or										
household members at work. If yes, complete listing. Then, collect information for each member,										
one person at a time. Add a continuation sheet if there are more than 10 household members.										
Eligible for										
					Initiation of breastfeeding module / Maternal Nutrition	Infant and young child feeding module (up to 2 year olds)				
2.1	Line #	Name	Is (Name) Male or Female		Please tell me how old (NAME) is.; How old was (NAME) on his/her last birthday? Record age in completed years; 98=DK; (only for ≥50 year olds)	Circle line number if HH member is a woman aged between 15 and 49 years	Circle line number if HH member is under 3 year olds	For each child under 3: Who is the primary caregiver of (NAME)? Record line number of caregiver.		
			Male	Female						
	1					1	1			
	2					2	2			
	3					3	3			
	4					4	4			
	5					5	5			
	6					6	6			
	7					7	7			
	8					8	8			
	9					9	9			
	10					10	10			
Are there any other persons living here – even if they are not members of your family or do not have parents living in this household? Including children at work or at school? If yes, insert person's name										
complete the form. Then, complete the totals below.										
					Women 15-49 years (from above)	Children under 3 years (from above)				
2.2	<b>TOTALS (total number eligible per module)</b>				[     ]	[     ]				
For each child aged 0-23 months use a different questionnaire to collect their information.										
<b>WOMENS CHARACTERISTICS (ALL WOMEN 15-49 YEARS)</b>										
<b>INFORMATION PANEL FOR DATA COLLECTOR/FIELD WORKER</b>										
this module is to be administered to women identified in the household roster to be between 15-49 years of age.										
a separate module must be completed for each eligible woman										
verify that you are speaking with the correct respondent by checking that the respondent's name is the same as the name listed in the information above										
if the person you are speaking with IS NOT that individual,ask to speak with the correct respondent										
(This information is entered after identifying eligible women from the Household Roster)										
3.1	Woman's Name (from column 2 of household Roster): _____									
3.2	Woman's Line Number (Circled in column 5 of household roster): [     ]									
3.3	In what month and year were you born? (IF Don't know,USE 98)									
(ASK: In what month and year were you born?)										

3.4	Please tell me how old you are. What was your age at your last birthday?			
<b>FW: Check Q3.3 and Q3.4: Is the respondent between the ages of 15 and 49 years? If the information in Q3.3 and Q3.4 conflicts, determine which is most accurate.</b>				
3.50	What is the woman's current physiological status?	Pregnant <input type="checkbox"/> 1 months <input type="text"/> Lactating <input type="checkbox"/> 2 Pregnant & Lactating <input type="checkbox"/> 3 Not pregnant / Not Lactating <input type="checkbox"/> 4		
3.60	What is your marital status?	CURRENTLY MARRIED <input type="checkbox"/> 1 CURRENTLY LIVING TOGETHER <input type="checkbox"/> 2 SEPARATED/DIVORCED <input type="checkbox"/> 3 WIDOWED <input type="checkbox"/> 4 SINGLE/NEVER MARRIED <input type="checkbox"/> 5		
3.70	Have you ever been to school? if NO skip to 3.9	YES..... <input type="checkbox"/> 1 NO..... <input type="checkbox"/> 0 → 3.90		
3.8	What is the highest level of education that you have completed?	Less than primary school..... <input type="checkbox"/> 1 Primary school ..... <input type="checkbox"/> 2 Secondary/High school ..... <input type="checkbox"/> 3 College/Pre-university/University ..... <input type="checkbox"/> 4 Post graduate degree ..... <input type="checkbox"/> 5		
3.90	Which religion do you belong to?	CHRISTIAN <input type="checkbox"/> 1 MUSLIM <input type="checkbox"/> 2 TRADITIONAL <input type="checkbox"/> 3 HINDU <input type="checkbox"/> 4 OTHER (SPECIFY)..... <input type="checkbox"/> 96		
3.10	What would you say is your main source of livelihood currently?  CIRCLE ONLY ONE RESPONSE	Unestablished own business (Informal)..... <input type="checkbox"/> 1 Established own business (formal)..... <input type="checkbox"/> 2 Rural agriculture..... <input type="checkbox"/> 3 Urban agriculture..... <input type="checkbox"/> 4 Remittances ..... <input type="checkbox"/> 5 Employment iua kall..... <input type="checkbox"/> 6 Employment office..... <input type="checkbox"/> 7 pastoralism..... <input type="checkbox"/> 8 Other..... <input type="checkbox"/> 96 Specify _____		
3.11	What is your CURRENT occupation?  CIRCLE ONLY ONE RESPONSE	Unemployed/Housewife <input type="checkbox"/> 1 Employed Formal (8-5 job)..... <input type="checkbox"/> 2 Student <input type="checkbox"/> 3 Serves in church/mission <input type="checkbox"/> 4 Other (Specify) <input type="checkbox"/> 96		
<b>4.0 BIRTH HISTORY DETAILS (ALL WOMEN 15 -49 YEARS)</b> <b>NOW I would like to ask you about pregnancies and births that you may have had.</b>				
1.31	Have you ever been pregnant? If 'No' probe by asking: Were you ever pregnant, even if this pregnancy did not result in the birth of a live child?	YES..... <input type="checkbox"/> 1 NO..... <input type="checkbox"/> 2 → END		
1.32	Have you ever given birth? If 'No' probe by asking: I mean, to a child who ever breathed or cried or showed other signs of life – even if he or she lived only a few minutes or hours?	YES..... <input type="checkbox"/> 1 NO..... <input type="checkbox"/> 0 → END		
1.33	When was the last time (days, month and year) you gave birth (even if your child is no longer living)?	<input type="text"/>		
1.34	Do you have any children to whom you have given birth and are alive?	YES..... <input type="checkbox"/> 1 NO..... <input type="checkbox"/> 0		
1.35	How many?	<input type="text"/>		
1.36	Do you have any children to whom you have given birth and are not alive?	YES..... <input type="checkbox"/> 1 NO..... <input type="checkbox"/> 0		
1.37	If yes, how many?	<input type="text"/>		
1.38	How many births have you had both alive and dead? (SUM 1.35 + 1.37)	<input type="text"/>		
1.38b	Check Q1.33: Did the respondent's last birth occur within the last 2 years, that is, since (18/7/2012)?	YES LIVE BIRTH SINCE (21/07/2012) <input type="checkbox"/> 1 NO LIVE BIRTH SINCE (21/07/2012) <input type="checkbox"/> 0		
<b>INTERVIEW CHILD DETAILS (ALL CHILDREN 0-23 MONTHS)</b>				
1.39	For child aged 0-23 months what is his/her age in COMPLETE MONTHS?	<input type="text"/>		
1.40	Is (NAME) a Male or Female	Male <input type="checkbox"/> Female <input type="checkbox"/>		
1.41	How was child's age verified?	Health card <input type="checkbox"/> 1 Birth certificate <input type="checkbox"/> 2 Baptism calendar <input type="checkbox"/> 3 Seasonal calendar <input type="checkbox"/> 4 don't know <input type="checkbox"/> 5		
1.42	Where was (NAME) born?	In the hospital..... <input type="checkbox"/> 1 In the health center, doctor's office, private clinic..... <input type="checkbox"/> 2 dispensary..... <input type="checkbox"/> 3 In the home..... <input type="checkbox"/> 4 In the midwife's home..... <input type="checkbox"/> 5 Other (specify) _____ <input type="checkbox"/> 96 DK <input type="checkbox"/> 98		
<b>4.0 KAPS ON BREASTFEEDING (ALL CHILDREN 0 - 23 MONTHS)</b>				
4.1	Was (NAME) ever breastfed?	Yes..... <input type="checkbox"/> 1 No ..... <input type="checkbox"/> 0 → 4.3 Don't Know..... <input type="checkbox"/> 98		
4.2	How long after birth did you put (NAME) to the breast?	Immediately <input type="checkbox"/> 000 Less than 1 hour <input type="checkbox"/> 1 OR Hours <input type="checkbox"/> 2 OR Days <input type="checkbox"/> 3		
<b>FW: If respondent reports she put the infant to the breast immediately after birth, circle '000' For 'Immediately'. If less than 1 hour, circle '1' for less than an hour AND RECORD '00' hours. If less than 24 hours, circle '2' and record number of completed hours, from 01 to 23. Otherwise, circle '3' and record number of completed days.</b>				

4.3	<p>Why was (NAME) never breastfed?</p> <p><b>DO NOT PROMPT; RECORD THE MOST IMPORTANT REASON.</b></p> <p><b>IF MORE THAN ONE REASON IS GIVEN, PROBE FOR THE MOST IMPORTANT AND CIRCLE AS APPROPRIATE.</b></p>	<p>Baby ill..... 1</p> <p>Baby unable to suckle..... 2</p> <p>Baby refused to suckle 3</p> <p>Mother refused..... 4</p> <p>Spouse refused 5</p> <p>Mother was sick 6</p> <p>No/inadequate breast milk..... 7</p> <p>Mother was away ..... 8</p> <p>Mother died 9</p> <p>Sore/cracked nipples..... 10</p> <p>Advice by health professional..... 11</p> <p>Advice by other person..... 12</p> <p>Baby incubated/in nursery 13</p> <p>Other (Specify) 96</p> <p>Don't Know..... 98</p>	
4.4	<p>During the first three days after birth was (NAME) given anything other than breast milk?</p>	<p>YES..... 1</p> <p>NO..... 0</p> <p>DK..... 98</p>	<p>→ 4.7</p>
4.5	<p>What was (NAME) given to drink? Anything else?</p> <p><b>MULTIPLE RESPONSE POSSIBLE</b></p>	<p>MILK (OTHER THAN BREAST MILK) A</p> <p>PLAIN WATER B</p> <p>SUGAR/GLUCOSE WATER C</p> <p>GRIPE WATER D</p> <p>SUGAR/SALT SOLUTION E</p> <p>FRUIT JUICE F</p> <p>INFANT FORMULA G</p> <p>TEA/INFUSIONS H</p> <p>COFFEE I</p> <p>HONEY J</p> <p>OTHER (SPECIFY) 96</p>	
4.6	<p>What are the reasons (NAME) was given drinks other than breast milk? Anything else?</p> <p><b>FW: PROBE, Anything else? RECORD ALL MENTIONED</b></p>	<p>NOT ENOUGH BREAST MILK A</p> <p>BABY CRIED TOO MUCH B</p> <p>CULTURAL REASONS C</p> <p>WORK RELATED OBLIGATIONS D</p> <p>WEATHER TOO HOT E</p> <p>FIRST MILK NOT GOOD FOR BABIES F</p> <p>OTHER (SPECIFY) 96</p>	
4.7	<p>During the first 3 days after the child was born did you receive any practical support or advice to help you start breastfeeding [child's name]?</p>	<p>YES..... 1</p> <p>NO..... 0</p> <p>DK..... 98</p>	
4.8	<p>In your opinion, should a baby be put to the breast immediately they are born?</p>	<p>YES..... 1</p> <p>NO..... 0</p> <p>DK..... 98</p>	
4.9	<p>Should a baby be given the very first milk from the breast (colostrum - milk produced in the first three days after birth) at birth or soon after?</p>	<p>YES..... 1</p> <p>NO..... 0</p> <p>DK..... 98</p>	
4.10	<p>Would you feed your baby on colostrum?</p>	<p>YES..... 1</p> <p>NO..... 0</p> <p>DK..... 98</p>	<p>→ 4.12</p>
4.11	<p>What are the benefits of feeding baby on colostrum?</p> <p><b>MULTIPLE RESPONSE POSSIBLE</b></p>	<p><b>Nutritious TO BABY</b> 1</p> <p><b>Prevents diseases/infections</b> 2</p> <p><b>Cleans baby's stomach</b> 3</p> <p><b>Nothing specific</b> 4</p> <p><b>Don't know</b> 98</p>	
4.12	<p>Why would you not feed your baby on colostrum?</p>	<p><b>Its dirty milk</b> 1</p> <p><b>Not satisfying/ sufficient</b> 2</p> <p><b>Mother needs to rest</b> 3</p> <p><b>Cultural practises (Specify)</b> 4</p> <p><b>Other (Specify)</b> 96</p>	
4.13	<p>How long after birth should a child/baby be put to the breast? IF LESS THAN ONE HOUR, CIRCLE 00HRS, IF LESS THAN 24 HOURS, RECORD IN HOURS, OTHERWISE RECORD DAYS IF DON'T KNOW CIRCLE 98</p>	<p>Immediately/ &lt; 1 HOUR..... 00</p> <p>Hours 1</p> <p>Days 2</p> <p>Don't Know..... 98</p>	
4.14	<p>Within the first three days after delivery, should a baby be given anything to drink/eat other than breast milk?</p>	<p>YES..... 1</p> <p>NO..... 0</p> <p>DK..... 98</p>	<p>} 5.0</p>
4.15	<p>If yes, what should the baby be given?</p>	<p>MILK (OTHER THAN BREAST MILK) A</p> <p>PLAIN WATER B</p> <p>SUGAR/GLUCOSE WATER C</p> <p>GRIPE WATER D</p> <p>SUGAR/SALT SOLUTION E</p> <p>FRUIT JUICE F</p> <p>INFANT FORMULA G</p> <p>TEA/INFUSIONS H</p> <p>COFFEE I</p> <p>HONEY J</p> <p>OTHER (SPECIFY) 96</p>	

<b>5.0 EXCLUSIVE BREASTFEEDING (CHILDREN 0 - 5 MONTHS ONLY)</b>				
5.1	For how long <b>IN MONTHS</b> should a child be exclusively breastfed (fed on breast milk without being given <b>EVEN</b> water?)			
5.2	Is (NAME) still breastfeeding?	YES.....	1	
		NO.....	0	
5.3	Was (NAME) breastfed yesterday during the day or at night?	YES.....	1	
		NO.....	0	
		DK.....	98	
<b>Next I would like to ask you about some liquids that (NAME) MAY HAVE had yesterday during the day or at night. Did (NAME) have any (ITEM FROM LIST)?: Read the list of liquids starting with 'plain water'.</b>				
5.4	What was (NAME) given to drink? yesterday during the day and night Anything else?	Liquids	MILK (OTHER THAN BREAST MILK) PLAIN WATER SUGAR/GLUCOSE WATER GRIPE WATER SUGAR/SALT SOLUTION FRUIT JUICE INFANT FORMULA TEA/INFUSIONS COFFEE HONEY	A Y=1 N=0 B C D E F G H I J
		Semi solids	CEREALS VEGETABLES FRUITS MEATS PULSES/LEGUMES OTHERS (Specify)	K L M N O 96
5.5	At what age was (NAME) introduced to other foods (liquids or semi solids) in addition to breastfeeding?	Liquids	A milk other than breastmilk B plain water C sugar/glucose water D gripe water E sugar/saalt solution F fruit juice G infant formula H tea/infusions I coffee J honey	Age Days Weeks Months 98 99
	<b>RECORD AGE IN DAYS, WEEKS OR MONTHS. IF DON'T KNOW CIRCLE 98, IF NOT YET INTRODUCED RECORD 99</b>	Semi-solids/solids	K cereals L vegetables M fruits N meats O pulses/legumes p others	
	Examples of liquids and semi solids are as listed in 5.4			
5.6	In your opinion is it important for a baby to be breast fed for six months without being introduced to anything else to eat or drink/including water?	YES.....	1	
		NO.....	0	
<b>6.0 CONTINUED BREASTFEEDING AT 2 YEARS (CHILDREN 6 -23 MONTHS)</b>				
6.1	Is (NAME) still breastfeeding?	YES.....	1	→ 7.0
		NO.....	0	
6.2	For how long did (NAME) breastfeed? <b>IF NEVER BREASTFED RECORD 00 IN DAYS, IF LESS THAN A WEEK, RECORD IN DAYS; IF LESS THAN A MONTH, RECORD IN WEEKS OTHERWISE RECORD IN MONTHS. IF DON'T KNOW, CIRCLE '98' PROBE FOR EVERY MONTH SINCE BIRTH OF CHILD</b>	Days.....		
		Weeks.....		
		Months.....		
		Don't Know.....	98	
6.3	Why did (NAME) stop breastfeeding? <b>DO NOT PROMPT; CIRCLE THE (ONE) MOST IMPORTANT REASON. IF MORE THAN ONE REASON IS GIVEN, PROBE FOR THE MOST IMPORTANT AND CIRCLE AS APPROPRIATE.</b>	Baby ill.....	1	
		Baby refused to suckle.....	2	
		Mother refused to breastfeed.....	3	
		Spouse recommended .....	4	
		Mother was sick.....	5	
		No/little breast milk.....	6	
		Sore/cracked nipples	7	
		Mother was away .....	8	
		Mother died.....	9	
		Baby was old enough to stop.....	10	
		Baby got teeth	11	
		Advice by health professional.....	12	
		Advice by other person.....	13	
		Other (Specify.....)	96	
		Don't Know.....	98	

7.0 BOTTLE FEEDING (CHILDREN 0 - 23 MONTHS)																																														
7.1	Yesterday during the day or night did (NAME) drink anything from a bottle with a nipple, a cup or spoon.																																													
	<table border="1"> <tr><td>YES.....</td><td>1</td></tr> <tr><td>NO.....</td><td>0</td></tr> <tr><td>DK.....</td><td>98</td></tr> </table>	YES.....	1	NO.....	0	DK.....	98																																							
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7.2	If yes, which container did (NAME) drink from?																																													
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7.3	What should be used to feed LIQUIDS to a baby?																																													
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8.0 INTRODUCTION OF SOLID, SEMISOLID OR SOFT FOODS AND RESPONSIVE FEEDING (CHILDREN 6 - 23 MONTHS)																																														
8.1	At what age did you feed [NAME] her/his first solid /semi-solid food? By "solid or semi-solid foods," we mean food that is thick, not a soup, broth, or thin porridge																																													
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8.2	Where do you receive/ have you received information about feeding your baby?																																													
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8.3	Who mainly decides what [NAME] should and should not eat?																																													
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9.0 MINIMUM DIETARY DIVERSITY BREASTFED CHILDREN (CHILDREN 6 23 MONTHS)																																														
9.1	Please describe everything that (NAME) ate yesterday during the day or night, whether at home or outside the home. a) Think about when (NAME) first woke up yesterday. Did (NAME) eat anything at that time? b) If yes: Please tell me everything (NAME) ate at that time. Probe: Anything else? Until respondent says nothing else. If no, continue to Question b). c) b) What did (NAME) do after that? Did (NAME) eat anything at that time? d) If yes: Please tell me everything (NAME) ate at that time. Probe: Anything else? Until respondent says nothing else. Repeat question b) above until respondent says the child went to sleep until the next day. If respondent mentions mixed dishes like a PORRIDGE, sauce or stew, probe: c) What ingredients were in that (MIXED DISH)? Probe: Anything else? Until respondent says nothing else. As the respondent recalls foods, underline the corresponding food and circle '1' in the column next to the food group. Once the respondent finishes recalling foods eaten, read each food group where '1' was not circled, ask the following question and Circle '1' if respondent says yes, '0' if no and '8' if don't know.																																													
Write down all foods and drinks mentioned. When composite dishes are mentioned, ask for the list of ingredients. When the respondent has finished, probe for meals and snacks not mentioned.																																														
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	Yesterday during the day or night, did (NAME) drink/eat any (FOOD GROUP ITEMS)?																																													
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10.2	How many times did (NAME) eat solid, semi-solid, or soft foods other than liquids yesterday during the day or at night?																																													
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11.0 CONSUMPTION OF IRON RICH OR IRON FORTIFIED FOODS (CHILDREN 6 23 MONTHS)																																														
Now I would like to ask you about some particular foods (NAME) may eat. I am interested in whether your child had the item even if it was combined with other foods.																																														
11.1	Yesterday, during the day or night, did (NAME) consume any [list iron fortified solid, semi-solid or soft foods designed specifically for infants and young children available in the local setting]?																																													
	<table border="1"> <thead> <tr> <th>[LIST OF FOODS]</th> <th>Y</th> <th>N</th> <th>DK</th> </tr> </thead> <tbody> <tr><td>1 Cerelac</td><td>1</td><td>0</td><td>98</td></tr> <tr><td>2 plumpy nut</td><td>1</td><td>0</td><td>98</td></tr> <tr><td>3 Corn soy blend</td><td>1</td><td>0</td><td>98</td></tr> <tr><td>4 Weetablx</td><td>1</td><td>0</td><td>98</td></tr> <tr><td>5 Quick porridge OATS</td><td>1</td><td>0</td><td>98</td></tr> <tr><td>6 White OATS</td><td>1</td><td>0</td><td>98</td></tr> <tr><td>7 Others</td><td>1</td><td>0</td><td>98</td></tr> </tbody> </table>	[LIST OF FOODS]	Y	N	DK	1 Cerelac	1	0	98	2 plumpy nut	1	0	98	3 Corn soy blend	1	0	98	4 Weetablx	1	0	98	5 Quick porridge OATS	1	0	98	6 White OATS	1	0	98	7 Others	1	0	98													
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11.3	Yesterday, during the day or night, did ( <b>NAME</b> ) consume any [list lipid based nutrient supplement (LNS)e.g. plumpy nuts available in the local setting]? <i>Show common types of LNS available in survey area. (plumpy nuts, plumpy sup etc)</i>	YES..... NO.....							
11.4	Yesterday, during the day or night, did ( <b>NAME</b> ) consume any [list iron fortified infant/toddler formulas available in the local setting]?	YES..... 1 NO..... 0							
<b>Now we are going to discuss the feeding of [child's name] since this time yesterday.</b>									
11.5	Are you the person who fed (NAME) yesterday?	YES..... 1 NO..... 0							
11.6	Yesterday, what liquids other than breastmilk was (NAME) given? (READ ALL OPTIONS)	A None..... 01 B Tea..... 02 C Water (includes sugar water) ..... 03 D Infant formula..... 04 E Other non-breastmilk milks..... 05 F Other, specify: ..... 96 G Does not know..... 98							
11.7	Yesterday, did [NAME] have anything to drink from a bottle with a nipple?	YES 1 NO 0 DK 98							
11.8	Yesterday, did [NAME] eat any solid or semi-solid foods?	Yes ..... 1 No..... 0 Does not apply (child does not eat solid foods)..... 88 Does not know..... 98							
<b>Now I would like to ask some questions about how [child's name] was fed yesterday during the main meal.</b>									
11.9	Yesterday, at the main meal, did [NAME] eat all the food you thought he/she should?	YES 1 NO 0 DK 98							
11.10	Yesterday, during the main meal, did you do anything to encourage [NAME] to eat?	YES 1 NO 0							
11.11	What did you do? (Write down the caregiver's answer and code it later. Multiple responses are acceptable. Circle all codes that apply.)	Offered another food or liquid..... 01 Encouraged verbally..... 02 Modeled eating (with or without toy)..... 03 Ordered strongly or forced the child to eat. 04 Another person helped feed child..... 05 Another form of encouragement..... 06 Does not know..... 98							
11.12	Yesterday, during the main meal while feeding [NAME], did you talk to her/ him?	YES 1 NO 0 DK 98							
11.13	What did you say? (Write down the caregiver's answer and code it later. Multiple responses are acceptable. Circle all codes that apply.)	Ordered child to eat..... 01 Praised child..... 02 Asked child questions..... 03 Talked about the food ..... 04 Threatened the child..... 05 Told child that she liked the food..... 06 Rewarded the child..... 07 Talked about other things ..... 08 Does not know..... 98							
11.14	Yesterday, during the main meal, did [NAME] self-feed (eat by him/herself, using hands or utensil) at any moment during the meal?	YES 1 NO 0 DK 98							
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11.16	The last time [NAME] was sick, did you offer less, more or the same amount of breast milk as when (NAME) is healthy? <b>(If response is "less", ask additional questions to determine why.)</b>	<table border="1"> <tr><td>Less, because the child did not want it.....</td><td>1</td></tr> <tr><td>Less, because mother's decision.....</td><td>2</td></tr> <tr><td>More.....</td><td>3</td></tr> <tr><td>The same.....</td><td>4</td></tr> <tr><td>Child never breastfed or child breastfeeding before last illness.....</td><td>5</td></tr> <tr><td>Child has never been sick.....</td><td>88</td></tr> <tr><td>Does not know.....</td><td>98</td></tr> </table>	Less, because the child did not want it.....	1	Less, because mother's decision.....	2	More.....	3	The same.....	4	Child never breastfed or child breastfeeding before last illness.....	5	Child has never been sick.....	88	Does not know.....	98				
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11.17	The last time [NAME] was sick, did you offer less, more or the same amount of non-breast milk liquids as when [NAME] is healthy? <b>(If response is "less", ask additional questions to determine why.)</b>	<table border="1"> <tr><td>Less, because the child did not want it.....</td><td>1</td></tr> <tr><td>Less, because mother's decision.....</td><td>2</td></tr> <tr><td>More.....</td><td>3</td></tr> <tr><td>The same.....</td><td>4</td></tr> <tr><td>Child never fed non-breast milk liquids.....</td><td>88</td></tr> <tr><td>Does not know.....</td><td>98</td></tr> </table>	Less, because the child did not want it.....	1	Less, because mother's decision.....	2	More.....	3	The same.....	4	Child never fed non-breast milk liquids.....	88	Does not know.....	98						
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11.1	The last time [NAME] was sick, did you offer less, more or the same amount of foods as when (NAME) is healthy? <b>IF THEY RESPOND "LESS" THEN PROBE "WHY?"</b>	<table border="1"> <tr><td>Less, because the child did not want it.....</td><td>1</td></tr> <tr><td>Less, because mother's decision.....</td><td>2</td></tr> <tr><td>More.....</td><td>3</td></tr> <tr><td>The same.....</td><td>4</td></tr> <tr><td>Child never fed foods.....</td><td>88</td></tr> <tr><td>Does not know.....</td><td>98</td></tr> </table>	Less, because the child did not want it.....	1	Less, because mother's decision.....	2	More.....	3	The same.....	4	Child never fed foods.....	88	Does not know.....	98						
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11.19	After the illness ended, did you offer less, more or the same amount of food as when [NAME] is healthy? <b>(If response is "less", ask additional questions to determine why?)</b>	<table border="1"> <tr><td>Less, because the child did not want it.....</td><td>1</td></tr> <tr><td>Less, because mother's decision.....</td><td>2</td></tr> <tr><td>More.....</td><td>3</td></tr> <tr><td>The same.....</td><td>4</td></tr> <tr><td>Does not know.....</td><td>98</td></tr> </table>	Less, because the child did not want it.....	1	Less, because mother's decision.....	2	More.....	3	The same.....	4	Does not know.....	98								
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11.20	How often does (NAME)'s food remain on the plate/bowl?	<table border="1"> <tr><td>Most of the time/always</td><td>1</td></tr> <tr><td>Often/several times</td><td>2</td></tr> <tr><td>Few times/once in a while</td><td>3</td></tr> <tr><td>Never</td><td>4</td></tr> </table>	Most of the time/always	1	Often/several times	2	Few times/once in a while	3	Never	4										
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11.21	What is done to the food that remains on the plate if (NAME) fails to finish?	<table border="1"> <tr><td>Put in a fridge to feed baby later</td><td>A</td></tr> <tr><td>Put in a cupboard to feed baby later</td><td>B</td></tr> <tr><td>Put elsewhere to feed baby later</td><td>C</td></tr> <tr><td>Thrown away</td><td>D</td></tr> <tr><td>Given to other children</td><td>E</td></tr> <tr><td>Other, specify</td><td>96</td></tr> </table>	Put in a fridge to feed baby later	A	Put in a cupboard to feed baby later	B	Put elsewhere to feed baby later	C	Thrown away	D	Given to other children	E	Other, specify	96						
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11.22	How often are you/ is the mother away from the baby for most of the day (more than half a day)?	<table border="1"> <tr><td>Always/most days (6 days/week)</td><td>1</td></tr> <tr><td>Often/Many days (4-5 days/week)</td><td>2</td></tr> <tr><td>Sometimes/A few days (2-3days/week)</td><td>3</td></tr> <tr><td>Never/few days (0-1 days/week)</td><td>4</td></tr> </table>	Always/most days (6 days/week)	1	Often/Many days (4-5 days/week)	2	Sometimes/A few days (2-3days/week)	3	Never/few days (0-1 days/week)	4										
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12.0 ANTENATAL CARE (FOR PREGNANT WOMEN)																																																			
Now I would like to ask you some questions about your experience during this pregnancy.		CODING CATEGORIES																																																	
QUESTIONS AND FILTERS																																																			
12.1	Have you received antenatal care during this pregnancy?	YES NO	1 0 → 12.10																																																
12.2	How many months pregnant were you when you first received antenatal care for this pregnancy?	Months Don't Know.....	<input type="text"/> 98																																																
12.3	How many times have you received antenatal care during this pregnancy?	No. of times Don't Know.....	<input type="text"/> 98																																																
12.4	Where DID you receive antenatal care for this pregnancy? (FW: IF HEALTH FACILITY, PROBE AND WRITE ITS NAME, CODE AND LOCATION) Name of HF HF code Location (FW: IF MORE THAN ONE PLACE MENTIONED, RECORD THE MOST RECENT PLACE VISITED)	Home..... Traditional birth attendant's..... Health facility..... Other (Specify).....	1 2 3 96																																																
12.5	Whom did you see?  PROBE (Anyone else?) FOR THE TYPE OF PERSONS AND RECORD ONLY THE PERSON WITH THE HIGHEST QUALIFICATION	Doctor..... Nurse..... Midwife/ Auxillary midwife.. Traditional birth attendant.. Other (Specify).....	1 2 3 4 96																																																
12.6	During any of the ANTENATAL CARE VISITS for this pregnancy, were any of the following done or given to you at least once?	Height measurement Weight measurement..... BP measurement..... Iron Folate supplementation .. Anti-malaria drugs..... Urine sample .. Blood sample .. Tetanus vaccine .. Deworming Tablets HIV Test Mosquitoe net MUAC Ultrasound SCAN Other..... Specify.....	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> <th>D/K</th> </tr> </thead> <tbody> <tr><td>1</td><td>0</td><td>98</td></tr> </tbody> </table>	Y	N	D/K	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98
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12.7	During any of the antenatal care visits for this pregnancy, were you given any information or counseled about:	Tests during pregnancy Place of delivery Your own health Your own nutrition HIV/AIDS..... Breastfeeding Infant feeding IFA	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> <th>can't remember</th> </tr> </thead> <tbody> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> </tbody> </table>	Y	N	can't remember	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98																					
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12.8	Where have you received the information from? FW: MULTIPLE RESPONSES ARE ACCEPTABLE	Doctor..... Nurse..... Midwife/ Auxillary midwife.. Traditional birth attendant.. Relative/ Friend/ Neighbour Community Health Worker NGO/CBO Other..... Specify.....	A B C D E F G 96																																																
12.9	During this pregnancy were you given / did you buy any Iron tablets/ syrup or Iron and Folic Acid supplements? INTERVIEWER TO SHOW THE TABLETS	YES NO.....	1 0 → 12.11																																																
12.10	During this pregnancy, for how many days have you taken the Iron tablets / syrup or Iron Folate supplements?		<input type="text"/>																																																
12.11	Why did you NOT take iron supplement during this pregnancy?  multiple response allowed	Not given at health facility Ignored advise from healthcare worker Threw them away React to them Can't afford to buy Other (Specify)	1 2 3 4 5 96																																																
12.12	Are you currently taking any other supplements or other nutrition commodities  FW: MULTIPLE RESPONSES ARE ALLOWED	Nutritional supplements (fortified blended flours) (CSB, Advantage Plus, Unimix..) (RUSF... Herbal supplements Soil/ Mineral stones Other Specify.....	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr><td>1</td><td>0</td></tr> <tr><td>1</td><td>0</td></tr> <tr><td>1</td><td>0</td></tr> </tbody> </table>	Y	N	1	0	1	0	1	0																																								
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13.1b	How many months pregnant were you when you first attended ANC clinic for your pregnancy with (NAME)?	months	<input type="text"/> DK 98																																																
13.2	How many times did you receive antenatal care during your pregnancy with (NAME)?	No. of times Don't Know.....	<input type="text"/> DK 98																																																
13.3	Why did you not attend ANC?	Not aware of existence/importance of ANC Health facility too far Unfriendly health workers TBA services adequate Cultural barriers e.g. staff too young, male staff etc Other (Specify)	1 2 3 4 5 96																																																

13.4	During any of the antenatal care visits for your pregnancy with (NAME), were you given any information or counseled about:	Tests during pregnancy Place of delivery Your own health Your own nutrition HIV/AIDS Breastfeeding Infant feeding	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> <th>can't remember</th> </tr> </thead> <tbody> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> <tr><td>1</td><td>0</td><td>98</td></tr> </tbody> </table>	Y	N	can't remember	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98									
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13.5	During any of the <b>ANTENATAL CARE VISITS</b> for your pregnancy with (NAME), were any of the following done or given to you at least once?	Weight measurement..... BP measurement..... Iron/folate tablets ..... Anti-malaria drugs..... Urine sample ..... Blood sample ..... Tetanus vaccine ..... Deworming tablets HIV Test Mosquito net Ultrasound SCAN Other..... Specify _____	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> <th>DK</th> </tr> </thead> <tbody> <tr><td>1</td><td>0</td><td>98</td></tr> </tbody> </table>	Y	N	DK	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98	1	0	98
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13.6	<b>CHECK Q13.5 IF RESPONSE IS YES FOR IRON/FOLATE, ASK:</b> During your pregnancy with (NAME), were you issued/ did you buy Iron tablet/ syrup or Iron Folate Supplementation?  <b>RESPONDENT SHOW THE TABLETS</b>	YES..... NO.....	<table border="1"> <tr><td>1</td></tr> <tr><td>0</td></tr> </table> <p style="text-align: right;">→ 13.8</p>	1	0																															
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13.7	During the whole pregnancy with (NAME), for how many days did you take the tablet/syrup or Iron Folate supplement?		<table border="1"> <tr><td> </td></tr> </table>																																	
13.8	<b>IF NO FOR IRON/FOLATE, ASK:</b> Why did you NOT take iron supplements during pregnancy with (NAME)?	<i>Not given at health facility</i> <i>Ignored advise from healthcare worker</i> <i>Threw them away</i> <i>React to them</i> <i>Can't afford to buy</i> <i>Other (Specify) _____</i>	<table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> <tr><td>3</td></tr> <tr><td>4</td></tr> <tr><td>5</td></tr> <tr><td>96</td></tr> </table>	1	2	3	4	5	96																											
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13.9	Are you currently taking any other supplements or other nutrition commodities  <b>FW: MULTIPLE RESPONSES ARE ALLOWED</b>	Nutritional supplements (fortified blended flours) <i>(CSB, Advantage Plus, Unimix..)</i> <i>(RUSF...</i> Herbal supplements Soil/ Mineral stones Other Specify.....	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr><td>1</td><td>0</td></tr> <tr><td>1</td><td>0</td></tr> <tr><td>96</td><td> </td></tr> </tbody> </table>	Y	N	1	0	1	0	96																										
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14.0	<b>POST-NATAL PRACTICES</b> <b>[PROVIDE GUIDANCE TO DATA COLLECTORS]</b>																																			
14.1	Where did you deliver (NAME) ?	At home by TBA At home by Nurse At home without assistance Hospital Other (specify) _____	<table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> <tr><td>3</td></tr> <tr><td>4</td></tr> <tr><td>96</td></tr> </table>	1	2	3	4	96																												
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14.2	[If NOT at HEALTH FACILITY, ASK], How long did it take before you took (NAME) to a clinic for the first time?	Immediately (within first 24 hours) Within first 2 weeks Between 2 weeks and 1 month After 1 month Child not taken Does not intend to take child to clinic.	<table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> <tr><td>3</td></tr> <tr><td>4</td></tr> <tr><td>5</td></tr> <tr><td>6</td></tr> </table>	1	2	3	4	5	6																											
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15.0	<b>MATERNAL NUTRITIONAL PRACTICES (WOMEN -15-49)</b>																																			
Please describe the foods (meals and snacks) that you ate or drank yesterday during the day and night, whether at home or outside the home. Start with the first food or drink of the morning.																																				
Write down all foods and drinks mentioned. <b>When composite dishes are mentioned, ask for the list of ingredients.</b>																																				
When the respondent has finished, probe for meals and snacks not mentioned.																																				
Breakfast	Snack	Lunch	Snack	Dinner	Snack																															
[Households: include foods eaten by any member of the household, and exclude foods purchased and eaten outside the home]																																				
When the respondent recall is complete, fill in the food groups based on the information recorded above. For any food groups not mentioned, ask the respondent if a food item from this group was consumed.																																				
1 CEREALS corn/maize, rice, wheat, sorghum, millet or any other grains or foods made from these (e.g. bread, noodles, porridge or other grain products) + insert local foods e.g. ugali, nshima, porridge or paste	Y	N	DK																																	
2 WHITE ROOTS and TUBERS (white potatoes, white yam, white cassava, or other foods made from roots)																																				
3 VITAMIN A RICH VEGETABLES AND TUBERS (pumpkin, carrot, squash, or sweet potato that are orange inside + other locally available vitamin A rich vegetables (redpepper)																																				
4 DARK GREEN LEAFY VEGETABLES (dark green leafy vegetables, including wild forms locally available vitamin A rich leaves such as amaranth, cassava leaves, kale, spinach)																																				
5 OTHER VEGETABLES (other vegetables (e.g. tomato, onion, eggplant) + other locally available vegetables)																																				
6 VITAMIN A RICH FRUITS (ripe mango, cantaloupe, apricot (fresh or dried), ripe papaya, dried peach, and 100% fruit juice made from these + other locally available vitamin A rich fruits)																																				
7 OTHER FRUITS (other fruits, including wild fruits and 100% fruit juice made from these)																																				
8 ORGAN MEAT (liver, kidney, heart or other organ meats or blood-based foods)																																				
9 FLESH MEAT (beef, pork, lamb, goat, rabbit, game, chicken, duck, other birds, insects)																																				
10 EGGS (eggs from chicken, duck, guinea fowl or any other egg)																																				
11 FISH AND SEAFOOD (fresh or dried fish or shellfish)																																				
12 LEGUMES, NUTS, AND SEEDS (dried beans, dried peas, lentils, nuts, seeds or foods made from these (eg. hummus, peanut butter)																																				
13 MILK AND MILK PRODUCTS (milk, cheese, yogurt or other milk products)																																				
14 OILS AND FATS (oil, fats or butter added to food or used for cooking)																																				
15 SWEETS (sugar, honey, sweetened soda or sweetened juice drinks, sugary foods such as chocolates, candies, cookies and cakes)																																				
16 SPICES AND CONDIMENTS, BEVERAGES (spices (black pepper, salt), condiments (soy sauce, hot sauce), coffee, tea, alcoholic beverages)																																				

