FINAL REPORT

Beneficiary Population-Based Nutritional Baseline Survey

BALAKA, MACHINGA AND MANGOCHI

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LUANAR

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Clinic
DDS	Dietary Diversity Score
DHO	District Health Offficer
EBF	Exclusive Breastfeeding
FGD	Focus Group Discussion
FLW	Front Line Worker
FtF INVC	Feed the Future, Intergrating Nutrition in Value Chains
GMP	Growth Monitoring and Promotion
HDD	High Dietary Diversity
HIV	Human Immunodeficiency Virus
INVC	Intergrating Nutrition in Value Chains
IYCF	Infant and Young Child Feeding
IYCN	Infant and Young Child Nutrition
LDD	Low Dietary Diversity
MDD	Minimum Dietary Diversity
LUANAR	Lilongwe University of Agriculture and Natural Resources
MDHS	Malawi Demographic and Health Survey
NASFAM	National Smallholders Association of Malawi
NSO	National Statistical Office
SUN	Scaling Up Nutrition
TA	Traditional Authority
WASH	Water, Saniation and Hygiene
WHO	World Health Organisation

EXECUTIVE SUMMARY

Introduction

This report reflects the baseline survey of community based nutrition was conducted in Balaka, Machinga and Mangochi in the districts. The overall objective of the beneficiary population-based baseline survey was to provide the FtF-INVC activity with representative baseline data on nutritional indicators of the INVC beneficiary population. The specific objectives were to determine the:

1. Prevalence of stunted children under 3 years of age (custom)
2. Prevalence of children 6-23 months receiving a minimum acceptable diet
3. Dietary Diversity of women of reproductive age (15 to 49 years)
4. Percent of 0-5 months children exclusively breastfed in target districts

Methodology for data collection and analyses

The study was conducted in Balaka, Machinga and Mangochi from July to August 2014. These are districts where INVC interventions will be implemented. A two stage random sampling was employed in selecting the sample during the survey. The total number of households to be interviewed in each district was in turn determined by the population of all the participating villages in the districts based on proportion to population size (PPS) methodology. The desired sample size of 2,657 that was required to detect a change of 7 percentage points, that is, a drop in the current prevalence of stunting from 56 percent to 49 percent among children under 3 years, a "whole of community" approach was used to develop the sampling frame.

Major findings

The following are the results from the 2014 beneficiary population-based nutritional baseline survey conducted in Balaka, Mangochi and Machinga where FtF-INVC's interventions will be operational.

The community perceptions were determined using focus group discussions (FGDs) held with women of child baring age (n = 25), men (n = 32) and grandmothers (n = 27) in all the three districts. These groups are considered to be influential in issues pertaining to maternal, infant and young child nutrition (MIYCN).

Main indicators established by the Baseline survey

The current study was conducted to determine a number of key indicators that would assist in monitoring and evaluation of the activites to be implemented in the three districts. The indicators include prevalence of stunting among children less than 36 months of age, proportion of such children receiving minimum acceptiable diet, dietary diversity among women fo child bearing age. The findings are summarized in the Table below.

Summary of the main baseline survey indicators by district

Parameter	Balaka	Machinga	Mangochi	Overall %
Prevalence of stunted children < 3 years of age	36.9	42.7	51.0	47.3
Proportion of children 6-23 months who received minimum acceptable diet:				
Breastfed children 6 – 23 months	33.3	34.6	31.8	32.5
Non-breastfed children 6 – 23 months	55.6	26.9	40.5	40.9
Proportion of children who received minimum meal frequency:				
Breastfed children 6-8 months old	89.1	88.1	82.8	84.4
Breastfed children 9-23 months	67.6	66.0	76.2	73.2
Non-breastfed children 9-23 months	40.7	26.9	29.1	31.1
Percent of 0-5 months children exclusively breastfed	73.8	77.5	69.6	71.9
Women 15-49 years who ate diversified diet	77.2	74.8	71.7	74.6
Mean number of foods consumed by women 15 to 49 years of age	4.3	4.1	4.1	4.1

Nutrtitional status: Anthropometric indicators

Prevalence of chronic malnutrition (stunting) was very high in Mangochi (51%) and lowest in Balaka (36.9%). However, prevalence of acute malnutrition (GAM) was within normal range (2.2% Balaka, 0.7% Machinga and 1.7% in Mangochi). There exists among these children symmetrical stunting but with satisfactory weight for their short stature. Boys were likely to be stunted, underweight and wasted (51.1%, 14% and 2% respectively) than girls (43.4%, 12.1% and1.3% respectively). These findings are consistent with those reported in national nutrition surveys.

Infant and young child feeding practices indicators

Most of the mothers had followed the appropriate recommended infant feeding practices in that most respondents (71.9%) indicated their infants less than 6 months of age had been exclusively and all of them were being breastfed. Breastfeeding had been initiated within 30 minutes after birth, 90% of the infants had received colostrums and the majority of the children less than 24 months of age (92.1%) were still being breastfed.

Current feeding practices as captured by feeding pattern the day before the survey revealed that the majority of the eligible children (86.7%) had been fed but meal frequency was low as 47.3% of the children were fed less than three times per day. Feeding practices for the nonbreastfed children were inadequate in that the proportion fed at least 4 times was low in each district and renged from a low of 26.9% in Machinga to 40.7% in Balaka. In addition, the proportion that

received minimum acceptable diet was also lowest in Machinga (26.9%) and highest in Balaka (55.6%).

Chronic undernutrition (stunting) is the main problem in the three districts and efforts should be intensified to combat it. Being too short can be a risk factor for obstetric complications and diet-related non-communicable diseases later in adulthood.

Breastfeeding from birth continues to be universal in the three districts as evidenced by the fact that almost all the children (≥97%) less than 2 years of age had ever been breastfed.

Dietary pattern for infants and young children was similar to that of women of child bearing age (15 to 49 years) suggesting that the children depend more on family meals once complementary feeding is initiated. Almost one half of the children aged 6 to 23 months did not receive the minimum acceptable diet which in turn might be contributing to high chronic malnutrition rates. Children, because of their small stomachs and high nutrient requirements, need to be fed at least 4 times and should receive a minimum acceptable diet.

The main stay of the diet for both the children and their mothers is cereal particularly maize which is the main staple frequently eaten with vegetables. All these are bulky and have low energy and nutrient density, hence difficult for the children to meet their recommended daily nutrient requirements.

Almost all women who participated in this survey had knowledge on infant and young child feeding practices and the main source of the information were health facilities. However a significant proportion did not put the knowledge into practice as revealed by the relative low proportion of the children who received a minimum acceptable diet and those that were fed with minimum meal frequency as recommended in the national guidelines and WHO.

Both men and grandmothers are important in MIYCN due to their roles in agricultural production, food utilization, decision making and control over resources. However, there are no structures in any of the communities in all the three districts that specifically target either grandmothers or men in MIYCN interventions.

It is therefore recommended that:

- Frontline workers should continue to include MIYCN messages to mothers at any opportunity that avails itself. It is important to include even cooking demonstrations using locally available foods to encourage the mothers to adopt the correct appropriate maternal, infant and young child feeding practices.
- Grandmothers and men should be fully engaged in design and implementation of any interventions that have food and nutrition objectives that target mothers, infant, and young children.
- As custodians of cultural knowledge, it will be important to encourage establishment of structures and use consultative approach with the grandmothers in order to design interventions that are likely to be adopted.

- Separate training sessions in MIYCN should be designed targeting frontline workers, community leadership and mothers to reinforce appropriate nutrition practices at household level.

ACKNOWLEDGEMENT

We are grateful to the United States Agency for International Development for funding the baseline surveys through FtF INVC. We especially thank Jim Phillips, Grace Ngwira for the support rendered during the entire period of the survey from preparation to completion of data collection. Many thanks should also go to all NASFAM coordinators from Namwera Office in Mangochi, Machinga/Balaka Office for providing the information and data necessary for sampling of villages where to conduct the survey in the 3 districts. We would like also to thank the TAs, GVHs and Village Heads, the respondents and their families for willingly accepting to participate in the survey.

Thanks to all data collection supervisors, enumerators, the anthropometric measurers, data entry clerks and all the drivers for their cooperation and hard working spirit. Above all we thank the Almighty God for the travel mercies and keeping the entire survey team in good health throughout the survey period.

CHAPTER 1: INTRODUCTION

1.1 Baseline Survey Background

This baseline survey report of community based nutrition was conducted in Balaka, Machinga and Mangochi in the districts. The overall objective of the beneficiary population-based baseline survey was to provide the FtF-INVC activity with representative baseline data on nutritional indicators of the INVC beneficiary population. The specific objectives were to determine the:

5. Prevalence of stunted children under 3 years of age (custom)
6. Prevalence of children 6-23 months receiving a minimum acceptable diet
7. Dietary Diversity of women of reproductive age (15 to 49 years)
8. Percent of 0-5 months children exclusively breastfed in target districts

1.2 Baseline Survey Organisation

1.2.1 Consultation with DHO and NASFAM

1.2.2 Survey Instruments

A number of instruments including household questionnaire, survey interview guide, checklist for focus group discussions and anthropometric equipment (secca scales for taking weight and height boards for taking length of children under 2 years of age and height for children aged 2 years and older).

The consultant developed the household questionnaire which was translated into Chichewa for ease of interviewing, survey interview guide, and checklist for focus group discussion. These were shared with FtF INVC for review and feedback was incorporated in the final instruments.

1.2.3 Training of Survey Assistants

Training for the survey was conducted by the consultant and data expert in Liwonde from 24th to 28thJuly 2014. Survey assistants were trained in administration of the survey instruments to develop their skills. The training involved going through each household questionnaire item to understand what data it intended to capture and how best to collect the data. It was interactive in that there were questions and answers activities, group discussions, and simulation of questionnaire administration in pairs. The survey assistants were also trained in group dynamics and teamwork as well as survey ethics and ethical conduct in communities to ensure quality data collection.

CHAPTER 2: METHODOLOGY FOR DATA COLLECTION AND ANALYSES

Both quantitative and qualitative methods were used in the baseline survey. To guide the development of data collection instruments and analysis plan, a modified UNICEF conceptual framework for child growth and development (UNICEF, 1997) was used to capture the factors that affect child under-nutrition. The model state that the optimal child growth is influenced by food, care, and health which are in turn determined by various individual, household and community resources, such as maternal knowledge and education, household food security, access to safe water and sanitation and availability of health services.

2.1 Pre-survey preparations

Given the desired sample size of 2,657 that was required to detect a change of 7 percentage points, that is, a drop in the current prevalence of stunting from 56 percent to 49 percent among children under 3 years, a "whole of community" approach was used to develop the sampling frame. Therefore the following data were sourced:

- All villages participating in INVC programme from NASFAM offices in Balaka/Machinga and Mangochi (Namwera Office).
- Data from District hospitals and District Commissioners offices in all the three districts to obtain population data and confirmation of the existence of the villages provided by NASFAM offices in Balaka/Machinga and Mangochi (Namwera Office).

2.2 Sampling procedures for the baseline survey

The sampling procedure used to select the villages to participate in the baseline survey was as follows:

- Total number of villages participating in INVC project in each of the three districts was determined from the project offices. Total population of the participating villages in each of the districts (Balaka, Machinga and Mangochi) was also determined based on the district data collected from DHO.
- The total number of households to be interviewed in each district was in turn determined by the population of all the participating villages in the districts based on proportion to population size (PPS) methodology

Following the procedure used, the total number of participating villages were 141 in Mangochi, 66 villages in Balaka and 50 villages in Machinga) based on the population size of the district and the list of beneficiaries. The corresponding households that were finally interviewed were 453 for Balaka, 446 for Machinga and 1,758 for Mangochi.

Second stage:

The second level of sampling was the selection of the first household within the village. A bottle or a pen was spun and the direction of the pointed end was noted. All visible households were then listed and one household selected randomly often by the local village head or a representative to start data collection. Where a village was big and has more than one point of household concentrations, multiple sampling points were done to ensure that the entire village

was equally sampled. The leader of each survey team of enumerators was responsible for sampling.

2.3 Organization of surveys and data collection

Data collection for the baseline surveys was implemented by five teams each team comprising of a supervisor, two anthropometric measurers (with vast experience in taking anthropometric measurement using stadiometers and digital weighing scales), one data entry clerk and five research assistants who conducted household interviews plus a driver (Annex 4).

Before data collection, the survey team received extensive training on survey interviewing techniques, data collection methods, anthropometric measurements and ethics training. Training consisted of classroom instruction on the respective questionnaire contents, concepts and definitions, and field practice in performing actual interviews. After field practice, issues pertaining to translations, interviewing techniques and any issues that emerged from the pre-testing of the questionnaires were resolved before going to the field for actual data collection.

During data collection, the enumerators moved in their respective teams. Logistics and geographic coverage of the selected GVHs was coordinated by the supervisors. This included coordinating and supervising the movement of the enumerators and in-field data entry clerks. The supervisors also conducted focus group discussions with grandmothers, men and women of child bearing age.

2.3.1 Focus Groups Discussions

In each district, a set of FGDs was conducted with three key groups of people, that is: mothers, grandmothers and men using the FGD tools as checklists (Annex 2). Together, the FGDs gathered an assessment of caregivers' nutritional knowledge, attitudes and practices; and, social and cultural practices and beliefs which have either a negative or positive effect on nutrition outcomes.

2.3.2 Nutritional assessment of children under 3 years

Each team had 2 trained anthropometrists with vast experience in measuring weight and stature. Children's weight and stature measured were used to assess nutritional status using three traditional indices of weight-for-height (measures wasting); weight-for-age (measures underweight); and, height-for-age (measures stunting). The child growth indicators were based on the 2006 WHO standards, which Malawi adopted, and were used in the 2010 Malawi Demographic and Health Survey (MDHS).

2.3.3 Infant and Young Child Feeding

Infant and young child feeding were assessed and benchmarked in each district. Emphasis was on assessing exclusive breastfeeding (EBF) and complementary feeding, dietary diversity, provision of minimum acceptable diet and minimum acceptable meal frequency as key determinants of nutritional well-being among infants and young children.

CHAPTER 3: RESULTS AND DISCUSSION

This chapter contains results from the 2014 beneficiary population-based nutritional baseline survey conducted in Balaka, Mangochi and Machinga where FtF-INVC's interventions will be operational. A total of 2657 households were sampled with 66.3% (1758) from Mangochi; 17% (453) from Balaka and 16.7% from Machinga district.

The community perceptions were determined using focus group discussions (FGDs) held with women of child baring age (n = 25), men (n = 32) and grandmothers (n = 27) in all the three districts. These groups are considered to be influential in issues pertaining to maternal, infant and young child nutrition (MIYCN).

3.1 Main indicators established by the Baseline survey

The current study was conducted to determine a number of key indicators that would assist in monitoring and evaluation of the activites to be implemented in the three districts. The indicators include prevalence of stunting among children less than 36 months of age, proportion of such children receiving minimum acceptiable diet, dietary diversity (Table 1). Detailed analyses of these key indicators are provided in the relevant sections that follow in the chapter. There were a total of 1678 children aged 6-23 months and only 132 children aged 9-23 months (7.9%) had stopped breast feeding.

Table 1: Summary of the main baseline survey indicators by district

Parameter	Balaka	Machinga	Mangochi	Overall %
Prevalence of stunted children < 3 years of age	36.9	42.7	51.0	47.3
Proportion of children 6-23 months who received minimum acceptable diet:				
Breastfed children 6 – 23 months	33.3	34.6	31.8	32.5
Non-breastfed children 6 – 23 months	55.6	26.9	40.5	40.9
Proportion of children who received minimum meal frequency:				
Breastfed children 6-8 months old	89.1	88.1	82.8	84.4
Breastfed children 9-23 months	67.6	66.0	76.2	73.2
Non-breastfed children 9-23 months	40.7	26.9	29.1	31.1
Percent of 0-5 months children exclusively breastfed	73.8	77.5	69.6	71.9
Women 15-49 years who ate diversified diet	77.2	74.8	71.7	74.6
Mean number of foods consumed by women 15 to 49 years of age	4.3	4.1	4.1	4.1

3.2 Socio-Demographic Characteristics

3.3 Household Composition

Presented in Table 2 are some key aspects of household composition in the three districts. From a total of 2,657 households that were interviewed, the total number of household members was 13,948 and mean household size was 5.2 which was the similar for all the districts. The average age of the household heads in the 3 districts was 34 years, which is similar to the average age reported in the 2010 Malawi IHS3 and 2008 Malawi Census datasets. The results also show that there were more female members in the households visited (52.3% of female members to 47.7% of the male members respectively).

Table 2: Household characteristics by district

Characteristic	Balaka	Machinga	Mangochi	Overall
Type of household head (%):				
Male Head (n = 2022	76.4	84.4	74.3	76.3
Female Head (n = 635	23.6	15.6	25.7	23.7
Total household members:	2331	2399	9218	13948
Mean household size:	5.2	5.3	5.2	5.2
Sex of household members:				
Male	48.2	50.2	46.9	47.7
Female	51.8	49.8	53.1	52.3
Age related characteristics:				
Mean age of male HH (years)	34.7	33.8	34.4	34.4
Mean age of HH members	16.3	15.5	15.8	15.8
Mean years of schooling	5.5	4.7	4.4	4.7

3.4 Age of the household members

From Table 3, it can be seen that the majority of the household members (64.2 percent) were between 0 and 15 years of age while members who were 45 years and older were only 3.8 percent overall. The trend is similar for each district and suggest high dependency ratio.

Table 3: Age category of the household members by district (percent)

Age group	Balaka (n=2331)	Machinga (n 2399)	Mangochi (n 9218)	Total (n=1 3948)
Age unknown	1.0	0.5	0.5	0.6
0 to 5 years	29.6	31.5	31.4	31.1
6 to 10 years	16.5	16.8	16.7	16.7
11 to 15 years	10.9	10.6	10.8	10.8
16 to 20 years	7.9	7.5	7.5	7.6
21 to 25 years	8.8	8.2	8.9	8.8
26 to 30 years	7.9	8.0	7.4	7.6

31 to 35 years	7.3	7.5	5.7	6.3
36 to 40 years	3.7	4.2	4.7	4.4
41 to 45 years	1.9	2.4	2.4	2.3
45 + years	4.4	2.8	3.9	3.8

3.4 Educational Level

Figure 1 presents educational level of the respondents interviewed. The results show that the majority of the women had primary education, with approximately 71 percent having attained some level of primary education. Machinga registered the lowest educational levels as 54 percent of them reported having attained only some primary school education while 31.1 percent had not attended any school. In contrast, Balaka district had the highest proportion of women with formal education, with about 8.4 percent having attained some secondary school education while 58.3 percent had attained some primary school education. The low educational level among respondents is of great concern as low literacy levels are often associated with poor child feeding and health seeking behaviours.

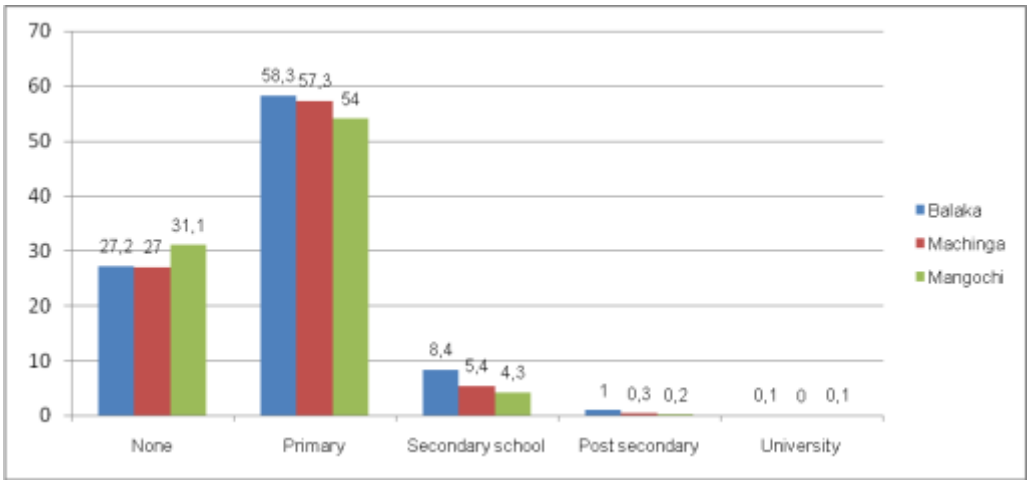


Figure 1: Formal education attained by respondents in the sampled villages by District

3.5 Main occupation of the household members

Main occupation of household members was agricultural related as it can be seen from Table 4. Overall 36.2 percent of the household members were unproductive as these were either young children or elderly hence all these need to be cared for. It should also be noted that 26.8 percent were schooling as well. This pattern is observed in all the three districts. Obviously, most households do not have steady source of income.

Table 4: Main occupation of the household members by district (percent)

Main occupation	Balaka (n=2304)	Machinga (2391)	Mangochi (9200)	Total (13,895)
None (young children and the elderly)	32.0	35.4	37.4	36.2
Farmer	25.3	27.6	28.6	27.9
School teaching	0.9	0.4	0.3	0.4
Artisan/blacksmith	2.1	1.3	1.2	1.4
Civil servants	0.3	0.1	0.2	0.2
Trader/shopkeeper	5.3	4.6	4.6	4.7
Seasonal Agriculture labour	0.7	0.5	0.6	0.6
Permanent agriculture labor	0.2	0.1	0.1	0.1
Casual labour	1.3	0.6	0.7	0.7
Seasonal non-agriculture labour	0.3	0.6	0.3	0.4
Permanent non-agriculture labour	1.2	0.3	0.5	0.6
Student	30.3	28.4	25.5	26.8
House wife	0.1	0.1	0.2	0.1

3.6 Household water source

Water, sanitation and hygiene (WASH) is an important component in the malnutrition causal pathway, and is one of the 13 proven high impact interventions that are being promoted in scaling up nutrition in Malawi. Use of unprotected water sources negatively affects child nutrition and health. Such water is potential source of food and water-borne infections. Information on source of water for household use was solicited during the baseline survey and the results are presented in Table 5. Overall, a significant proportion of the households (11.5 percent) did not have access to portable water and the proportion varied in the districts (9.5 percent in Balaka, 19.2 percent in Machinga and 8 percent in Mangochi). Machinga was particularly worse off and require assistance in provision of safe water sources.

Table 5: Sources of drinking water by district (percentage)

Water Source	Balaka	Machinga	Mangochi	Total
Piped water in dwelling	1.5	.2	.5	.6
Piped into yard or plot	3.8	.9	.4	1.1
Public tap	11.7	4.0	1.4	3.6
Borehole with pump	73.5	75.3	87.7	83.2
Protected dug well	2.4	2.7	2.8	2.7
Protected spring	.0	.0	.1	.0
Unprotected dug well	2.0	11.7	5.2	5.8
Unprotected spring	.0	3.4	.7	1.0
Pond, river, stream. lake	5.1	1.8	1.2	2.0

3.7: Nutritional Status and Feeding Practices of Children and Infants

Anthropometric measurements of weight and height were taken from a total of 2540 children between the ages of 6 months and 35 months to generate nutritional status indicators. The majority of the children (67.3%) were from Mangochi, 16.5% from Machinga and 16.2% from Balaka. In addition, mothers or carers of the children were asked to provide information on foods and drinks fed to their children 24 hours (day and night), prior to household interviews. The mothers and women of child-bearing age (15 to 49 years) in the households were also asked questions about their own diet and the food they had consumed during the previous 24 hours (day and night), whether consumed at home or outside the home. In total there were 2963 women of child bearing age (15 to 49 years) that were interviewed (501 from Balaka, 477 from Machinga and 1985 from Mangochi).

3.7.1 Age distribution of the sampled children

Distribution of the children included in the nutrition baseline sample, by age group and gender are presented in Figures 2 and 3. Nearly 50 percent of the children (49.1) measured were girls and 50.9 percent of all the children sampled were boys hence both sexes were adequately represented in the assessment of nutritional status in all the districts.

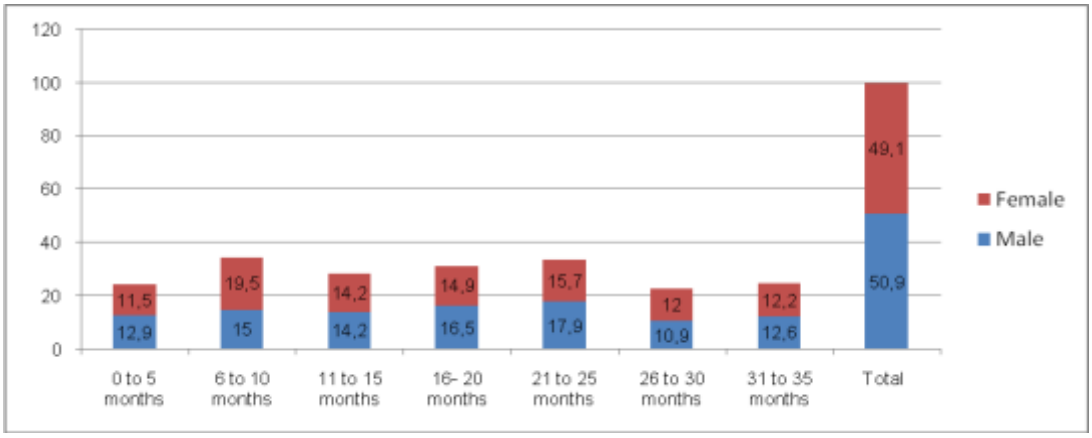


Figure 2: Distribution of children sampled by age group and gender 0-35 months (n=2918)

The distribution of the sampled children aged 0 - 35 months by district are shown in Figure 3. Since 66.3 percent of the households were from Mangochi as sampling was done proportional to size, most of the children (66.7 percent) in the final sample were also from Mangochi.

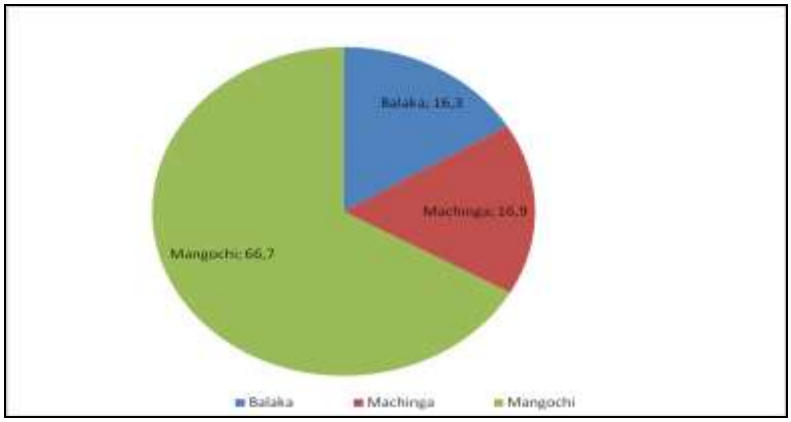


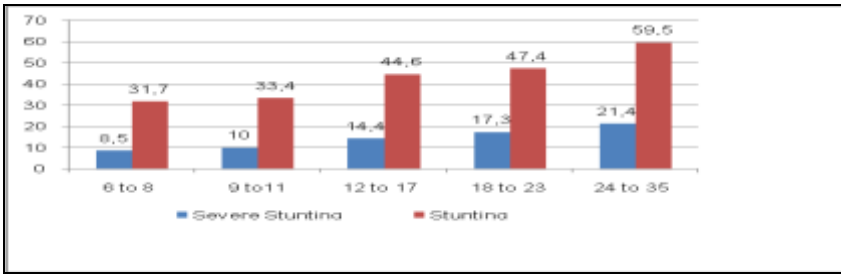
Figure 3: Distribution of children sampled by district

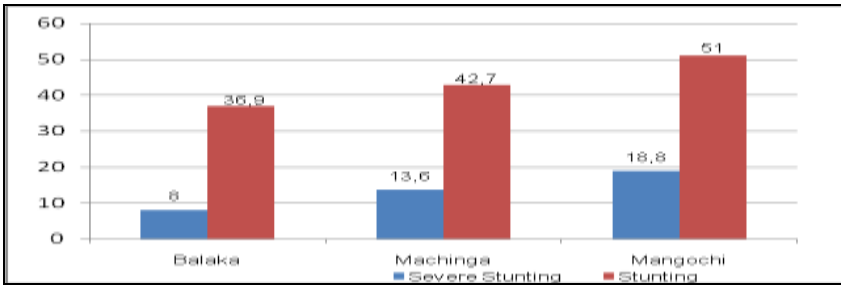
3.7.2 Nutritional status of the children

Table 6, and the corresponding grahps present details for prevalence of stunting by age, sex and district. Results show that 47.3 percent of the children sampled are stunted (too short for age) and the distribution of stunting gradually increases with age from 31.7 percent among infants aged 6 to 8 months and a high of 59.5 percent for children between the ages of 24 and 35 months.

Table 6: Prevalence of stunting (children 6-35 months) by Sex, District and Overall

Background characteristics		Height-for-age		
	n	% < -3 SD	% <-2 SD	mean Z-score
Total	2540	16.2	47.3	1.27
Age in months:				
6-8	319	8.5	31.7	1.35
9-11	290	10.0	33.4	1.4
12-17	464	14.4	44.6	1.12
18-23	629	17.3	47.4	1.3
24-35	838	21.4	59.5	1.13
Sex:				
Male	1281	19.2	51.1	1.31
Female	1259	13.1	43.4	1.21
District:				
Balaka	412	8.0	36.9	1.26
Machinga	419	13.6	42.7	1.3
Mangochi	1709	18.8	51.0	1.24





Among the three districts, prevalence of stunting was highest in Mangochi (51 percent) which is also slightly higher than 2010 district prevalence of 48.3 percent for the diastrict. The lowest stunting prevalence was registered in Balaka (36.9 percent) and it is significantly lower than the district prevalence of 44.8 percent in 2010 (NSO and ICF Macro 2011).

Figure 4 also confirm the seriousness of the problem of stunting in the three districts. The departure of the curve to extreme left from the reference population is very visible. Stunting reflects chronic malnutrition and is mainly a result of inadequate food intake over a long period of time and often exacerbated by frequent illnesses and other precipitating factors. Hence such contributory factors must be taken into considerations in any interventions that aim to improve nutritional status of communities.

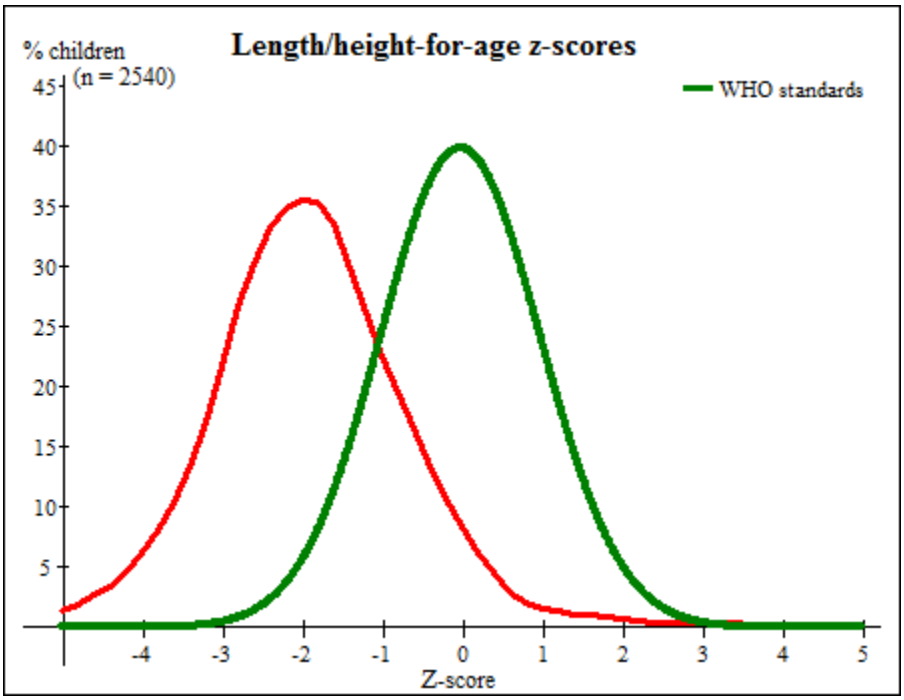


Figure 4: Comparison of stature for age of INVC baseline results and WHO, 2006 reference

Comparison of stunting prevalence with 2010 DHS by child age group is presented in Table 7. In general, the study children are worse off even among the youngest age group. However, fewer children were severely stunted compared with 2010 MDHS. Malawi recorgnizes the seriousness of stunting and launched the SUN 1000 Special Days Movement in July 2011 to scale up

nutrition in an effort to end stunting which has consistently remained too high. These findings confirm that chronic undernutrition is the main problem in Malawi and efforts should be intensified to combat the problem. It should further be noted that being too short can be a high risk factor for obstetric challenges in later life.

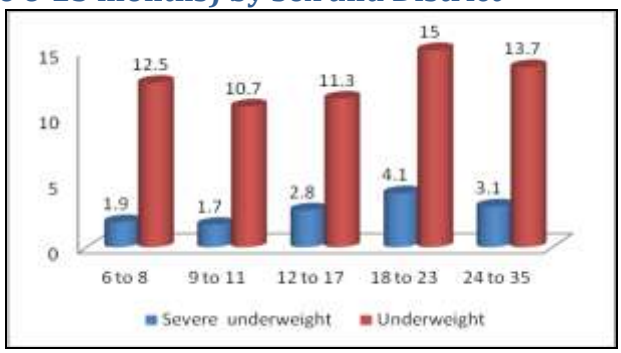
Table 7: Comparison of stunting prevalence for INVC Baseline survey results with 2010 DHS national results

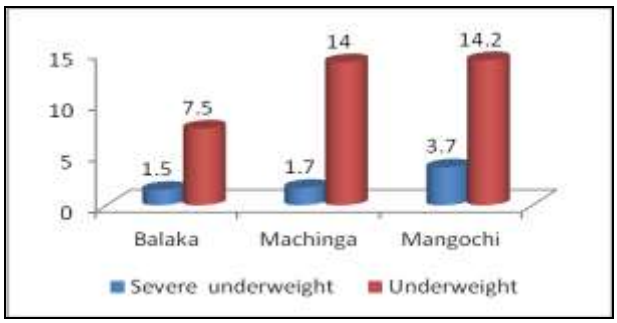
Age in months	Stunting		Severe stunting	
	2010 DHS	Baseline survey	2010 DHS	Baseline survey
6-8	25.2	31.7	12.2	8.5
9-11	27.6	33.4	10.7	10.0
12-17	45.9	44.6	20.9	14.4
18-23	61.3	47.4	29.2	17.3
24-35	56.0	59.5	25.5	21.4

Table 8 presents weight-for-age z-scores for children aged 6 to 35 months from the three districts. Proportion of children that were underweight was 13.1 percent and 3 percent of these were severely underweight. The boys tended to be more underweight (14 percent) than the girls (12.1 percent).

Table 8: Prevalence of underweight (children age 6-23 months) by Sex and District

		Weight-for-age		
	N	< -3 SD %	< -2 SD %	mean Z-score
Total	2552	3.0	13.1	1.09
Age in months:				
6-8	321	1.9	12.5	1.13
9-11	290	1.7	10.7	1.15
12-17	467	2.8	11.3	1.05
18-23	633	4.1	15.0	1.1
24-35	841	3.1	13.7	1.02
Sex				
Male	1289	3.5	14.0	1.1
Female	1263	2.5	12.1	1.07
District				
Balaka	412	1.5	7.5	1.05
Machinga	419	1.7	14.0	1.06
Mangochi	1709	3.7	14.2	1.09





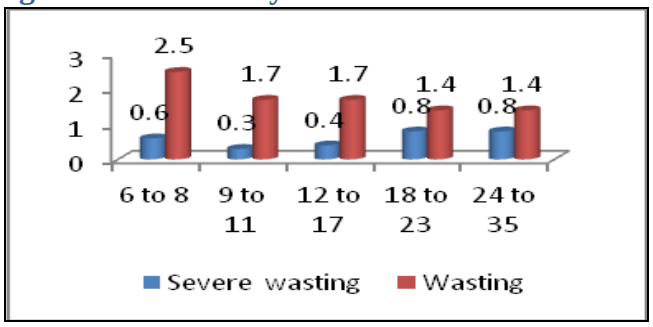
The deviation to the left of the reference population is visible from Figure 5. The curves reveal the extent of the deviation of the study children from the reference standards (WHO, 2006).

Figure 5: Comparison of weight for age of INVC baseline results WHO, 2006 reference.

In general, prevalence of acute malnutrition was within the acceptable range of less than 3 percent in all the districts surveyed. The highest prevalence was 2.5 percent for children aged 6 to 8 months. This is a reflection of inadequate complementary feeding. It should also be noted that 4.1 percent of children are overweight, with Z-scores more than two standard deviations (+2 SD) above the median (Table 9).

Table 9: Prevalence of wasting among children aged 6-35 months by Sex and District

		Weight-for-Length/height			
Parameter	n	**< -3 SD %**	**< -2 SD %**	**> +2 SD %**	**mean Z-score**
Total	2549	0.7	1.6	4.1	1.01
Age in months:					
6-8	**319**	0.6	2.5	6.6	1.15
9-11	**290**	0.3	1.7	5.9	1.03
12-17	**467**	0.4	1.7	1.7	0.94
18-23	**633**	0.8	1.4	3.0	1.0
24-35	**840**	0.8	1.4	4.6	0.98
Sex:					
Male	1287	0.8	2.0	4.3	1.04
Female	1262	0.6	1.3	3.9	0.98
District:					
Balaka	411	1.2	2.2	5.6	1.02
Machinga	420	0.5	0.7	2.6	0.94
Mangochi	1718	0.6	1.7	4.1	1.02



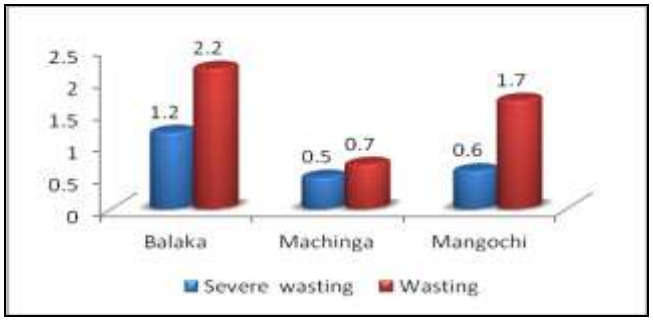


Figure 6 clearly confirms the fact that most children had normal weight for stature. There are two curves in the chart; one is for the reference population (WHO, 2006) and the other for the surveyed children. If there was high prevalence of wasting, the children's curve would have shifted to the left of the reference population. Thus, most of the children were within the normal distribution band. There exist in Malawi symmetrical stunting that is the children being too short but with satisfactory weight for their short stature.

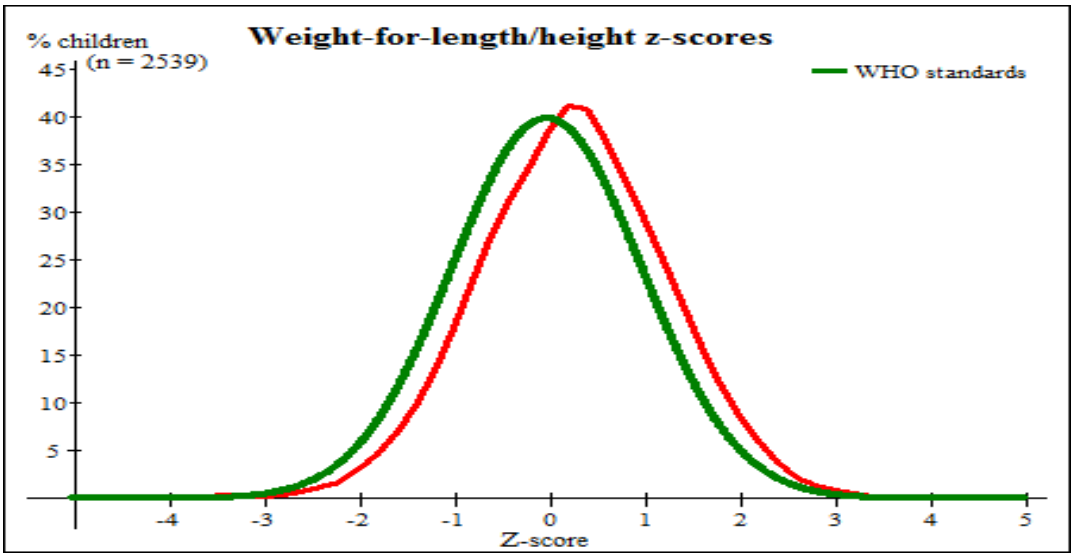


Figure 6: Comparison of weight for stature of INVC baseline and WHO, 2006 reference

It should be further noted that prevalence of stunting, underweight and wasting tended to be higher among boys than girls. These findings are consistent with the trend observed in almost all the national surveys conducted in Malawi. For instance, 2010 DHS reported prevalences of stunting, underweight and wasting for boys of 51.1 percent, 14 percent and 4.2 percent respectively while that for girls were 43.3 percent, 11.7 percent and 3.8 percent respectively.

3.8: Infant and Young Child Feeding Practices

Adequate nutrition is vital for proper child growth and development. The period from birth to two years of age is particularly critical because it is the period of rapid growth and brain development. It is recommended that babies should be exclusively breastfed for the first 6 months. Thereafter nutritious complementary feeding should be introduced while continuing to breastfeed on demand up to the age of at least 24 months. Inappropriate feeding practices during

this period often results in growth faltering, micronutrient deficiencies and common child illnesses such as diarrhoea, malaria and acute respiratory infections. In the INVC baseline nutrition survey, information on infant and young child feeding practices was therefore collected.

3.8.1 Prevalence of Exclusive breastfeeding

There were 363 children under 6 months of age and 102 of these children were given some liquids such as water, various solids and yogurt which implies that these children were not being breastfed exclusively. The survey results show that exclusive breastfeeding for the first six months is widely practiced in the 3 districts. Overall, 71.9 percent of infants under 6 months of age were exclusively breastfed which is similar to the 2010 MDHS national prevalence of 71.4 percent (Table 10). However, within this age group, younger children are more likely to be exclusively breastfed (Table 11) than the older ones. Early introduction of fluids and other food should strongly be discouraged because it limits the frequency of breastfeeding by the infant and exposes the baby to the risk of infections.

Table 10: Prevalence of exclusive breastfeeding by and district

District	Exclusive breastfeeding prevalence	
	N	%
Balaka (n=65)	48	73.8
Machinga (n=71)	55	77.5
Mangochi (n=227)	156	69.6
Overall (n=363)	261	71.9

Table 11 presents the feeding practices followed in the three surveyed districts. Consistent with the 2010 DHS estimates, the INVC survey results show that almost all children (99 percent) between the ages of 6 and 35 months have ever been breastfed. From 18 months of age, a significant proportion of the children are weaned off the breast and the 24 to 35 months old children are almost all completely weaned off the breast. There seem to be no differences between gender of the child and the child's district of origin.

Table 11: Breastfeeding practices among children age 6-35 months by sex and district

		Child breastfeeding practices		
Parameter	N	Children ever breastfed %	Children still breastfeeding %	Children breastfed day before survey %
Age in months:				
6-8	316	100	100	100
9-11	291	99.7	98.3	98.6
12-17	460	99.4	96.8	97.0
18-23	607	97.0	79.6	78.3

24-35	865	100	1.2	1.2
Sex:				
Male	1282	99.1	59.7	59.4
Female	1257	99.1	62.0	62.0
District:				
Balaka	407	98.8	57.3	57.2
Machinga	414	97.9	58.9	58.9
Mangochi	1718	99.5	62.2	62.0

3.8.2 Complementary feeding

The national guidelines for infant and young child feeding, recommend the introduction of complementary food to infants around 6 months of age because by that age breast milk alone is not adequate to meet daily energy and nutrient requirements to maintain a child's optimal growth and development. In the baseline survey respondents were asked to indicate types of fluids that had been given to the child the day before interviews. The results in Table 12 show a high proportion of children that had been given water (67.4 percent), while a significant proportion was given clear broth (46 percent) and thin porridge (33.8 percent). All these are bulky and have low energy and nutrient density, hence difficult for the children to meet their recommended daily energy and nutritient intakes.

Table 12: Varying types of liquids given to children day before interview by district

Feeding practices	Balaka (n=477)	Machinga (n=494)	Mangochi (n=1945)	All (n=2916)
Children fed with bottle/cup/spoon (%)	4.1	2.8	2.3	2.7
Medicine and vitamins (%)	8.5	8.7	6.8	7.4
Given Thanzi ORS (%)	2.9	1.9	3.1	2.9
Plain water (%)	67.1	67.4	67.5	67.4
Infant formula (%)	2.1	1.2	1.0	1.2
Mean number of times infant formula given	2.0	2.4	2.2	2.2
Tinned milk, powdered (%)	2.1	2.0	3.4	3.0
Mean number of times tinned milk given	1.5	1.7	1.5	1.5
Juice /drinks (%)	6.3	7.7	5.3	5.8
Clear broth or *msuz*i (%)	46.6	47.8	45.5	46.0
Yogurt (%)	2.4	1.5	.8	1.1
Mean number of times yogurt given	1.2	2.2	1.7	1.7
Thin porridge (%)	34.7	32.6	33.8	33.8
Thobwa	33.3	11.9	10.7	14.5
Any other liquids (%)	6.8	5.2	5.6	5.7

Presented in Table 13 are the common food served to children 6 to 23 months the day before the survey. The results show that the main stay of the diet for the children is cereal since it is the

main staple eaten with vegetables. It is of concern that most of the children had other vegetables such as cabbage, egg plants which are less nutritious than the dark green vitamin A rich vegetables. Similar dietary pattern was observed for women of child bearing age (15 to 49 years) suggesting that the children depend more on family meals once complementary feeding is initiated.

Table 13: Common type of foods consumed by the 6-23 months children by district (%)

Common foods consumed	Balaka	Machinga	Mangochi	Total
Food made from grains	96.6	97.5	96.1	96.4
Vitamin A rich vegetables	11.2	11.4	5.6	7.4
White tubers and roots	9.3	15.4	12.7	12.6
Dark green leafy vegetables	45.9	49.3	48.0	47.8
Other vegetables	80.6	81.4	80.6	80.7
Vitamin A fruits	11.2	11.8	11.1	11.3
Other fruits	18.7	6.1	6.0	8.0
Organ meat (Iron rich)	1.5	0.4	0.5	0.6
Flesh meat	10.8	9.6	7.0	8.1
Eggs	7.8	7.9	5.3	6.1
Fish	26.9	39.6	36.6	35.5
Food from Soya	15.3	10.0	13.8	13.4
Food made from g/nuts	32.8	31.4	34.0	33.4
Any food from other beans	38.1	35.0	35.9	36.1
Milk and milk products	4.1	5.7	5.6	5.4
Oils and fats	56.7	62.5	59.6	59.6
Sweets	52.2	48.9	48.8	49.4
Beverages e.g .coffee/tea	47.0	24.3	26.5	29.3
Spices, condiments	25.4	27.1	21.8	23.2
Insects	1.5	1.4	1.0	1.2

Information on the types of foods given to the youngest children under 2 of age during day and night (24 hour recall) preceding the survey and feeding frequency was collected in the baseline nutrition survey. From this information on proportion of 6-23 children who received minimum acceptable diet and minimum feeding frequency by their breastfeeding status were generated. The results are presented in Figure 9. Overall, 32.5 percent of breastfed children aged 6-23 months received a minimum acceptable diet, defined as consumption of at least four out of seven food groups in the previous 24 hours. Among the non-breastfed children, 40.9 percent of the children had received a minimum acceptable diet and the highest proportion was in Balaka (55.6 percent) while in Machinga and Mangochi, 26.9 percent and 40.5 percent had received minimum acceptable diet respectively. By implication therefore, more than on half of the children do not receive the minimum acceptable diet which might be contributing to the high chronic malnutrition prevalence.

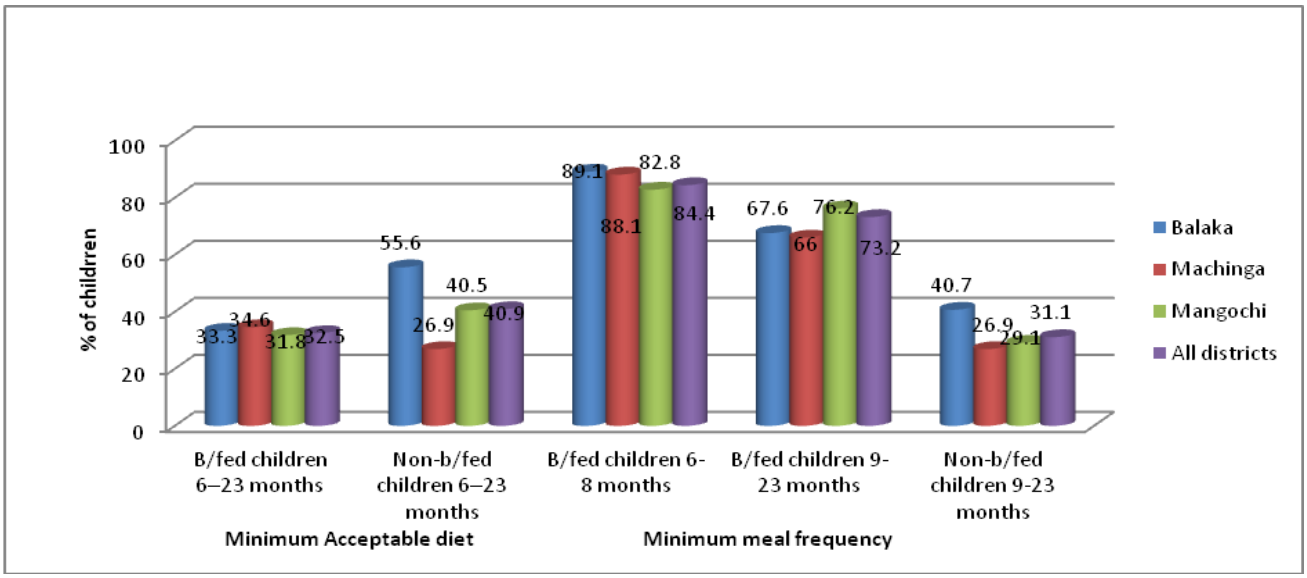


Figure 7: Minimum Acceptable diet and Minimum meal frequency for breastfed and non breastfed children 6-23 months

Overaal, 31.1 percent of the non-breastfed children (6 to 23 months of age) received the minimum meal frequency of at least 4 meals 24 hours prior to the survey (Figure 9). The high proportion (about 70%) that are fed less frequently is of grave concern and require attention to ensure adequate dietary intake for these infants and young children). These results suggest that many of the children are not likely to meet their daily energy and nutrient requirements.

Figure 8 presents proportion of children 6-23 months of age consuming groundnut, soya bean, bean and dairy foods which are commodities INVC projects promote. The results show that consumption of dairy products is really low ranging from 4.1 percent in Balaka to 5.7 percent in Machinga. About a third of the children ate groundnuts and beans while consumption of soybeans is less than that of groundnuts and beans. Utilization component of any legume and livestock intervention implemented and promoted in these three districts will require specialized strategies to motivate households to increase consumption of legumes and dairy food products.

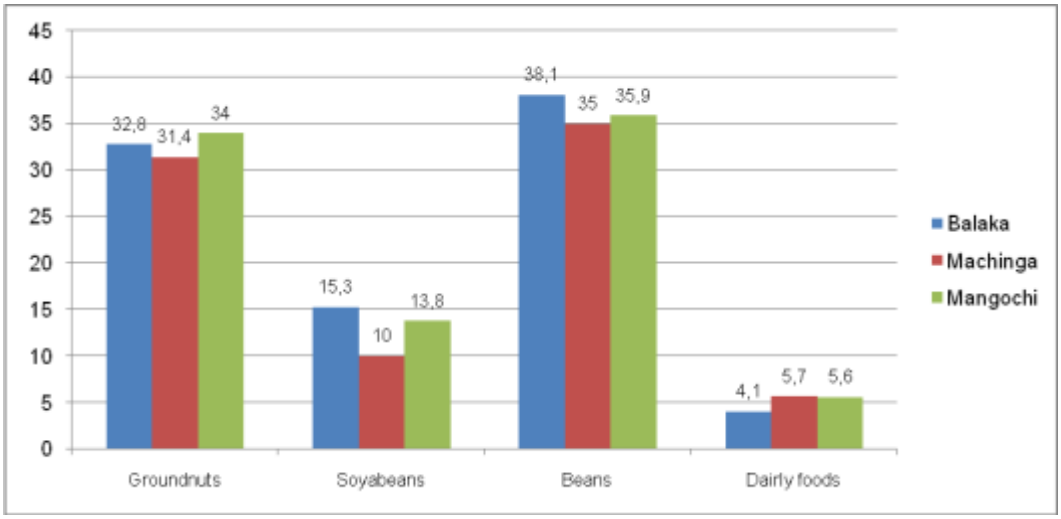


Figure 8: Consumption of groundnut, soya bean, bean and dairy foods

Based on the 24 hour recall, it was possible to assess consumption of foods rich in vitamin A and iron among children aged 6 to 35 months. Findings reveal that in almost all age groups less than a quarter of the children were consuming foods rich in Vitamin A or iron (Table 14). While the proportion was higher among children aged 24-35 months, the proportions were still significantly low ranging between 44 percent and 59 percent. These results suggest that a high proportion of the children in all three districts may have low levels of food-based micronutrient intake and as such this is an area that needs special attention in the three districts.

Table 14: Consumption of vitamin A and iron rich foods by children age 6-23 months (n = 1697)

	% consuming foods rich in vitamin A in last 24 hours		% consuming foods rich in iron in last 24 hours		Total number of children
Parameter	**Unweighted**	**Weighted**	**Unweighted**	**Weighted**	**n**
Age in months:					
6-8	8.7	24.6	9.8	10.1	316
9-11	11.0	13.0	11.1	11.0	292
12-17	18.3	17.5	18.4	18.5	463
18-23	25.6	20.8	25.4	25.2	626
24-35	36.5	24.0	35.2	35.2	865
Sex:					
Male	50.3	50.5	50.4	50.1	1293
Female	49.7	49.5	49.6	49.9	1269
District:					
Balaka	15.3	6.1	15.6	6.2	412
Machinga	17.5	13.9	16.8	13.3	423
Mangochi	67.2	80.0	67.6	80.5	1727

Presented in Figure 9, about 50 percent of children between 6-35 months had low dietary diversity in all the surveyed districts based on the Malawi six food groupconcept. Only a small proportion of the children (about 20 percent) had highly diversified diets.

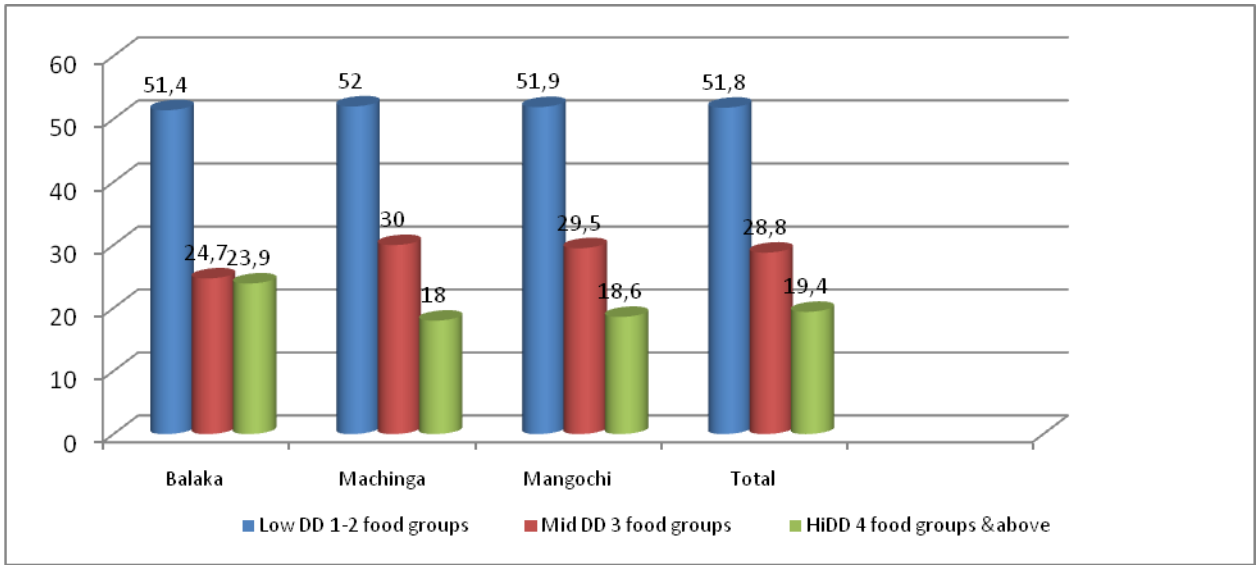


Figure 9: Dietary diversity for children 6 to 35 months by district

3.9 Women's Dieatry Diversity

Inadequate dietary intake is an immediate cause of undernutrition. Alongside improving food security, nutrition education should emphasize the need for households to adopt dietary diversification as a key determinant of nutritional and health well-being of all household members.

The variety of foods consumed by women of child bearing age the day prior to the survey (24 hour recall) was solicited. The results show that the most commonly consumed food groups among women of child bearing age are cereals mainly in the form of maize meal (*nsima*), followed by non-leafy vegetables then oils and sweets (Table 15). This suggests that energy dense diets are consumed in the three districts. The results further suggest that fish, mostly small fish eaten with bones, is the major animal food source in all the three districts (41.2 percent overall) compared with the overall consumption of meat by only 9 percent of the women. Similar dietary pattern was observed for the children aged 6 to 23 months suggesting dependency of the young children on family meals once complementary feeding is initiated.

Table 15: Common foods eaten by women 15-49 years of age by District

Common foods consumed	Balaka	Machinga	Mangochi	Total

Food made from grains	96.8	99.0	98.7	98.4
Vitamin A rich vegetables	15.2	18.2	10.3	12.4
White tubers and roots	19.6	28.3	21.9	22.5
Dark green leafy vegetables	49.7	48.4	57.2	54.4
Other vegetables	82.0	84.3	86.7	85.5
Vitamin A fruits	23.2	17.0	17.3	18.2
Other fruits	28.7	10.1	11.7	14.3
Organ meat (Iron rich)	3.2	1.9	0.8	1.4
Flesh meat	15.0	9.2	7.5	9.0
Eggs	8.2	5.9	5.9	6.3
Fish	31.1	49.1	41.8	41.2
Food from Soya	14.0	10.9	12.0	12.2
Food made from g/nuts	36.3	34.2	38.6	37.5
Any food from other beans	41.9	37.3	41.1	40.6
Milk and milk products	6.8	4.8	4.9	5.2
Oils and fats	65.7	69.2	64.2	65.2
Sweets	50.3	43.8	47.0	47.0
Spices, condiments	51.3	34.4	39.5	40.7

About 40 percent of women of child-bearing age (15-49 years of age) had consumed beans, 34.2 to 38.6 percent had consumed food containing groundnuts, less than 15 percent (10.9 to 14 percent) consumed food containing soya beans and less than 7 percent (4.8 to 6.8 percent) consumed dairy products (Figure 10). This suggests that most of the women do not consume significant quantities of these commodities being promoted by INVC. Utilization component of any nutrition related interventions require comprehensive promotion including cooking demonstrations in all the three districts to foster positive behavior change.

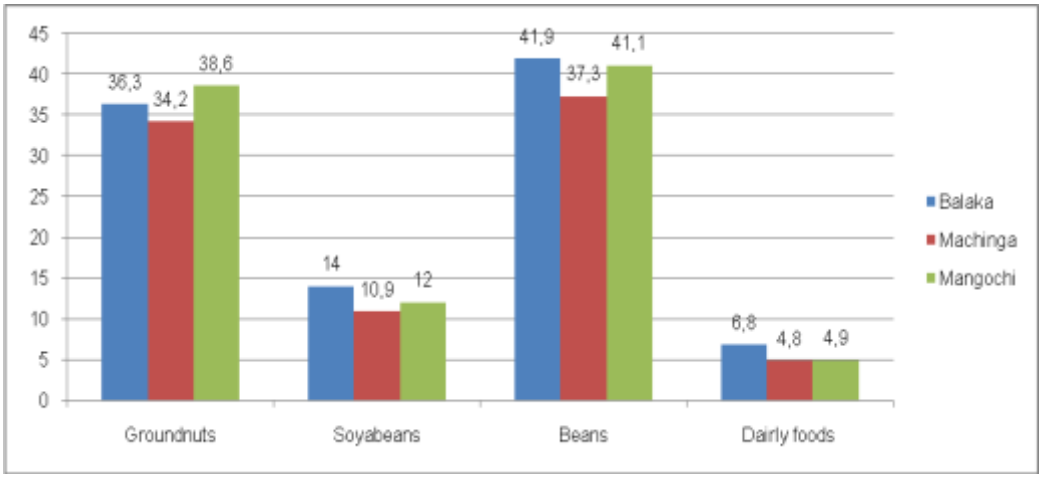


Figure 10: Consumption of groundnut, soya bean, bean and dairy foods by women age 15 to 49 years

A diet comprising of at least 4 out of the 6 food groups is a highly diversified diet (HDD) while a diet comprising of 2 or fewer food groups is a low diversified diet (LDD). Food consumed the day before the survey was therefore analysed to establish the dietary diversity status of women of

child bearing age. Overall 74.6 percent had achieved high dietary diversity level (Table 16). It is of concern that about 20 percent of the women failed to consume a diversified diet. It should be noted that the wider the variety of foods consumed the higher the likelihood that the diet will meet energy and nutrient requirements of the consumer.

Table 16: Dietary Diversity of women (15-49) consumed foods based on 9 food groups by Distric*t*

Food Groups	Balaka %	Machinga %	Mangochi %	Total %
LDD	6.0	6.9	9.6	7.5
MDD	16.8	18.2	18.6	17.9
HDD	77.2	74.8	71.7	74.6

Key:
Low Dietary Diversity (LDD) - *Consumption of food groups ≤2 groups from list.*
Medium Dietary Diversity (MDD) - *Consumption of three food groups.*
High Dietary Diversity - *Consumption of at least 4 food groups and above*.

The actual types of foods predominately eaten by households at different levels of dietary diversity reveal that cereals and vegetables are consumed universally. However, it is mainly the HDD households who are likely to consume animal foods and legumes Table 17). The LDD and MDD households are therefore at risk of a variety of micronutrient deficiencies**.**

Table 17: Typical foods consumed day before the survey by dietary diversity level

Lowest dietary diversity (≤ 2 food groups) LDD	Minimum dietary diversity (3 food groups) MDD	High dietary diversity (>4 food groups) HDD
Cereals Vegetables	Cereals Vegetables Fruit	Cereals (staples) Vegetables Fruits Oils and fats Legumes Animal foods

In Malawi vitamin A deficiency and nutritional anaemia often due to iron deficiency, are among the micronutrient deficiencies of public health concern. Attention should therefore be paid to ensure that micronutrient nutrition that includes vitamin A and iron are adequately covered in any nutrition intervention.

Consumption of vitamin A and iron rich foods were assessed from the 24 hour dietary recall data and the results are presented in Figure 11. The contributing factor for high consumption of Vitamin A foods was the availability of vegetables in the areas visited. It is impressive that almost 80 percent of the women age 15 to 49 years consumed vitamin A rich foods while over 90% had consumed iron rich foods. The main sources of these however, were of plant origin which, have reduced bioavailability. During survey period some households had their own vegetable gardens while some were easily bought at local markets.

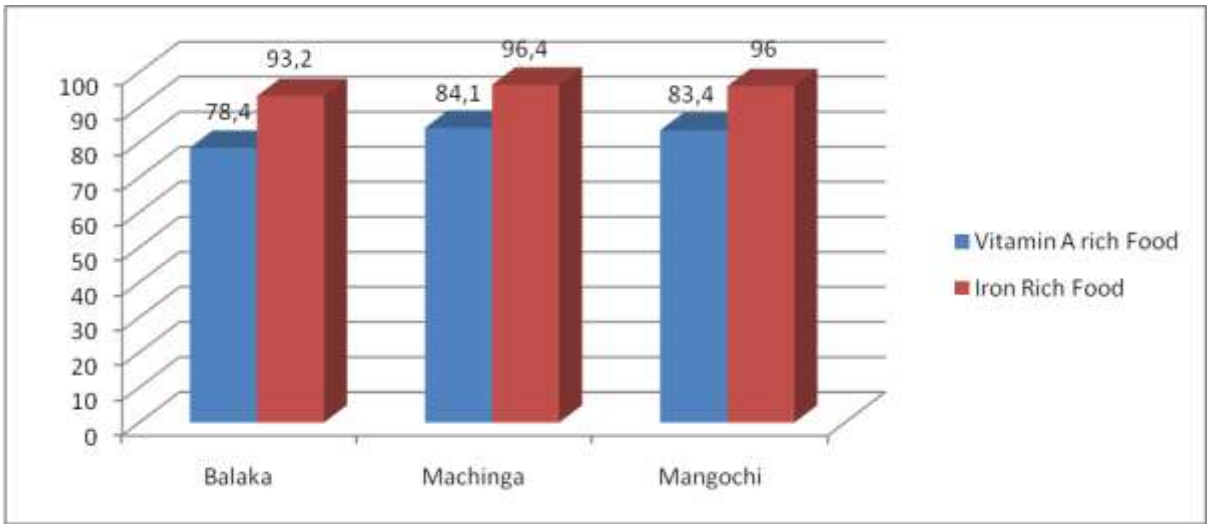


Figure 11: Consumption of Vitamin A rich fruits and Iron rich foods by district

CHAPTER 4: FGD FINDINGS ON MATERNAL, INFANT AND YOUNG CHILD NUTRITION

The community perceptions were determined based on focus group discussions (FGDs) held with women of child baring age, men and grandmothers in each of the districts. These groups are considered to be influential in issues pertaining to maternal, infant and young child nutrition (MIYCN). The details of the groups with whom discussions were held in each district are given in Table 18.

Table 18: Number of Participants by FGD, district, EPA and TA

Village	GVH	TA	EPA	District	Number
Women of child baring age (15 to 49 years):					
Chibwana	Chibwana	Kalembo	Ulongwe	Balaka	8
Kazembe	Umbwa	Chiwalo	Nyambi	Machinga	10
Mmatila	Ngalipa	Katuli	Katuli	Mangochi	7
Grandmothers:					
Chimphati	Chimphati	Chanthunya	Rivirivi	Balaka	6
Mtungwi	Mtungwi	Ngokwe	Chikweo	Machinga	9
Kansiya	Chimphepo	Nankumba	Nankumba	Mangochi	12
Men:					
Thapaniwa	Mpilisi	Nsamala	Mpilisi	Balaka	10
Mowere	Mowere	Nkaola	Chikweo	Machinga	10
Kalonga	Chiunda	Chowe	Maiwa	Mangochi	12

4.1 Women of child bearing age

4.1.1 Dietary practices and care of children younger than 2 years

Exclusive breastfeeding up to 6 months

It was argued that this is not always possible where a mother is unable to produce enough milk. In this case, other semi solid foods such as porridge are introduced before 6 months of age. One woman categorically argued that,

> *"In my case I introduced other foods to my 2 children at the age of 4 months because I couldn't produce enough milk, the child was just crying after a feed which to me was the sign of not being satisfied with the breast milk".*

Breastfeeding frequency

The women during FGDs stated that a baby should be breastfed as frequently as possible whenever the baby cries.

Breastfeeding and HIV

Most women stated that there shouldn't be any differences in breast feeding a child practices.

> *"By stopping breastfeeding the child is very likely to develop malnutrition especially at village level, where communities cannot afford the breastfeeding substitutes as compared to those in towns who have access to these.*

The main hindrance to exclusive breastfeeding is inadequate breastmilk which results in the baby crying often. The mothers, in some cases, influenced by grandmothers introduce water, other fluids and thin porridge.

Complementary feeding

Most of the women stated that children aged between 6 – 11 months and those aged 12 – 23 months should be given thick porridge in the morning and soft nsima in the afternoon. Snack of fruits should be given in between meals.

The meal frequency is too low and variety of food is also limited. This may be contributing to the high prevalence of malnutrition among the children.

1.1.2 Barriers to adopting appropriate infant and young child nutrition

Existence of a person in the community for advising lactating mother on breastfeeding practices and its importance

Generally there is no person in the community responsible for advising lactating mother on breastfeeding practices and its importance. Women only get these messages from health facilities or during growth monitoring and promotion clinics. A few women also indicated elders, and to a lesser extent, the radio as other sources of nutrition information.

It was also indicated that, sometimes mothers receive conflicting information from grandmothers and health workers. For instance, while they are advised by health workers to breastfeed exclusively for six months, some grandmothers encourage them to give baby thin porridge to calm a crying baby.

It is also of concern that women indicated that there was irregular support from fathers on maternal, infant and young child feeding. There is minimal involvement of men during pregnancy and breastfeeding, and they do not accompany their wives for antenatal and postnatal services, citing being busy and culturally unacceptable as the main reasons

4.2 Male Involvement in Maternal, Infant and Young Child Feeding (MIYCF)

It is expected that men should take active part in maternal, infant and young child feeding and care. They are heads of households and are the major decision makers. In all FGDs men reported that they involved in maternal and child care since they provide basic household needs. These include; provision of food that contain all the food groups, clothing and shelter, promoting good sanitation and hygiene to ensure good health. However they were quick to indicate that their involvement was limited by resource availability.

Nevertheless they indicated that their involvement is necessary to:

> "*come up with better decisions on farming techniques which help in improving yield and hence improving the eating patterns and the health of children and ensuring that toilet facilities are available, hence preventing diseases*".

4.2.1 Knowledge in maternal infant and young child feeding (MIYCF) issues

The men had some basic knowledge concerning:

Pregnant and lactating women should eat food that contains all the food groups of her choice provided it is nutritious.

A lactating mother should eat food that enhance milk production such as cassava, thobwa, squash (Sobo) and fruits and ensure that she maintains good personal hygiene so that the baby remains healthy.

Infant and young children should be breast feed frequently with good breast position when breast feeding the baby which helps the mother to produce more milk, ensures that the mother is not stressed and the baby gets enough milk

However, there were contradictory responses to statements on breastfeeding in the context of HIV. Some men indicated that an HIV positive woman should only breastfeed her baby up to six months of age and then stop breastfeeding abruptly. Others reported that the baby can be breastfed up to two years of age based on medical expert advice.

All the men agreed that a sick child 0 – 6 months old should continue to be breast feed and medical attention needed. A sick child aged 6 to 23 months should continue to be breast fed; and be given soft diet containing all the food groups such as porridge with groundnut flour.

In addition the men had some knowledge on importance of good hygiene and sanitation for disease prevention; frequency of growth monitoring and promotion and some programmes for care of acute malnutrition.

However men bemoaned irregular source of information which was limited to their spouses and in some cases the radio some of which may be incorrect information. They are often left out in

nutrition interventions

4.2.2 Barriers to male involvement

A number of issues were highlighted that prevent active involvement of men in maternal, infant and young child feeding. The main ones given were:

- Unreliable rainfall patterns which lead to low crop production resulting in low disposable income.
- Exorbitant prices of farm inputs that also lead to inadequate procurement of the required imputs which in turn result in poor yields affecting disposable income for family use.
- Limited knowledge in MIYCN interventions as there are no community structures that target male involvement.
- Cultural beliefs where child care is domain of women and a man who tries to help is laughed at by both men and women in the community.

4.3 Grandmother in Maternal, Infant and Young Child Feeding (MIYCF)

Role of grandmother:

As grandmothers *"we have the responsibility of taking care of the young ones"when their mother is pregnant or she is nursing a new baby".*

In all FGDs, grandmothers indicated that they play a major role through offering advice and support to young mothers on child care before, during and after birth of the child. The roles include;

- Encouraging young mothers to breastfeed their children exclusively for the first 6 months of life.
- Teach young mothers to prepare complementary food that contain 6 food groups including vegetables, fruits, groundnut flour and cassava from the age of 6 months up until 5 years.
- Help young mothers on personal hygiene to ensure good health for the mother and baby.

4.3.1 Knowledge in maternal infant and young child feeding (MIYCF) issues

The elderly women had some basic knowledge on the following:

Pregnant and lactating women should eat food that contains all the food groups such as vegetables, meat, fruits and cassava for proper growth and development of the unborn child. They stressed that"*Vegetables will increase blood which is necessary during delivery"*

I addition they should attend antenatal clinincs regularly where they are tested for HIV to know their status.

A lactating mother should eat food that contain all the food groups and food that enhances milk production such as cassava, thobwa, squash (Sobo) and fruits and ensure that she observes good personal hygiene so that the baby remains healthy.

They had some knowledge on Infant and young child nutrition as they indicated that they d

encourage young mothers to breastfeed their children exclusively for the first 6 months of life; teach young mothers to prepare complementary food that contain 6 food groups including vegetables, fruits, groundnut flour and cassava from the age of 6 months up until 5 years; and help young mothers to observe personal hygiene to ensure good health for the mother and baby.

Breastfeeding in the context of HIV:
Grandmothers argued that "*there is conflicting information on breastfeeding and HIV in that some recommend that the mother should not breastfeed the baby while others recommend breastfeeding in the normal way".* Hence, they encourage HIV+ mothers to seek medical advice since the recommendations change frequently.

Generally most of elderly mothers interviewed have some information on maternal infant and young child feeding nutrition (MIYCN). Source of information were antenatal clinic (ANCs) and GMP clinics they had attended some time back and to a lesser extent from the radio.

4.3.2 Barriers to involvement of grandmothers in MIYCN

A number of issues were highlighted that prevent active involvement of grandmothers in maternal, infant and young child feeding. The main ones given were:

- Inadequate knowledge of MIYCF practices therefore they may be giving inappropriate advice.
- There are no community structures that target grandmothers so that they could also be updated in current recommendations of MIYCN.

4.4 Concluding remarks

Frontline workers should continue to include MIYCN messages to mothers at any opportunity that avails itself. It is important to include even cooking demonstrations using locally available foods to encourage the mothers to adopt the correct practices including the appropriated meal frequencies. This is based on the finding that most mothers had the knowledge but from the quantitative study most young children had the same meal frequency as mothers.

Grandmothers appear to have adequate basic breastfeeding knowledge as illustrated by their recall on need for exclusive breastfeeding during the first 6 months, introduction of complementary foods at 6 months of age, promoting personal hygiene and linking this with health of the baby, able to list the 6 food groups, promoting regular attendance of ANC and GMP and even importance of HIV testing during pregnancy. However, they may not fully agree with the IYCF recommendations since mothers of child bearing age indicated that early introduction of fluids and other foods was usually due to grandmothers' recommendations to calm a crying baby believed not to be receiving adequate breastmilk.

Grandmothers have inadequate knowledge on recommended complementary feeding practices. Their belief that breastmilk is not adequate to satisfy a baby as the baby cries often encourages early

introduction of thin plain porridge , water and other foods which are often less nutritious and bulky. The practice easily exposes the baby to infections resulting in diarrhoeal episodes that negatively impact on nutritional status of the baby.

Men also have some knowledge and have the desire to be involved more in MIYCN but they are not adequately informed. There is need to have men groups in these communities which will also require well trained male facilitators as a means of encouraging them to participate fully in the meeting. These should be built in the agriculture production and food security components since from the assessment, men see their major as aprovider of food, clothing, shelter and resources re quired to ensure adequate MIYCN.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

Chronic undernutrition (stunting) is the main problem in the three districts and efforts should be intensified to combat it. Being too short can be a risk factor for obstetric complications and diet-related non-communicable diseases later in adulthood.

Breastfeeding from birth continues to be universal in the three districts as evidenced by the fact that almost all the children (≥97%) less than 2 years of age had ever been breastfed.

Dietary pattern for infants and young children was similar to that of women of child bearing age (15 to 49 years) suggesting that the children depend more on family meals once complementary feeding is initiated. Almost one half of the children aged 6 to 23 months did not receive the minimum acceptable diet which in turn might be contributing to high chronic malnutrition rates. Children, because of their small stomachs and high nutrient requirements, need to be fed at least 4 times and should receive a minimum acceptable diet.

The main stay of the diet for both the children and their mothers is cereal particularly maize which is the main staple frequently eaten with vegetables. All these are bulky and have low energy and nutrient density, hence difficult for the children to meet their recommended daily nutrient requirements.

Almost all women who participated in this survey had knowledge on infant and young child feeding practices and the main source of the information were health facilities. However a significant proportion did not put the knowledge into practice as revealed by the relative low proportion of the children who received a minimum acceptable diet and those that were fed with minimum meal frequency as recommended in the national guidelines and WHO.

Both men and grandmothers are important in MIYCN due to their roles in agricultural production, food utilization, decision making and control over resources. However, there are no structures in any of the communities in all the three districts that specifically target either grandmothers or men in MIYCN interventions.

It is therefore recommended that:

- Frontline workers should continue to include MIYCN messages to mothers at any opportunity that avails itself. It is important to include even cooking demonstrations using locally available foods to encourage the mothers to adopt the correct appropriate maternal, infant and young child feeding practices.
- Grandmothers and men should be fully engaged in design and implementation of any interventions that have food and nutrition objectives that target maternal, infant, and young children.
- As custodians of cultural knowledge, it will be important to encourage establishment of structures and use consultative approach with the grandmothers in order to design interventions that are likely to be adopted.

- Separate training sessions in MIYCN should be designed targeting frontline workers, community leadership and mothers to reinforce appropriate nutrition practices at household level.
- Both men and grandmothers should be specifically targeted in nutrition interventions. In communities there are currently no structures for meaningfull involvement but both groups showed enthusiasm to formally get involved.

6.0 REFERENCES

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ANNEXES

Annex 1: Household questionnaire

Questionnaire for Beneficiary Population-Based Nutritional Baseline Survey

Balaka, Mangochi and Machinga

Introduction: *Enumerators, please introduce the purpose of the survey and state confidentiality of the responses. Please tell the respondent that participation in this study is voluntary and that s/he will not receive any direct benefit due to participation in this study. Use the introductory sheet provided to you.*

INFORMED CONSENT MODULE: REQUEST FOR CONSENT [in Chichewa]:

Good Morning my name is ----------I am here with a group of research workers from Lilongwe University of Agriculture and Natural Resources, Bunda Campus, a project called Feed the Future - Integrating Nutrition in Value Chains (INVC).

The project aims at helping communities such as this one to grow more legumes. The aim is to increase the harvest of high-value crops such as groundnuts, and soy beans that can be produced and sold. The aim is to improve the nutrition and incomes of households in this community by helping the local community to organize themselves and find ways to produce more food and be able to sell the extra.

This interview is meant to help us understand the current state of nutrition and health in this community. You have been randomly selected to be part of the group of households to provide the information needed to assess the existing situation. The information is needed to help clarify what are the best ways to assist the community to develop itself. Among other things, I will ask you a number of questions regarding your infant and young child feeding practices, types of foods consumed, health, your own dietary practices.

All the answers you give in this interview will be treated with strict confidentiality. The answers we get from you will be treated completely anonymously. Your name or the names of your family members or those related to you will NOT be used to identify your answers. No one will be able to identify your answers with you or your family members.

- *Are you willing to answer these questions?* ***YES/NO****.*
- *Thank you for accepting to participate.*

Muli bwanji, dzina langa ndine ---------- ndabwera ndi anzanga akafukufuku kuchokera ku sukulu ya za malimidwe ku Bunda, kuzela mu puloject yotchedwa kudyetsera tsogolo la mawa – imene ikubweretsa pamodzi madyedwe oyenera ndi ndondomeko zokhuza zakudya.
Zolinga za pulojekiti imeneyi ndi kulimbikitsa ulimi wa mbeu za mtundu wa nyemba monga mtedza, soya, ndi nyemba ndicholinga chofuna kuchulukitsa kakololedwe ka mbeuzi zomwe ndi zaphindu ku thanzi lathu ndipo kuti zikakololedwa zambiri tingathenso kugulitsako. Pakutero titha kupititsa patsogolo thanzi komanso chuma mmabanja athu podzipezera tokha njira zimene zingalimbikitse ulimi.

Cholinga cha kucheza nanu ndi kuti tidziwe za manyedwe ndi za umoyo kudera lino. Nyumba yanu ndi imodzi mwa nyumba zimene zasankhidwa kudzera m'mayere ndi cholinga choti tidziwe mwatchutchutchu za m'mene nkhani za umoyo ndi madyedwe zikuyendera kuno. Zimene mutiuze zithandizira kuunikira njira zimene zingathandize dera lino kuti litukuke. Mwazina, ndikufusani mafunso okhudzana ndi kadyetsedwe ka ana ang`ono, mitundi ya zakudya, za umoyo, ndi zamadyedwe ayinuyo.

Zonse zimene tikambilane zikhala za chinsinsi, Mayankho anu onse asungidwa mwa chinsinsi, komanso dzina lanu kapena la wina aliyense wa pakhomo pano silikagwilitsidwa ntchito.

- **Ndinu okonzeka kutenga nawo gawo poyankha mafunso? INDE/AYI _____**

Zikomo kwambiri polola kutenga nawo mbali pazokambilana zanthu.

Date of interview (dd/mm/yy):_____/____/2014
Time Interview started _____:_____ *Time Interview Ended* ____:_____
QUESTIONNAIRE NUMBER: |_____|

Researchers & supervisor Details

		Code
Enumerator name		
Supervisor name		
Interview date		
Name of respondent		
Respondent: Beneficiary of NASFAM or not?	1=yes 2=No	
District →see codes below		
EPA		
Traditional Authority Name		
Group Village Headman (GVH) name		
Name of village		
Name of household head		

District Code

1=Balaka
2=Machinga
3=Mangochi

A: **GENERAL INFORMATION AND HOUSEHOLD COMPOSITION**

*Please provide me with information on the composition of your household as per the table below. Please note: A "**household**" includes all members of a common decision making unit (usually within one residence) that are sharing the same household resources. These include members who may be away from home e.g. school children attending boarding schools.*

A0 Household size pakhomo pano mulipo angati?_|_____|

		A1	A2	A3	A4	A5	A6
No.	Household (HH) member NAME: Start with Household Head followed by spouse (if any) then followed by rest of household members	WHAT IS THE RELATIONSHIP OF THIS HH MEMBER TO THE HH HEAD (*see RELATIONSHIP CODES below*)	WHAT IS THE AGE OF THIS HH MEMBER? (*years*)	IS THIS HH MEMBER MALE OR FEMALE? 0=Female 1=Male	LEVEL OF FORMAL EDUCATION 1-None 2-Primary School; 3-econdary.School; 4-Post secondary 5-University 6- Don't Know IF NONE go to A6	HOW MANY YEARS OF FROMAL SCHOOLING HAS THIS HH MEMBER HAD AS OF 2012 (*years*)	WHAT IS THE MAIN OCCUPATION OF THIS HH MEMBER (*see code below table*)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELATIONSHIP CODES:

1. Head
2. Husband
3. 1st wife
4. 2nd wife
5. 3rd wife
6. 4th wife
7. Son
8. Daughter
9. Father
10. Mother
11. Brother
12. Sister
13. Cousin
14. Other relatives
15. Other non-relatives
16. Worker lives within HH
17. Worker lives outside HH
18. Wife

OCCUPATION CODE:

1. Farmer

2. School Teaching
3. Artisan/Blacksmith
4. Civil servant
5. Trader/Shopkeeper
6. Seasonal Agric. Labourer (*seasonal ganyu*)
7. Permanent agricultural labourer (permanent perm)
8. Casual labor
9. Seasonal non-agric Labourer (*non agric ganyu*)
10. Permanent non-agric labour (mining, transport)
11. Student
12. Housework
13. Retired
14. Military/Police
15. Other specify

99. None *(only for second, or those under elderly care incapacitated)*

B. WATER AND SANITATION

B1. Source of drinking water (Kodi madzi akumwa mumatunga kuti) ☐

1 Piped water in dwelling 2. Piped into yard or plot 3. Public tap 4. Borehole with pump
5. Protected dug well 6. Protected spring 7. Rainwater collection 8. Unprotected dug well
9. Unprotected spring 10. Pond, river or stream 11. Tanker-truck, vendor 12. Other (Specify)

B2. Distance to water source and back (Mumatenga nthawi yaitali bwanji kupita ndi kubwerako)

Number of . Minutes……__ __ __
Water on premises……888
Do not know……...999

B3. Type of toilet facility for household use(kodi chimbudzi chanu ndi chotani) ☐

1 Flush to sewage system or septic tank 2. Pour flush latrine (water seal type) 3. Improved pit latrine (e.g. VIP

4. Traditional pit latrine 5. Open pit 6. Bucket 7. No facilities or bush or field 8 Other specify

B4 Location of toilet facility (Chimbudzi chanu chili pati) ☐

1 Within dwelling/yard/compound 2 Outside dwelling/yard/compound

B5 Disposal of young children stools (Kodi akachita chimbudzi mumachisamalabwanji? ☐

1. Children always use toilet or latrine 2. Thrown into toilet or latrine 3.Thrown outside the yard
4. Buried in the yard 5. Other (specify) 8. No young children in household

C. MORBIDITY (Illness recall) [Repeat for each child under 3 years] *Bwerezani mafunsowa pa ana onse osapitirira zaka zitatu pakhomopo*	**Child1**	**Child 2**
C1 In the last 2 weeks, has NAME had 3 or more semi-solid or liquid stools (acute diarrhea) in a 24-hour period? ***Kodi mwanayi (tchukani dzina) anatsegulako m'mimba masabata awiri apitawa?*** 1. YES 2. NO **>> skip to C11** 3. Don't Know **>> skip to C11**	☐	☐
***C2 For how many days did NAME have the 3 or more semi-solid or liquid stools* (acute diarrhea) in a 24-hour period?** *Kodi mwana ameneyi anatsegula mmimba masiku angati?*	**DAYS** ☐	**DAYS** ☐
***C3 During the time NAME had 3 or more semi-solid or liquid stools in a 24-hour* period, was there any <u>blood</u> in the stool?** *Panthawi imene mwanayu(dzina lake) amatsgegula mmimba, chimbudzi chake chinali ndi magazi?* 1. YES 2. NO 3. Don't Know	☐	☐
C4 Did NAME receive ANY treatment for the diarrhea? ***Kodi mwanayi (dzina) analandira chithandizo china chili chonse pamene amatsegula mmimba?*** 1. YES 2. NO 3. Don't Know	☐	☐

C5 During this diarrhea episode, what did you do?Panthawi imene mwana amatseguls mmimba, munapangapo chiani? 1. Continue to breastfed / increase food intake 2. Cease breastfeeding/giving food 3. Give salt for diarrhea at home 4. Go to church / preacher 5. Go to traditional healer 6. Go to health centre-post / hospital 7. Nothing 8. Other (specify) ***Multiple answers possible***	☐	☐
C6. Which treatment was given to NAME for the diarrhea? (indicate all that apply) *Mwanayi(tchulani dzina) analandira chithandizo chanji atatsegula mmimba* 1 Oral Rehydration Therapy (ORT) 2 Zinc Supplements 3 Local/Homemade Syrups 4 Continued Breastfeeding Or Feeding 5 Other Specify ***Multiple answers possibleA***	☐	☐
C7. When (NAME) had diarrhea, did the intake of fluid change ? ***(Nthawi imene mwanayi (tchulani dzina) amatsegula mmimba kodi kaperekedwe kazakumwa kanasintha)?*** 1. YES 2. NO 3 Don't know	☐	☐
C8. If yes, did the fluid intake change in relation to the usual amount ? ***(Ngati Inde kanasintha motani)?*** 1. Less 2. About the same 3. More 4. Nothing to drink	☐	☐
C9. When (NAME) had diarrhea, did the intake of food change ***(Nthawi imene mwanayi (tchulani dzina) amatsegula mmimba kodi kaperekedwe kazakudya kanasintha)?*** 1. YES 2. NO 3 Don't know	☐	☐
C10. If yes how did the food intake change in relation to the usual amount? ***Ngati Inde kanasintha motani)?*** 1. Less 2. About the same 3. More 4. Nothing to eat	☐	☐
C11. In the last 2 weeks, has NAME had a fever? ***Kodi mwana wanuyu anatenthako thupi masabata awiri apitawa?*** 1. YES 2. NO **>> skip to C16** 3. Don't Know **>> skip to C16**	☐	☐

C12 .When (NAME) had fever did the intake of fluid change ?(Nthawi imene mwanayi (tchulani dzina) anatentha thupi kodi kaperekedwe ka zakumwa kanasintha? 1. YES 2. NO ***3. Don't Know***	☐	☐
C13. If yes did the fluid intake change in relation to the usual amount ? Ngati inde kanasintha bwanji? 1. Less 2. About the same 3. More 4. Nothing to drink	☐	☐
C14. When (NAME) had fever, did the intake of food change Nthawi imene mwanayi (tchulani dzina) anatentha thupi kodi kaperekedwe ka zakudya kanasintha? 1. YES 2. NO ***3. Don't Know***	☐	☐
C15. If yes how did the food change relation to the usual amount? Ngati inde kanasintha bwanji 1. Less 2. About the same 3. More 4. Nothing to eat	☐	☐
C16. During the last 2 weeks, has NAME had malaria Kodi mwana wanuyu anadwalapo malungo masabata awiri apitawa? ***1. YES 2. NO >> skip to D01 3. Don't Know>> skip to D01***	☐	☐
C17. When (NAME) had malaria did the intake of fluid change ? Nthawi imene mwanayi (tchulani dzina) anadwala malungo kodi kaperekedwe ka zakumwa kanasintha? ***1. YES 2. NO 3. Don't Know***	☐	☐
C18. If yes did the fluid intake change in relation to the usual amount ? Ngati inde kanasintha bwanji Less 2. About the same 3. More 4. Nothing to drink	☐	☐
C19. When (NAME) had malaria, did the intake of food change Nthawi imene mwanayi (tchulani dzina) anatentha thupi kodi kaperekedwe ka zakudya kanasintha? ***1. YES 2. NO 3. Don't Know***	☐	☐
C20. If yes how did the food changein inrelation to the usual amount? Ngati inde kanasintha bwanji 1. Less 2. About the same 3. More 4. Nothing to eat	☐	☐

MODULE D. CHILD ANTHROPOMETRY AND INFANT AND YOUNG CHILD FEEDING

Enumerator Instructions:
Ask these questions of the primary caregiver of each child aged 0–35 months in the household.

Household identification (*in data file, each respondent must be matched with the HH ID*) ☐☐☐☐☐☐

Check to see if EACH caregiver has given consent to be interviewed in INFROMED CONSENT MODULE. If a caregiver has not yet given consent, return to Module B and gain caregiver consent before proceeding. You should carry duplicate copies of this module in case there are more than 5 children 0-35 months old in the household.

No.	Question	Response codes	Child 1	Child 2	Child 3	Child 4	Child 5
D01	CAREGIVER'S ID CODE FROM THE HOUSEHOLD ROSTER		☐☐	☐☐	☐☐	☐☐	☐☐
D02	CHILD'S ID CODE FROM THE HOUSEHOLD ROSTER		☐☐	☐☐	☐☐	☐☐	☐☐
D03	What is [child's name]'s sex?	1 = Male 2 = Female					
D04	I would like to ask you some questions about [child's name]. *Tsopano ndikufunsani mafunso okhudzana ndi (* child's name*)* What is the date of birth of [child's name]? Kodi mwanayi anabadwa liti? Does [child's name] have a health passport or any other written document with the birth date recorded? Kodi mwanayi ali ndi bukhu la kuchipatala?tchulani dzina la mwana IF THE HEALTH PASSPORT CONFIRMS THE INFORMATION IS CORRECT, RECORD THE DATE OF BIRTH AS DOCUMENTED ON THE PASSPORT.		☐☐ Day ☐☐ Month ☐☐☐☐ Year ☐	☐☐ Day ☐☐ Month ☐☐☐☐ Year	☐☐ Day ☐☐ Month ☐☐☐☐ Year	☐☐ Day ☐☐ Month ☐☐☐☐ Year	☐☐ Day ☐☐ Month ☐☐☐☐ Year
D05	How old was [child's name] at [his/her] last		☐	☐	☐	☐	☐

	birthday? RECORD AGE IN COMPLETED YEARS		Years	Years	Years	Years	Years
D06	How many months old is [child's name]? RECORD AGE IN COMPLETED MONTHS		Months	Months	Months	Months	Months
D07	CHECK E04, E05, AND E06 TO VERIFY CONSISTENCY A) IS THE YEAR RECORDED IN E04 CONSISTENT WITH THE AGE IN YEARS RECORDED IN E05? B) ARE YEAR AND MONTH OF BIRTH RECORDED IN E04 CONSISTENT WITH AGE IN MONTHS RECORDED IN E06? IF THE ANSWER TO A OR B IS 'NO,' RESOLVE ANY INCONSISTENCIES. IF THE BIRTHDATE WAS RECORDED ON A HEALTH PASSPORT, THIS MAY BE USED AS THE CORRECT DATA SOURCE.	1 = Yes 2 = No 1 = Yes 2 = No					
D08	CHECK E06. IS THE CHILD UNDER 36 MONTHS?	1 = Yes 2 = No >> end module 9 = Don't know >> end module					

	ANTHROPOMETRY CHILDREN 6 – 35 MONTHS OF AGE						
No.	**Question**	**Response codes**	**Child 1**	**Child 2**	**Child 3**	**Child 4**	**Child 5**
D09	CHILDREN UNDER 24 MONTHS SHOULD BE MEASURED LYING DOWN; CHILDREN 24 MONTHS OR OLDER SHOULD BE MEASURED STANDING UP. HEIGHT IN CENTIMETERS TO THE NEAREST 0.1 CM: MEASURE THE CHILD		☐☐☐.☐ cm	☐☐☐.☐ cm	☐☐☐.☐ cm	☐☐☐.☐ cm	☐☐☐.☐ Cm
D10	WEIGHT IN ***KGS*** TO NEAREST 0.1 KG		☐☐.☐ Kgs	☐☐.☐ Kgs	☐☐.☐ Kgs	☐☐.☐ Kgs	☐☐.☐ Kgs
	EXCLUSIVE BREASTFEEDING AND MINIMUM ACCEPTABLE DIET *Kuyamwitsa mwana mwa kathithi ndi kudya koyenera*						
D11	CHECK QUESTION D05. IS THE CHILD UNDER 2 YEARS OF AGE?	1 = Yes 2 = No **>> D30**					
D12	Has [child's name] ever been breastfed? *Kodi mwanayu (tchulani dzina la mwana) adayamba wayamwako chibadwire?*	1 = Yes 2 = No **>> skip to D16** 9 = Don't Know **>> skip to D16**					
D13	Is (child name) still breastfed? Kodi Mwanayu akadayamwabe?	1 = Yes 2 = No >> **skip to D16**					
D14	Was [child's name] breastfed yesterday during the day or at night? *Kodi mwanayu dzulo anayamwako usana kapena usiku?*	1 = Yes **>> skip to D16** 2 = No 9 = Don't Know					

D15	*Sometimes babies are fed breast milk in different ways, for example by spoon, cup, or bottle. This can happen when the mother cannot always be with her baby. Sometimes babies are breastfed by another woman or given breast milk from another woman by spoon, cup, bottle, or some other way. This can happen if a mother cannot breastfeed her own baby. (Nthawi zina wana angapatsidwe mkaka wam'mawere, mwatchitsanzo kugwiritsa ntchito sipuni, kapu ngakhalenso botolo, izi zikhoza kuchitika pamene mwana sangakhale ndi mayi wake nthawi zonse, Nthawi zina mwana amayamwitsidwa ndi mai wina kapena kupatsidwa mkaka wammawere kuchokera kwa mai wina pogwiritsa ntchito sipuni, kapu kapena botolo. Izi zikhoza kuchitika ngati mai sangathe kuyamwitsa mwana wake.*						
	Did [child's name] consume breast milk in any of these ways yesterday during the day or at night? Kodi mwanayi anapatsidwa mkaka wam'mawele kudzera munjira zimenezi dzulo?	1 = Yes 2 = No 9 = Don't Know					
No.	**Question**	**Response codes**	**Child 1**	**Child 2**	**Child 3**	**Child 4**	**Child 5**
D16	Now I would like to ask you about some medicines and vitamins that are sometimes given to infants. *Tsopani ndikufuna kuti ndikufunseni za mavitamin kapenda mankhwala amene ana amapatsidwa* Was [child's name] given any vitamin drops or other medicines as drops yesterday during the day or at night? *Kodi mwanayu anapatsidwako mankhwala ena alionse dzulo?*	1 = Yes 2 = No 9 = Don't Know					
D17	Was [child's name] given **Thanzi ORS** yesterday during the day or at night? *Kodi mwanayu anapatsidwako thanzi dzulo?*	1 = Yes 2 = No 9 = Don't Know					
	READ THE QUESTIONS BELOW. READ THE LIST OF LIQUIDS ONE BY ONE AND MARK YES OR NO, ACCORDINGLY. *Funsani mafunso ali mmunsiwa palokha palokha ndipo ayankhe eya kapena ayi?* Next I would like to ask you about some liquids that [child's name] may have had yesterday during the day or at night. READ THE LIST OF LIQUIDS STARTING WITH 'PLAIN WATER. *Tsopano tikufunsani zakumwa zimene anamwako dzulo mwanayu (tchulani dzina la mwana)*						
D18	Plain water? *Madzi akumwa*	1 = Yes 2 = No 9 = Don't Know					
D19	Infant formula such as **lactogen**? *Mkaka wa mwana wa kushopu (Okhala mu chitin)*	1 = Yes 2 = No >> skip to D21 9 = Don't Know>> skip to D21					

D20	How many times yesterday during the day or at night did [child's name] consume any formula? PROBE: ANY MORE? *Kodi mwanayu anamwa kangati mkaka wa ku shopu?*	98 = Don't know	☐☐ Times	☐☐ Times	☐☐ Times	☐☐ Times	☐☐ Times

No.	Question	Response codes	Child 1	Child 2	Child 3	Child 4	Child 5
D21	Did [child's name] have any milk such as tinned, powdered, or fresh animal milk? *Kodi mwanayu dzulo anamwako mkaka waufa, wamchitini kapena wa ziweto.*	1 = Yes 2 = No >> skip to D23 9 = Don't Know >> skip to D23					
D22	How many times yesterday during the day or at night did [child's name] consume any milk? PROBE: ANY MORE? *Kodi mwanayu dzulo anamwa kangati mkaka wina uliwonse*	Number of times 98 = Don't know	☐☐ Times	☐☐ Times	☐☐ Times	☐☐ Times	☐☐ Times
D23	Did [child's name] have any juice or juice drinks? *Kodi mwanayu anamwako juwisi wina aliyense ?*	1 = Yes 2 = No 9 = Don't Know					
D24	Clear broth or msuzi? *Anamwako nsuzi wina uliwonse?*	1 = Yes 2 = No 9 = Don't Know					
D25	Yogurt? *Nanga yogati*	1 = Yes 2 = No >> skip to D27 9 = Don't Know>> skip to D27					
D26	How many times yesterday during the day or at night did [child's name] consume any yogurt? PROBE: ANY MORE? *Yogatiyu anamwa kangati dzulo?*	Number of times 98 = Don't know	☐☐ Times	☐☐ Times	☐☐ Times	☐☐ Times	☐☐ Times
D27	Did [child's name] have any thin porridge? *Tchulani dzina la mwana, anamwako phala la madzi-madzi?*	1 = Yes 2 = No 9 = Don't Know					
D28	Any other liquids such as thobwa? *Nanga chakumwa china chili chonse ngati thobwa?*	1 = Yes 2 = No 9 = Don't Know					
D29	Any other liquids? *Nanga chakumwa china chili chonse poonjezera tatchula kale zija?*	1 = Yes 2 = No 9 = Don't Know					

No.	Question	Response codes	Child 1	Child 2	Child 3	Child 4	Child 5
	Please describe everything that [child's name] ate yesterday during the day or night, whether at home or outside the home. *Fotokozani zakudya zonse zimene mwanayu anadya dzulo kunyumba kuno kapena koyenda, kuyambira mmawa kutacha mpaka madzulopamene amakagona.* A) Think about when [child's name] first woke up yesterday. Did [child's name] eat anything at that time? IF YES: Please tell me everything [child's name] ate at that time. PROBE: Anything else? UNTIL RESPONDENT SAYS NOTHING ELSE. THEN CONTINUE TO PART B).						

	NGATI ANADYA, TCHULANI ZAKUDYA ZIMENE ANADYAZO, YESETSANI KUFUNSITSITSA IF NO, CONTINUE TO PART B). *NGATI NDI AYI PITILIZANI KU PART B* B) What did [child's name] do after that? Did [child's name] eat anything at that time? IF YES: Please tell me everything [child's name] ate at that time. PROBE: Anything else? UNTIL RESPONDENT SAYS NOTHING ELSE. REPEAT QUESTION B) UNTIL THE 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 FUNSITSITSANI KUTI KU CHAKUDYAKO ANATHIRAKO CHIANI? AS THE RESPONDENT RECALLS FOODS, UNDERLINE THE CORRESPONDING FOOD AND ENTER '1' IN THE RESPONSE BOX NEXT TO THE FOOD GROUP. IF THE FOOD IS NOT LISTED IN ANY OF THE FOOD GROUPS BELOW, WRITE THE FOOD IN THE BOX LABELED 'OTHER FOODS.' IF FOODS ARE USED IN SMALL AMOUNTS FOR SEASONING OR AS A CONDIMENT, INCLUDE THEM UNDER THE CONDIMENTS FOOD GROUP. ONCE THE RESPONDENT FINISHES RECALLING FOODS EATEN, READ EACH FOOD GROUP WHERE '1' WAS NOT ENTERED IN THE RESPONSE BOX, ASK THE FOLLOWING QUESTION AND ENTER '1' IF RESPONDENT SAYS YES, '0' IF NO, AND '9' IF DON'T KNOW: Yesterday, during the day or night, did [child's name] drink/eat any [food group items]?						
	OTHER FOODS: PLEASE WRITE DOWN OTHER FOODS (TO THE RIGHT OF THIS BOX) THAT RESPONDENT MENTIONED BUT ARE NOT IN THE LIST BELOW. THIS WILL ALLOW THE SURVEY SUPERVISOR OR OTHER KNOWLEDGEABLE INDIVIDUAL TO CLASSIFY THE FOOD LATER.		WRITE FOODS MENTIONED HERE:	WRITE FOODS MENTIONED HERE:	WRITE FOODS MENTIONED HERE:	WRITE FOODS MENTIONED HERE:	WRITE FOODS MENTIONED HERE:
No.	**Question**	**Response codes**	**Child 1**	**Child 2**	**Child 3**	**Child 4**	**Child 5**
D30	Food made from grains such as bread, rice, noodles, porridge, **nsima**, any other foods made from millet, sorghum, maize, rice, wheat or other locally available grains. ZAKUDYA ZOKHUTITSA:	1 = Yes 2 = No 9 = Don't Know					
D31	Pumpkin, carrots, squash, orange/yellow fleshed sweet potatoes, or other locally available orange/yellow fleshed vegetables and tubers (Zakudya zofiira mkati)	1 = Yes 2 = No 9 = Don't Know					
D32	**WHITE TUBERS AND ROOTS:** White potatoes, white yams, cassava, or any other foods made from roots and tubers (Zakudya zagulu la	1 = Yes 2 = No 9 = Don't Know					

	zikhawo)						
D33	**DARK GREEN LEAFY VEGETABLES**: Any dark green leafy vegetables such as cassava leaves, sweet potato leaves, amaranths, black jack leaves and any other locally available dark green leafy vegetables. (Ndiwo za masamba obiriwira)	1 = Yes 2 = No 9 = Don't Know					
D34	**OTHER VEGETABLES:** such as tomato, onion, eggplant) , including wild vegetables *(Masamba ena monga tomato, anyezi, mabilinganya ndi ena opezeka kutchire*	1 = Yes 2 = No 9 = Don't Know					
D35	Ripe mangoes, ripe papayas or other local vitamin A-rich fruits. Mango akupsa, papaya wakupsa kapena zipatso zina zili zones zokhala ndi vitamin A	1 = Yes 2 = No 9 = Don't Know					
D36	**OTHER FRUITS:** such as citrus, apples, white guavas or any other fruits including wild ones. Zipatso zina monga maolanje, mandimu, nachesi, manyumwa, guwafa ndi zipatso za kutchire	1 = Yes 2 = No 9 = Don't Know					
D37	**ORGAN MEAT (IRON-RICH):** Liver, kidney, heart, or other organ meats **Chiwindi,impyso, mtima ndi zina**	1 = Yes 2 = No 9 = Don't Know					
D38	**FLESH MEATS:** beef, pork, lamb, goat, rabbit, mice, wild game, chicken, duck, pigeon or other birds or any other meats Za gulu la Nyama monga: ng'ombe, nkhosa, mbuzi, kalulu, mbewa, nkhuku,bakha, nkhunda ndi china chilichonse cha mgulu la nyama	1 = Yes 2 = No 9 = Don't Know					
D39	**EGGS:** from any birds including chicken, guinea fowl,	1 = Yes 2 = No					

	turkey duck or any other birds Maziraockhoka ku: nkhuku, nkhanga, nkhukundembo kapena mbalame ina iri yonse	9 = Don't Know					
D40	**FISH:** Fresh or dried fish, shellfish, or sea Za gulu la nsomba food	1 = Yes 2 = No 9 = Don't Know					
No.	Question	Response codes	Child 1	Child 2	Child 3	Child 4	Child 5
D41	Any foods made from soybeans (Zakudya zochokera ku soya)	1 = Yes 2 = No 9 = Don't Know					
	Any foods made from groundnuts (zakudya zochokera ku mtedza/nsawa)	1 = Yes 2 = No 9= Don't know					
	Any foods made from other beans, garden peas, cow peas, pigeon peas, **nkhungudzu**, lentils, nuts, or seeds, etc. (Zakudya zochokera ku magulu anyemba)	1 = Yes 2 = No 9= Don't know					
D42	**MILK AND MILK PRODUCTS:** Cheese, yogurt, **chambiko**, or any other milk products (Zakudya zochokera ku mkaka)	1 = Yes 2 = No 9 = Don't Know					
D43	**OILS AND FATS:** Any oil, fats, or butter, red palm oil, avocado or foods made with any of these (Zakudya za mafuta)	1 = Yes 2 = No 9 = Don't Know					
D44	**SWEETS**: sugar, honey, or any sugary foods such as chocolates, sweets, candies, pastries, cakes, or biscuits (Zotsekemera)	1 = Yes 2 = No 9 = Don't Know					

No.	Question	Response codes	Child 1	Child 2	Child 3	Child 4	Child 5
D45	**BEVERAGES** coffee, tea, thobwa, mahewu, soft drinks, sweetened soda, freezes, etc. Zakumwa	1 = Yes 2 = No 9 = Don't Know					

D46	**SPICES, CONDIMENTS for flavor:** such as chilies, spices, herbs or fish powder Zokometsera mu ndiwo:	1 = Yes 2 = No 9 = Don't Know					
D47	**INSECTS:** like insect larvae, flying ants, locusts, crickets, grasshoppers or any other edible insects Gulu la ziwala: ngumbi, dzombe, nkhululu, chithuli, kapena ziwala zina zili zones zodyedwa	1 = Yes 2 = No 9 = Don't Know					
	CHECK CATEGORIES 30-45 YANGA'NANI MAFUNSO 30-45	If all 'no' >> go to D48 Ngati zonse ayankha kuti ayi kapena sakudziwa pitani ku D48					
D48	Did [child's name] eat any solid, semi-solid, or soft foods yesterday during the day or at night? Kodi dzulo mwanayu anadyako zakudya zili zonse zamadzimadzi kapena zofewa kupatula mkaka wa mawere? IF 'YES' PROBE: What kind of solid, semi-solid, or soft foods did [child's name] eat? Ndi zakudya ziti zimene anadya dzulo	1 = Yes >> go back to D30–D45 and record foods eaten. Then continue up to D47. 2 = No >> end module 9 = Don't Know >> end module					
D49	How many times did [child's name] eat solid, semi-solid, or soft foods other than liquids yesterday during the day or at night? PROBE: ANY MORE?	98 = Don't Know	Times	Times	Times	Times	Times

MODULE E: WOMEN'S DIETARY DIVERSITY

Household identification (*in data file, each respondent must be matched with the HH ID*)						

Enumerator Instructions:
Ask these questions of each woman of reproductive age (15-49 years) in the household. Check to see if EACH woman has given consent to be interviewed in INFORMED CONSENT MODULE. If a woman has not yet given consent, return to INFORMED CONSENTMODULE and gain her consent before proceeding. You should carry duplicate copies of this module (MODULE F) in case there are more than 5 women of reproductive age in the household.

No.	Question	Response codes	Woman 1	Woman 2	Woman 3	Woman 4	Woman 5
E01	WOMAN'S ID CODE FROM THE HOUSEHOLD ROSTER		☐☐	☐☐	☐☐	☐☐	☐☐
E02	In what month and year were you born? Kodi amayi munabadwa liti?	IF MONTH IS NOT KNOWN, ENTER '98' IF YEAR IS NOT KNOWN, ENTER '9998'	☐☐ Month ☐☐☐☐ Year	☐☐ Month ☐☐☐☐ Year	☐☐ Month ☐☐☐☐ Year	☐☐ Month ☐☐☐☐ Year	☐☐ Month ☐☐☐☐ Year
E03	Please tell me how old you are. What was your age at your last birthday? RECORD AGE IN COMPLETED YEARS Muli ndi zaka zingati	IF RESPON-DENT CANNOT REMEMBER HOW OLD SHE IS, ENTER '98' AND ASK QUESTION H04. IF RESPONDENT KNOWS HER AGE >> H05	☐☐ Years	☐☐ Years	☐☐ Years	☐☐ Years	☐☐ Years
E04	Are you between the ages of 15 and 49 years old? Kodi zaka zanu zili pakati pa 15-49	1 = Yes 2 = No >> end module 9 = Don't know >> end module					
E05	CHECK F02, F03 AND F04 (IF APPLICABLE): IS THE RESPONDENT BETWEEN THE AGES OF 15 AND 49 YEARS? IF THE INFORMATION IN F02, F03, AND F04 CONFLICTS, DETERMINE WHICH IS MOST	1 = Yes 2 = No >> end module					

No.	Question	Response codes	Woman 1	Woman 2	Woman 3	Woman 4	Woman 5
	ACCURATE.						
E06	Are you currently pregnant? Kodi Amayi panopa ndi nu oyembekezera?	1 = Yes 2 = No 9=Don't know					
	WOMEN'S DIETARY DIVERSITY						
	Please describe everything that you ate yesterday during the day or night, whether at home or outside the home. **A)** Think about when you first woke up yesterday. Did you eat anything at that time? IF YES: Please tell me everything you ate at that time. PROBE: Anything else? UNTIL RESPONDENT SAYS NOTHING ELSE, THEN CONTINUE TO PART B. Amayi mundifotokozere zonse zimene munadya dzulo kuyambira mmawa kutacha mpaka madzulo pamane mukagona? IF NO, CONTINUE TO PART B. **B)** What did you do after that? Did you eat anything at that time? IF YES: Please tell me everything you ate at that time. PROBE: Anything else? UNTIL RESPONDENT SAYS NOTHING ELSE. REPEAT QUESTION B ABOVE UNTIL RESPONDENT SAYS SHE 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. KUZAKUDYA ZIMENE MUNADYAZI MUTHIRAKO CHIANI? AS THE RESPONDENT RECALLS FOODS, UNDERLINE THE CORRESPONDING FOOD AND ENTER '1' IN THE COLUMN NEXT TO THE FOOD GROUP. IF THE FOOD IS NOT LISTED IN ANY OF THE FOOD GROUPS BELOW, WRITE THE FOOD IN THE BOX LABELED 'OTHER FOODS.' IF FOODS ARE USED IN SMALL AMOUNTS FOR SEASONING OR AS A CONDIMENT, INCLUDE THEM UNDER THE CONDIMENTS FOOD GROUP. ONCE THE RESPONDENT FINISHES RECALLING FOODS EATEN, READ EACH FOOD GROUP WHERE '1' WAS NOT ENTERED, ASK THE FOLLOWING QUESTION AND ENTER '1' IF RESPONDENT SAYS YES, '0' IF NO, AND '9' IF DON'T KNOW. Yesterday during the day or night, did you drink/eat any [food group items]?						
	OTHER FOODS: PLEASE WRITE DOWN OTHER FOODS TO THE RIGHT OF THIS BOX THAT RESPONDENT MENTIONED		WRITE FOODS EATEN HERE:	WRITE FOODS EATEN HERE:	WRITE FOODS EATEN HERE:	WRITE FOODS EATEN HERE:	WRITE FOODS EATEN HERE:

No.	Question	Response codes	Woman 1	Woman 2	Woman 3	Woman 4	Woman 5
	BUT ARE NOT IN THE LIST BELOW. THIS WILL ALLOW THE SURVEY SUPERVISOR OR OTHER KNOWLEDGEABLE INDIVIDUAL TO CLASSIFY THE FOOD LATER.						
E07	**CEREALS**: such as bread, rice, noodles, porridge, nsima, any other foods made from millet, sorghum, maize, rice, wheat or other locally available grains. ZAKUDYA ZOKHUTITSA	1 = Yes 2 = No 9 = Don't Know					
E8	**VITAMIN A RICH VEGETABLES AND TUBERS:** Pumpkin, carrots, squash, orange/yellow fleshed sweet potatoes, or other locally available orange/yellow fleshed vegetables and tubers Zakudya za chikasu kapena zofiira mkati monga maungu, karoti, mbatata za chikasu kapena zofiira mkati	1 = Yes 2 = No 9 = Don't Know					
E9	WHITE TUBERS AND ROOTS: White potatoes, white yams, cassava, or any other foods made from roots and tubers Zakudya zochokera ku zikhawo monga izi: Mbatata, chinangwa kapena zakudya zina zilizonse zochokera ku zikhawo	1 = Yes 2 = No 9 = Don't Know					

No.	Question	Response codes	Woman 1	Woman 2	Woman 3	Woman 4	Woman 5
E10	Any dark green leafy vegetables such as cassava leaves, sweet potato leaves, amaranths, black jack leaves and any other locally available dark green leafy vegetables. Za gulu la masamba obiliwira monga: chigwada, bobongwe, chisoso, kapena masamba ena ali onse obiliwira	1 = Yes 2 = No 9 = Don't Know					
E11	**OTHER VEGETABLES:** such as tomato, onion, eggplant) , including wild vegetables Masamba ena monga: tomato, anyezi, mabilinganya ndi masamba ena opezeka mu tchire.	1 = Yes 2 = No 9 = Don't Know					
E12	**VITAMIN A RICH FRUITS**: Ripe mangoes, ripe papayas Zakudya zokhala ndi vitamin A monga : mango, mpapaya kepana zina zakutchire zokhala ndi vitamin A or other local vitamin A-rich fruits.	1 = Yes 2 = No 9 = Don't Know					
E13	**OTHER FRUITS:** such as citrus, apples, white guavas or any other fruits including wild ones. Zipatso zina monga: mandimu, nachesi, lalanje, guwafa ndi zina zakutchire	1 = Yes 2 = No 9 = Don't Know					
E14	**ORGAN MEAT (IRON-RICH):** Liver, kidney, heart, or other organ meats Zamkati monga:	1 = Yes 2 = No 9 = Don't Know					

No.	Question	Response codes	Woman 1	Woman 2	Woman 3	Woman 4	Woman 5
	Chiwindi,impyso, mtima ndi zina						
E15	**FLESH MEATS:** beef, pork, lamb, goat, rabbit, mice, wild game, chicken, duck, pigeon or other birds or any other meats Nyama monga: ng'ombe, nkhumba, nkhosa, nkhuku, kalulu, mbewa, Nyama yakutchire, bakha, nkhunda kapena Nyama ina iriyonse	1 = Yes 2 = No 9 = Don't Know					
E16	**EGGS:** from any birds including chicken, guinea fowl, turkey duck or any other birds Maziraockhoka ku: nkhuku, nkhanga, nkhukundembo, nkhanga kapena mbalame ina iri yonse	1 = Yes 2 = No 9 = Don't Know					
E17	**FISH:** Fresh or dried fish, shellfish, or seafood Za mgulu la msomba	1 = Yes 2 = No 9 = Don't Know					
E18a	Any foods made from soybeans, (Zakudya zochokera ku soya)	1 = Yes 2 = No 9 = Don't Know					
E18b	Any foods made from, groundnuts (Zakudya zochekera ku mtedza)	1 = Yes 2 = No 9 = Don't Know					
E18c	Any foods made from beans, garden peas, cow peas, pigeon	1 = Yes 2 = No					

No.	Question	Response codes	Woman 1	Woman 2	Woman 3	Woman 4	Woman 5
	peas, nkhungudzu, lentils, nuts, or seeds (Zakudya za magulu a nyeba)	9 = Don't Know					
E19	**MILK AND MILK PRODUCTS:** Cheese, yogurt, chambiko, or any other milk products (Zakudya zochokera ku mkaka)	1 = Yes 2 = No 9 = Don't Know					
E20	**OILS AND FATS:** Any oil, fats, or butter, red palm oil, avocado or foods made with any of these (Za gulu la mafuta)	1 = Yes 2 = No 9 = Don't Know					
E21	**SWEETS**: sugar, honey, sweetened soda or any sugary foods such as chocolates, sweets, candies, pastries, cakes, or biscuits (Za kudya zotsekemera)	1 = Yes 2 = No 9 = Don't Know					
E22	**SPICES, CONDIMENTS, BEVERAGES:** such as chillies, spices, herbs, coffee, tea, thobwa, mahewu, soft drinks, freezes, etc. (Zokometsera zakudya)	1 = Yes 2 = No 9 = Don't Know					

Thank the respondent for participating in the survey

Annex 2: Checklist for FGDs

FGD TOOL 1: Focus Group Discussion Guide for Mothers

Name of district:
Name of TA:
Name of Group Village:
Number of participants:
Date:
Moderator/Facilitator:
Scribe:
Instructions to moderator and scribe: **Paraphrase/summarise what people are saying to capture correct information. You should constantly be checking your understanding, by saying things like "so what you are saying is …", or "If I understand you correctly, you are suggesting that.". This is especially useful if there is a difference of opinion, then you can say "I see there are two views here, the one is that … and the other is that ….. Do you agree with me?" then you can move on to the next item.** **Some sensitive issues may come up during the session so be cautious with how you handle the issues and create a safe environment for sharing by participants. Do not be judgemental about their practices, HIV status or anything else. Your role is to LISTEN and check your understanding of what they are saying. If any serious issues come up, make a note of this and inform your supervisor immediately.** **The time frames are very tight. Focus on getting key information within the time allocated.**
Welcome and overview
Time: 5 mins **Good morning/afternoon, my name is _____. I would like to learn more about this community, its households, your food and nutrition situation, existing interventions, challenges faced and opportunities that could be explored. Your experiences, views, knowledge and opinions are valuable in this process and we would therefore like you to share what you know and what your experiences are on the above issues. There are no right or wrong answers and the information you give will be used to ensure that we can provide communities with more support around nutrition.** **To ensure that we are in a safe environment to share openly and honestly can we agree to the following ground rules?** **Confidentiality – that we will keep private what we speak about in this discussion** **Honesty – tell us what you really know and feel about each topic of discussion, not what you think we want you to say – just share openly.** **Participation – it is very important that each of you give your opinions about the questions being asked and your experiences.** **Respect: let us respect each other's views as we want to know all the different opinions around the table. Feel free to express yourselves, this is a safe space – you will not be judged for your opinion. I hope that you will find it interesting to share information with each other.** **In our discussions we will discuss a number of maternal and child health care and nutrition practices and other general issues that affect the health and nutrition status of pregnant, lactating women and children up to 2 years.** **Does anyone have any questions before we start?**
Welcome and overview ***Time: 5 mins*** **Good morning/afternoon, my name is _____. I would like to learn more about this community, its households, your food and nutrition situation, existing interventions, challenges faced and opportunities that could be explored. Your experiences, views, knowledge and opinions are valuable in this process and we would therefore like you to share what you know and what your experiences are on the above issues. There are no right or wrong answers and the information you give will be used to ensure that we can**

provide communities with more support around nutrition.
To ensure that we are in a safe environment to share openly and honestly can we agree to the following ground rules?
Confidentiality – that we will keep private what we speak about in this discussion
Honesty – tell us what you really know and feel about each topic of discussion, not what you think we want you to say – just share openly.
Participation – it is very important that each of you give your opinions about the questions being asked and your experiences.
Respect: let us respect each other's views as we want to know all the different opinions around the table. Feel free to express yourselves, this is a safe space – you will not be judged for your opinion. I hope that you will find it interesting to share information with each other.
In our discussions we will discuss a number of maternal and child health care and nutrition practices and other general issues that affect the health and nutrition status of pregnant, lactating women and children up to 2 years. Does anyone have any questions before we start?

Section 1: Optimal breastfeeding (Kayamwitsidwe koyenera)

FG2.1.	In your opinion how should a mother feed her baby who is less than six months old? ***Kodi mumayembekezera kuti mzimayi azidyetsa bwanji mwana osaposera miyezi isanu ndi umodzi?***
FG2.2.	Is there a person in this village who women look to for advice on breastfeeding? Probe: Who is this person (*Probe for relationship/position in family/ community).* What advice would he/she give to a new mother on breastfeeding? ***Kodi pali munthu yemwe azimai ambiri amapezako malangizo okhudza kayamwitsidwe ka ana? Ngati alipo, munthuyu amapereka malangizo otani okhudzana kayamwitsidwe kamwana kwa mzimayi yemwe wangoyamba kumene kubereka?***
FG2.3.	What would people say to a mother who is giving only breast milk to her baby who is less than six months of age? Why? ***Kodi anthu anganene chani kwa mzimayi amene wapanga chiganizo choyamwitsa mwana wake mkaka wamawere okha okha popanda chowonjezera china chilichonse kuphatikizapo madzi kuchokera tsiku lobadwa mpaka kufikira miyezi isanu ndi umodzi? Chifukwa chake ndi chani?***
FG2.4	In your opinion, what occasions/circumstances should a mother not breastfeed her infant? ***Kodi pali zifukwa zomveka zolepheretsa mayi kuyamwitsa mwana wake mkaka wam'mawere? Fototokozani zifukwazo ngati zilipo.***
FG2.5	In your opinion, during what occasions/circumstances should a mother give other liquids and foods besides breast milk to a baby less than six months? ***Kodi pali zifukwa zanji zolola mzimayi kupereka zakumwa kapena zakudya zina kwa mwana amene sanakwanitse miyezi isanu ndi umodzi?*** ***Fotokozani zifukwazi ngati zilipo.***
FG2.6	Do you think that feeding other milks (other than breastmilk) to babies less than 6 months is "the same"/"just as good" or perhaps better than breastfeeding? (*Probe for type of milk and explain your answer*) ***Kodi pali kusiyana kulikonse kwa kupereka mkaka wamawere kwa mwana amene sanakwanitse miyezi isanu ndi umodzi ndi mkaka wina uliwonse ngati wogula kapena wan n'gombe/mbuzi? (Fotokoza zifukwa zanu)***
FG2.7.	How do most mothers who are HIV positive in this community feed their children less than 6 months and why? ***Kodi azimayi ambiri omwe ali ndikachilombo ka HIV amayamwitsa bwanji ana amene***

	sanakwanitse miyezi 6? Fotokozani yankho lanu.
FG2.8.	Are there any programmes or activities in the community to promote optimal breastfeeding? (*If yes, probe for support groups and other programmes*) ***Kodi muli ndi mapologalamu kapena ma bungwe othandiza kutukula/ kupititsa patsogolo kayamwitsidwe koyenera ka ana kudera kuno? (Fotokozani ngati zilipo)***
	In your opinion, how should children less than six months old be fed during illness and recovery?
FG2.9.	What support services for HIV positive mothers exist to ensure optimal breastfeeding? (*If yes, probe for available support services like breastfeeding support groups*) ***Kodi pali mathandizo otani a azimayi omwe anapezeka ndi kachilombo ka HIV pofuna kuwonetsetsa kuti akuyamwitsa ana moyenera?***

Section 2: Complementary feeding (Zakudya zowonjezera kwa ana oyamwa)

FG2.10.	In your opinion how should a mother feed her baby aged 6 to 11 months and from 12 to 23 months? (*Probe for what liquids/foods should be given, amount, density, diversity and how often and continued breastfeeding*) ***Kodi mumayembekeza kuti mayi amene ali ndi mwana wa miyezi 6 kufika miyezi 11 azidyetsa bwanji mwana wake? Nanga yemwe ali ndi mwana wa chaka chimodzi kufikira zaka ziwiri? (Fotokozani mitundu ya zakudya, kachulukidwe ka chakudya, kulimba kwake, kuwirikiza kwa kudya)*** 6 to 11 months 12 to 23 months
FG2.11	Is there a person in this village who women look to for advice on feeding children from 6 months up to 23 months? Who is this person and what advice would he/she give to a mother on complementary feeding from 6 to 23 months? ***Kodi pali munthu yemwe azimai ambiri amapezako malangizo okhudza chakudya choonjezera kumkaka? Nanga munthuyu amapereka malangizo otani pankhani yakadyetsedwe ka ana kuyambira miyezi 6 kufikira zaka ziwiri?***
FG2.12	In your opinion what foods are commonly given to children aged a. 6 months up 11 months? ***Kodi ndi zakudya ziti zomwe zimakonda kuperekedwa kwa ana amiyezi 6 kufika 11.?*** 12 to 23 months***? Kodi ndi zakudya ziti zomwe zimakonda kuperekedwa kwa ana achaka chimodzi kufika ziwiri?***
	In your opinion, how should children older than six months be fed during illness and recovery?
FG2.13.	What programmes or activities exist in the community to promote feeding of children from 6 months to 23 months? (*If yes, probe for types of programmes*) ***Kodi muli ndi mapologalamu olimbikitsa kadyetsedwe koyenera ka ana ochepera zaka ziwiri?***

Section 3: Nutrition during pregnancy and lactation (Kadyedwe ndi thanzi la amayi woyembekezera ndi oyamwitsa)

FG2.14	In your opinion what do you consider appropriate dietary practices during pregnancy and lactation? Why? ***Kodi kadyedwe koyenera ka azimayi woyembekezera ndi woyamwitsa ndikotani?***
FG2.15	Is there a person in this village who women look to for advice on how pregnant and lactating women should eat? Who is this person and what advice would he/she give to on nutrition during pregnancy and lactation? ***Kodi pali munthu yemwe azimai ambiri amapezako malangizo okhudza kadyedwe***

	koyenera panthawi yomwe ali oyembekezera kapena akuyamwitsa? Munthuyu amapereke malangizo otani okhudzana ndi madyedwe azimayi oyembekezera ndi oyamwitsa?
FG2.16	a. In your opinion what foods are considered specifically good for pregnant women and why?. ***Ndizakudya zanji zomwe zili zabwino kwa mmayi oyembekezera? Fotokozani zifukwa zake.***
	b. In your opinion what foods are considered specifically good for lactating women and why? ***Ndizakudya zanji zomwe zili zabwino kwa mmayi oyamwitsa? Fotokozani zifukwa zake.***
FG2.17	a. In your opinion what foods are restricted during pregnancy and why? ***Tatiuzeniko zakudya zomwe zili zoletsedwa kwa mzimayi woyembekezera ndi zifukwa zake***
	b. In your opinion what foods are restricted during lactation and why? ***Tatiuzeniko zakudya zomwe zili zoletsedwa kwa mzimayi woyamwitsa ndi zifukwa zake***
FG2.18	a. In your opinion what factors **encourage** intake Iron/folate tablets during pregnancy? (*Probe for the encouraging factors)* ***Kodi pali zinthu zina zomwe kulimbikitsa azimayi woyembekezera ndi woyamwitsa kumwa mankhwala wowonjezera magazi mthupi?***
	b. In your opinion what factors **discourage** intake of Iron/folate tablets during pregnancy? (*Probe for the discouraging factors)* ***Kodi pali zinthu zina zomwe zimaletsa azimayi woyembekezera ndi woyamwitsa kumwa mankhwala wowonjezera magazi mthupi?***
FG2.19	*a.* In your opinion what factors **encourage** intake of vitamin A supplements by women and children? (Probe for the encouraging factors) ***Kodi pali zinthu zina zomwe zimalimbikitsa amayi omwe amabereka kumenene ndi ana ochepera zaka zisanu kulandira Vitamin A? (Funsani ndithu kuti mumve zolepheletsazo)***
	b. In your opinion what factors **discourage** intake of vitamin A supplements by women and children? (Probe for the discouraging factors) ***Kodi pali zinthu zina zomwe zimalepheretsa amayi omwe amabereka kumene ndi ana ochepera zaka zisanu kulandira Vitamin A? (Funsani ndithu kuti mumve zolimbikitsa)***

Section 4: GMP and SFP

FG2.20	*a.* In your opinion what factors <u>encourage</u> attendance in growth monitoring and promotion (GMP) (*probe for enablers)* ***Kodi pali zifukwa zomwe zimalimbikitsa kutengera ana ku sikelo ya ana? (Funsani zomwe zimalimbikitsa amayi kutengera ana ku sikelo)***
	b. In your opinion what factors <u>discourage</u> attendance in growth monitoring and promotion (GMP) (*probe for stigma, beliefs with taking body measurements and preference for traditional methods of healing*) ***Kodi pali zifukwa zomwe zimaalepheletsa kutengera ana ku sikelo ya ana? (Funsani za kusalana, zikhulupiliro zokhudza ana ndi kuyesa nsinkhu,kukhulupilira mankhwala achikuda)***
FG2.21	*a.* In your opinion what factors encourage participation in Supplementary Feeding Programme (SFP) programmes? (*probe for enablers for participation in SFP)* ***Kodi pali zifukwa zomwe zimalimbikitsa kutengera ana awo omwe anyetchera ku sikelo ya likuni phala ?(Funsani zomwe zimalimbikitsa amayi kutengera ana awo omwe anyetchera ku pologalamu ya likuni phala)***
	b. In your opinion what factors discourage participation in Supplementary Feeding Programme (SFP) programmes? (*probe for stigma, beliefs with benefiting from* SFP *services)* ***Kodi pali zifukwa zomwe zimalepheletsa kutengera ana awo omwe anyetchera ku sikelo ya***

	likuni?(Funsani za kusalana ndi zikhulupiliro za omwe amalandira likuni phala
FG2.22	*a.* In your opinion what factors encourage participation in nutrition rehabilitation unit (NRU) programmes? (*probe for enablers for participation in NRU services)* ***Kodi pali zifukwa zomwe zimalimbikitsa amayi kutengera ana awo omwe anyetchera ku magulu/maleledwe?(Funsani zolimbikitsa kutengera ana kumagulu/maleledwe)*** *b.* In your opinion what factors discourage participation in nutrition rehabilitation unit (NRU) programmes? (*probe for stigma, beliefs with benefiting from* NRU *services)* ***Kodi pali zifukwa zomwe zimalepheletsa amayi kutengera ana awo omwe anyetchera ku magulu/maleledwe (Funsani za kusalana ndi zikhulupiliro za omwe amalandira nawo chithandizo kudzera kumagulu/maleledwe amakumana nazo)***
	c. In your opinion, what factors encourage participation in Outpatient Therapeutic Programmes (OTP)? *(probe for enablers for participation).* ***Kodi pali zifukwa zomwe zimalimbikitsa amayi kutengera ana awo omwe anyetchere kupologalamu ya chiponde?*** *d.* In your opinion, what factors discourage participation in Outpatient Therapeutic Programmes (OTP)? (*probe for stigma and beliefs associated with participation in OTP)* ***Kodi pali zifukwa zomwe zimalepheretsa amayi kutengera ana awo omwe anyetchera ku pologalamu ya chiponde? (Funsani zakusalana ndi zikhulupiliro kwa omwe amalandira nawo chithandizo cha chiponde)***

Section 5: General questions

FG2.23	In your opinion give challenges to improving the health and nutrition status of women and children in this community? Give 3 main challenges. ***Kodi ndi mavuto anji omwe akubweza m'mbuyo ntchito yotukula nthanzi la amayi ndi ana kudera kuno? Perekani mavuto atatu .***
FG2.24	In your opinion, what can be done to improve the health and nutritional wellbeing of women and children? Give 3 recommendations. ***Fotokozani zoyenera kuchita potukula umoyo, thanzi ndi kudya koyenera kwa amai ndi ana. Give 3 recommendations.***
End discussion by asking whether the participants have any questions.	

ZIKOMO

The end

Annex 3: List of village per TA, GVH and Villages selected

TA NAME	GVH NAME	Village Name
	Lumeta/Kaipa	Naipwi
	Lumeta/Chikamba	Chikamba
	Lumeta/Chinama	Mtundu
	Lumeta	Kaipa
	Lumeta	Nakapa
	Chapola/Lumeta	Issa
	Mbele/Chinama	Chipanga
	Mbele/Mponda	Mponda
	Mbele	Makha
	Mbele/Sinyala	Sinyala
	Mzinda	Namwala
	Mzinda	Somba
Bwananyambi	Mbalama/Mlima	Mlima
	Nikisi/Chilingo	Nikisi
	Ntonda	Malopa I
	Makunula	Makunula
	Ngatala	Ngatala
Chimwala/Nankumba	Chiwaula	Chiwaula I
	Malukula	Matenganya
	Mpumbe	Nachenda
	Mtuwa	Iwole
	Mtuwa	Mkulumba
	Nkata	Nkata
	Mase/Mkata	Kawinga
	Mtonda/Mtuwa	Mtonda
	Masi/Mkata	Majawa
	Masi	Mase
	Nalikolo	Kamwana
	Nalikolo/Itimu	Katunda
	Masi/Kadewere	Kadewere
	Nalikolo/Itimu	Nsalika
	Nkata/Kadewere	Mtuka
	Misolo	Misolo
	Chiunda	Chiunda
	Chiunda	Kalonga
	Chindamba	Masangano
	Chindamba	Ntakataka
Chowe	Chindamba	Lulanga

	Makumba	Matenganya
	Makumba	Makumba
	Mpumbe	Mpumbe
	Chimbende/Kalanje	Chimbende
	Chindamba	Chindamba
	Makumba	Makwinja
	Chindamba	Mizinga
	Chindamba	Chipereka
	Moto	Nlani Chapoza
	Makumba	Ntaka
	Makumba	Milombwa
	Moto/kalanje	Rashid
	Moto	Kalanje
	Moto	Talia
	Nkata	Nkata
	Nkata	Matukuta
	Balakasi	Chirambo
	Balakasi	Mpanga
	Balakasi/Limamo	Malekano
	Balakasi	Mtuluko
	Balakasi	Chilongo
	Chapola/Nkata	Mbuzi
	Balakasi	Nyambi
	Nkata	Nkata
	Namwera	Kandulu
	Namwera	Chiwina
	Balakasi	Taliyani
	Balakasi	Salimu II
	Balakasi	Sumaili I
	Namwera	Mgoji
	Namwera	Sinyala
	Namwera	Chande
	Namwera	Simbili
	Namwera	Chiutula chinyenye
	Chiponde/kwiputi	Kwiputi
	Chiponde	Somba
	Namwera/Chiponde	Ngawo
	Namwera	Mkwaila
	Namwera	Chiumbangame
	Namwera	Chiumbampasuka
	Mwawa	Mpamanda
Jalasi	Namwera	Maundu

	Chiponde	Makumba
	Chiponde	Mtanga
	Menyanga	M'menyanga
	Ngalipa	Silimu
	Ngalipa	Namalweso
	Luwalika	Pawira/pakira
	Luwalika	Makanjira
	Luwalika	Kwitambo
	Mpwakata	Nyuche
	Ngalipa	Matira/mpatira
	Chiwaula	Saidisefu
	Mtelera	Nsendema
	Chiwaula	Chiwaula
	Msalule	Salimu
	Katuli	Katuli
	Nsalule	Mbeju
	Chiwaula /Mtelera	Maida
	Mtelera	Tangasi
	Katuli	Ngolojere
	Katuli	Chunga
	Mpita	Mponda
	Mpita	Kwizimbagwe
	Mpita	Kwilindi
	Mpita	Magwede
	Katuli	Kasanga
	Katuli	Kalanje
	Katuli	Mtoto Kalino
	Katuli	Chipoka
	Mpita	Mpita
	Katuli	Kwilombe
	Nsalule	Bakali
	Mtelera	Matumula
Katuli	Kwisimba	Kwisimba
	Chapola	Ng'ombe
	Chapola	Mpundi
	Chapola	Fowo
	Chapola	Tumbwe
Makanjira	Binali	Lilombe/Kwilombe
	Katema	Mkawa
	Kalino/Mtalika	Chawa
	Katema/Chisawa	Chisawa
Mponda	Mkuchila	Mwawa

	Mpinganjira/Chisambanopa	Chisambanopa
	Mpinganjira/Namakango	Namakango
	Malunda	Malunda
	Malunda	Makunganya
	Michesi	Makawa
	Chigonere/Kenyanga	Kanyenga
	Chigonere/Matapang'ombe	Matapang'ombe
	Chigonere	Katole II
	Chigonere	Chigonere
	Nankumba	Nankumba
	Chamba/Ndzodzo	Chamba
	Chamba/Sosola	Sosola
	Chigonere/Zimbayuda	Kaiche
	Chamba/Chimphepo	Mbapi
	Nankumba	Chiphepo
	Nankumba/Chimphepo	Kansiya
	Nankumba/Chantulo	Chantulo
	Chamba/Sokole	Mologeni
	Chamba/SaitiTiputipu	SaitiTiputipu
Nankumba		

BALAKA DISTRICT

TA NAME	**GVH NAME**	**VILLAGE NAME**
	Mpilisi	Mpilisi
	Mpilisi	Thapaniwa
	Mpilisi	Kamaliza
	Chiyendausiku	Kalilombe
	Chiyendausiku	Tchaidoni
	Chiyendausiku	Thamangiwa
	Kwitanda	Chinseu
	Kwitanda	Jana
	Lupanga	Lupanga
T/A Nsamala	Lupanga	Chimbalanga
	Lupanga	Khundila
	Lupanga	Lakalaka
	Mchenga	Magombera/Ukalanga
	Mthali	Mulelemba
	Kapalamula	Mponda I
	Kapalamula	Mponda II
	Kapalamula	Kainga
	Mpulula	Mpulula I
	Mpulula	Mpulula II
	Mchenga	Mchenga I

Sub T/A Sawali	Matola	Kapasule
	Matola	Misomali
Sub T/A Kachenga	Mponda	Pyoli
Sub T/A Amidu	Hindahinda	Milambe
	Chibwana	Mpata II
	Chibwana	Chibwana Msamala
	Ngasale	Kimu
	Ngasale	Makawa
	Ngasale	William
	Ngasale	Ngasale
T/A Kalembo	Chikoko	Chikoko
	Kalembo	Makalani
	Nandumbo	Chikonga
	Chimdikiti	Chimdikiti
Sub T/A Chanthunya	Chimpakati	Chimpakati
	Chimpakati	Mponda
	Chimpakati	Ngongomwa
	Chanthunya	Chiphonda
	Phalula	Njirayagoma
	Utale	Ntandiwa
	Chambuluka	Magombo I
	Utale	Chiwaya
	Chambuluka	Mpepe (Zalimu II)
	Chambuluka	Mpirangwe
	Phimbi	Kamvazaana
	Chambuluka	Njiragoma
	Chambuluka	Ngalaweza
	Chambuluka	Sozinyo
	Chambuluka	Ntaja
	Chambuluka	Mbungo (Mgomwa II)
	Chambuluka	Chipembere
	Phimbi	Chikapusa
	Phimbi	Chisoni
	Phimbi	Chingele
	Phimbi	Funsani
	Phimbi	Jonasi
	Phimbi	Austin
	Phimbi	Semani
	Chambuluka	Kanyimbo
	Chambuluka	Chakanza
	Kamowatimwa	Kamowatimwa
	Kamowatimwa	Hawu
	Chambuluka	Tepani
	Chambuluka	Jussa
	Chambuluka	Njerenje

MACHINGA DISTRICT

TA	GVH	Name of Village
	Makwinja	Kanjoma/Makwinja
	Mkumbira/Ngomano	Ngomano
	Mkumbira/Namikuwo	Namikuwo
	Mataka/Matakampo	Mataka
	Malita	Malita
	Nyama/Khanene	Nyama
	Adamson/Dinji	Adamson/Adam
	Maonga	Maonga
	Mkumbira/Namikuwo	Likambale
	Chapola	Chapola
	Sale	Sale
Chikweo	Chimwaza	Chimwaza
Kawinga/Nyambi	Ntaja/Salanje	Salanje
Liwonde/Ngokwe	Masaka/Mwekuwa	Masaka
Mlomba/Chikweo	Kimu/Mlaluwere	Kimu
	Malawa/Malita	Issa
	Saidi	Saidi
	Mpacha	Mpacha
	Dinji	Dinji
	Chitapa/Chimbila	Mlungu
	Khungwa/Mtungwi	Mtungwi
	Nawanga/Dinji	Manyungwa
	Khungwa/Muwawa	Muwawa
Ngokwe/Chikweo	Dinji/Mwekuwa	Mwekuwa
Nkoola	Mowere	Mowere
Nsanama/Chikweo	Saidi	Saidi
	Maole/Nkapa	Nkapa
	Chikojo/Makoka	Makoka
	Maole/Mkanje	Ngwale
	Maole/Nyambi	Chimombo
Nyambi	Maole/Mkapa	Malango
Sitola/Chikweo	Mpotola/Mowere	Pichesi
	Mpotola/Dinji	Mkolokosa Wadi
	Umbwa	Amidu James
	Umbwa	Kazembe
	Sale	Nkalimbe
	Sale	Sale
Chiwalo	Sale	Mpamba
	Thom	Gwedeza
	Chitinji	Maindi
	Chitinji	Pose
	Chitinji	Bwanali

	Chitinji	Mapelela
Nkoola	Mowere	Mowere
	Mowere	Kanyopa
	Mowere	Lokho
	Mowere	Lokho
	Mowere	Nsulupi
	Mowere	Mthato
	Mowere	Bello

Annex 4: The baseline survey teams

TEAM 1	**TEAM 2**	**TEAM 3**	**TEAM 4**	**TEAM 5**
Supervisor	***Supervisor***	***Supervisor***	***Supervisor***	***Supervisor***
Alumbeni Jere	Bridget Mwale	Chiyembekezo Nsanjama	Davie Ngóma	Chikondano Kapanda
Research Assistants	***Research Assistants***	***Research Assistants***	***Research Assistants***	***Research Assistants***
Joe Chipeni	Ambrose Msakwiza	Juliet Chilezi	Chikhulupiliro Ndalasini	Christopher Chinkhadze
Vernia Pitala	Patricia Chilongo	Elen Dzozi	Felix Banda	Slyvia Matola
Judith Martins	Taonga Phiri	Davious Chimwaza	Arthur Maliro	Clara Dakalira
Chifundo Kalebe	Eliza Hendrix	Feggie Bodole	Edith Chiwewe	San Honde
Nancy Mwechumu	Lloyd Kafuwa	Mary Wowa	Alumbeni Mlota	Serah Mkandawire
Anthropometrists	***Anthropometrists***	***Anthropometrists***	***Anthropometrists***	***Anthropometrists***
Jacinta Nazombe	Dorothy Mpoola	Chimwemwe Mwale	Sarah Phikani	Lilian Semu
Kondwani Chavula	Harris Jinazale	Gift Nkhoma	Chisomo Phiri	Duncan Butao
Data Entry Clerks	***Data Entry Clerks***	***Data Entry Clerks***	***Data Entry Clerks***	***Data Entry Clerks***
Matimva Kalimbira	Yamikani Manyetera	Lyness Phiri	Winnie Kondowe	Chimwemwe Likoleche