STANDARDISED EXPANDED NUTRITION SURVEY (SENS)

Final report

Ajuong Thok refugee camp, Pariang County, South Sudan

Survey conducted: 25 October-3 November 2021

In collaboration with WFP, UNICEF, AHA and IRC

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ACRONYMS AND ABBREVIATIONS

AHA	Africa Humanitarian Action
ANC	Ante Natal Care
AWD	Acute Watery Diarrhea
BSFP	Blanket Supplementary Feeding Programme
CMR	Crude Mortality Rate
CI	Confidence Interval
CMAM	Community Management of Acute Malnutrition
CSB++	Corn-Soya Blend Plus Plus
ENA	Emergency Nutrition Assessment
EPI	Expanded Programme on Immunization
Epi Info	Name of CDC software for Epidemiological investigations
GAM	Global Acute Malnutrition
GFD	General Food Distribution
GFR	General Food Ration
HAZ	Height-for-Age z-score
Hb	Hemoglobin
HH	Household
iRHIS	Integrated Refugee Health Information System
IYCF	Infant and Young Child Feeding
IRC	International Rescue Committee
KAP	Knowledge Attitudes and Practices
L/P/D	Liters per Person per Day
LRTI	Lower Respiratory Tract Infection
MAM	Moderate Acute Malnutrition
MUAC	Mid-Upper Arm Circumference
MSGs	Mother Support Groups
NCHS	National Centre for Health Statistics
NIDs	National Immunization Days
ODK	Open Data Kit
OTP	Out-patient Therapeutic Programme
PDM	Post Distribution Monitoring
PPS	Probability Proportional to Size
ProGres	Registration database for refugee population data
SAM	Severe Acute Malnutrition
SC	Stabilization Centre
SD	Standard Deviation
SENS	Standardized Expanded Nutrition Survey (SENS)
SFP	Supplementary Feeding Programme
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SP	Samaritan's Purse
OTP	Outpatient Therapeutic Programme
U5CMR	Under-5 Crude Mortality Rate
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
URTI	Upper Respiratory Tract Infection
WASH	Water, Sanitation and Hygiene
WAZ	Weight-for-Age z-score
WHZ	Weight-for-Height z-score
WFP	World Food Programme
WHO	World Health Organization

ACKNOWLEDGEMENTS

UNHCR commissioned and coordinated nutrition surveys in Jamjang refugee camps (Ajoung Thok and Pamir) with support from AHA, IRC and WFP. We gratefully acknowledge the valuable contributions made by partner staff who dedicated their time and energy in the survey preparation, training facilitation, data collection and supervision. These included Dr. Akonyu David James, Medical Officer, AHA; Drichi James Lino, Nutrition Officer, AHA; Charles Lobot, Nutrition Officer, IRC; and Ajang Yuot Senior M&E Officer, IRC; AHII for logistic support and UNICEF for anthropometric survey supplies. Special thanks to all the drivers who worked tirelessly.

We extend our sincere thanks and appreciation to UNHCR Sub Office Jamjang; specifically to Maria Chidumu (Associate Nutrition & Food Security Officer) and Lilian Igube (Associate Nutrition and Food Security Officer) for their key role in organizing, training, facilitation, leading and supervising this survey; UNHCR Jamjang program and administration for operational support; UNHCR field and protection units for their support in community mobilization and information sharing prior to the survey. Our thanks also go to the UNHCR Head of Sub Office Jamjang, for overall guidance and support.

Thanks goes to Heqian Kuang, Associate Nutrition and Food security Officer, UNHCR Juba; Maria Chiidumu, UNHCR Associate Nutrition and Food Security Officer- Juba for leading, supervising the surveys, analyzing the report, and overall guidance; Dr Gebrewold Petros Yohannes, UNHCR Senior Public Health Officer- Juba for his technical input, overall guidance and report review. Thanks to Mustafa Sebit (Senior Public Health Associate-Juba) for iRHIS data consolidation support. We also appreciate the technical support of Naser Mohmand, UNHCR Senior Regional Nutrition and Food Security Officer for report review and technical feedback. Our appreciation also goes to the UNHCR Senior Management in Juba for the overall guidance and support.

Finally, we sincerely thank the refugee population who gave up their time to participate and allowed us to measure their children and, most importantly, to the children themselves. A complete list of key individuals involved can be found at **Appendix 1**.

EXECUTIVE SUMMARY

UNHCR in collaboration with AHA, IRC and WFP carried out the nutrition survey in Ajuong Thok refugee camp from 25th October to 3rd November 2021. Ajuong Thok refugee camp in located in Pariang County, Ruweng State. Refugees from Yida continue to be relocated to Pamir and Ajuong Thok refugee camps. The overall aim of the survey was to assess the nutrition situation among the refugee population and to monitor ongoing programme interventions. In Ajuong Thok a cross- sectional survey was conducted using the UNHCR Standardized Expanded Nutrition Survey (SENS) version 3, 2018 guidelines (http://sens.unhcr.org/) and the Standardized Monitoring and Assessments of Relief and Transitions (SMART) guidelines (https://smartmethodology.org/). Systematic random sampling was used to identify the survey respondents.

The surveys had a total of 5 modules consisting of 3 individual level and 2 household level questionnaires following UNHCR SENS guidelines version 3, 2019. The modules included: 1.Demography targeting all sampled housholds. 2 Anthropometry and health targeting all sampled children 6-59 months. 3. Anaemia targeting all children aged 6 to 59 months in all the sampled households and all non-pregnant women aged 15 to 49 years in every other sampled household, 4 IYCF targeting children 0-23 months and. 5 Food Security module targeting every other sampled household. The Emergency Nutrition Assessment (ENA) software version Jan 11th, 2020 was used to calculate the sample sizes of children and households for participating in the survey. WASH and Mosquito nets coverage/utilization was excluded as there was going to be a separate KAP survey to be undertaken in Ajuong Thok camp.

A total of six survey teams composed of four members each (one team leader, one hemoglobin measurer, one anthropometric measurer/translator and one hemoglobin/anthropometric measurement assistant) were included in the survey. A standardized training that lasted five days, which included a standardization test was provided. Data collection lasted five days from 25th -30th October 2021. The survey teams were supported by a team of 3 supervisors and 2 coordinators who roved between the teams during the data collection.

Mobile phone questionnaires using Open Data Kit (ODK) android software was used for data collection for the four modules of SENS. Data validation was carried out daily by the survey coordinator and supervisors. This facilitated daily feedback to the survey teams. Data analysis used ENA for SMART Jan 11th 2020, version for anthropometric indices and SPSS version 20 for the rest of the indicators.

The overall nutrition situation in Ajoung Thok refugee camp is classified as acceptable or low level[1] as indicated by the Global Acute Malnutrition (GAM) prevalence of 4.9% (3.1-7.6 95% C.I) based on weight for height z scores which is below the critical WHO emergency threshold of 15%. However, it is good to note that the higher confidence interval falls under the poor or medium level category of public health concern thus the need for combined efforts to keep the prevalence low.

[1] WHO/UNICEF categorization, prevention of malnutrition threshold-children under 5 years of age, December 2018

Compared to the situation in 2019 the nutrition situation has improved with a decrease in the trends of GAM prevalence (from 9.1% in 2019 to 4.9% in 2021. The prevalence of SAM decreased to 1.1% in Ajuong Thok and was below the UNHCR thresholds SAM of 2%.

The 2021 global stunting prevalence in Ajuong Thok was 19.6% (15.9-24.0 95% C.I). This is categorized as medium according to WHO standards. Stunting prevalence decreased slightly from 22.7% in 2019 to 19.6% in 2021.

Total anaemia prevalence among children aged 6 to 59 months in Ajuong Thok was 39.6% (34.8-44.4 95% C.I) which was slightly lower than the 40% level of public health significance (WHO classification).

The OTP and TSFP enrolment based on all admission criterion in Ajuong Thok at 35.7% (11.1-62.5 95% C.I) and is far below the recommended standard of >90%. This indicates that there is need for active case finding at the community level and at the facility level need to be strengthened.

The measles vaccination coverage for Ajuong Thok was 96.6% (94.6-98.3 95% C.I) which met the recommended target of ≥ 95%. The coverage of vitamin A supplementation was 96.3% (94.4-97.9 95% C.I) which met the recommended target of ≥ 90%.

The proportion of pregnant women enrolled in the ANC in Ajuong Thok camp was 96.6% (88.5-100 95% C.I) met the recommended target of ≥ 90%.

12.3% (9.1-15.5 95% C.I) of children aged 6-59 months reportedly had diarrhoea in the last two weeks prior to the survey indicating a diarrhea related morbidity still requires continued health and hygiene services provision.

Deworming coverage was 94.5% (91.7-96.9 95% C.I) met the UNHCR target of ≥ 75% continued routine and campaign interventions are encouraged

The rate of timely initiation of breastfeeding was 96.1% (93.3-98.9 95% C.I) while exclusive breastfeeding was 94.4% (87.0-100.0 95% C.I) indicating a positive uptake of the breastfeeding messages. However, the survey also found some sub-optimal infant and young child feeding practices. Continued breastfeeding at 2 years improved marginally from 58.3% in 2019 to 68.2% in 2021. Introduction of solid, semi-solid or soft foods seemingly reduced from 92.9% in 2019 to 61.9% in 2021 but this should be interpreted bearing in mind the small number of children assessed. The consumption of iron-rich or iron fortified foods remained relatively the same at 56.9% compared to 59.4% in 2019.

In Ajuong Thok, refugees continued to use negative coping strategies to fill their food assistance gap. Only 13.2% of the households reported acceptable food consumption. Nearly all households (98.5%) reported using one or more food coping strategies (relied on less preferred and/or less expensive food (22.2%), borrowed food or relied on help from a friend or relative (17.3%), reduced the number of meals eaten in a day (21.8%), limited portion size at mealtime (21.8%), and reduced consumption by adults so that children could eat (16.3%). Only 1.5% said they did not use any of the food coping strategies to fill the food assistance gap.

Table 1: Summary of results SENS 2021, Ajuong Thok refugee camp, South Sudan

	Number / total	(95% CI)	Classification of public health significance or target (where applicable)
CHILDREN 6-59 months			
Acute Malnutrition (WHO 2006 Growth Standards)			
Global Acute Malnutrition (GAM)	18/367	4.9 (3.1 - 7.6)	Very high/critical if ≥ 15% (WHO-UNICEF) UNHCR Target of < 10%
Moderate Acute Malnutrition (MAM)	14/367	3.8 (2.3–6.3)	
Severe Acute Malnutrition (SAM)	4/367	1.1 (0.4–2.8)	UNHCR Target of < 2%
Oedema	2/367	0.5 (0.0-1.4)	
Mid Upper Arm Circumference (MUAC)			
MUAC <125 mm and/or oedema	8/374	2.1 (1.1–4.2)	
MUAC 115-124 mm	6/374	1.6 (0.7 - 3.5)	
MUAC <115 mm and/or oedema	2/374	0.5 (0.1 - 1.9)	
Stunting (WHO 2006 Growth Standards)			
Total Stunting	73/372	19.6 (15.9 -24.0)	Very high/critical if ≥ 30% (WHO-UNICEF)
Moderate Stunting	58/372	15.6 (12.3-19.6)	
Severe Stunting	15/372	4.0 (2.5–6.5)	
Programme coverage			
Measles vaccination with card or recall (9-59 months)	341/353	96.6 (94.6-98.3)	Target of ≥ 95%
Vitamin A supplementation within past the 6 months with card or recall (6-59months)	360/374	96.3 (94.4-97.9)	Target of ≥ 90%
Outpatient Therapeutic Program (OTP) enrolment rate (based on all admission criteria WHZ, oedema and MUAC)	1/4	25.0 (0.6-80.6)	
Targeted Supplementary Feeding Program (TSFP) enrolment rate (based on all admission criteria WHZ and MUAC)	6/18	33.3 (13.3-59.0)	
Diarrhoea			
Diarrhoea in the last 2 weeks	46/374	12.3 (9.1-15.5)	
Deworming coverage within past 6 months (12-59 months)	309/327	94.5 (91.7-96.6)	
Anaemia 6-59 months			
Total Anaemia (Hb < 11 g/dl)	148/374	39.6 (34.8-44.4)	High if ≥ 40% Target of < 20%
Mild (Hb 10-10.9)	87/374	23.3 (19.0-27.5)	
Moderate (Hb 7-9.9)	61/374	16.3	

	Number / total	(95% CI)	Classification of public health significance or target (where applicable)
		(12.6-20.3)	
Severe (Hb < 7)	0	0	
Anaemia 6-23 months			
Total Anaemia (Hb < 11 g/dl)	80/130	61.5 (53.1-70.0)	
Mild (Hb 10-10.9)	42/130	32.3 (24.4-40.3)	
Moderate (Hb 7-9.9)	38/130	29.2 (21.6-37.7)	
Severe (Hb < 7)	0/130	0	
CHILDREN 0-23 months			
IYCF indicators			
Timely initiation of breastfeeding	172/184	93.5 (88.9-96.6)	UNHCR Target of ≥ 85%
Exclusive breastfeeding under 6 months	51/54	94.4 (87.0-100.0)	UNHCR Target of ≥ 75%
Continued Breastfeeding at 1 year	24/26	92.3 (74.9-99.1)	UNHCR Target of ≥ 95%
Continued Breastfeeding at 2years	15/25	60.0 (38.7-78.9)	UNHCR Target of ≥ 60%
Introduction to solid, semi-solid and soft foods	13/21	61.9 (40.7-82.6)	UNHCR Target of >60%
Consumption of iron-rich or iron-fortified foods	74/130	56.9 (48.5-66.2)	UNHCR Target of ≥ 60%
Bottle feeding	3/184	1.6 (0.0-3.8)	UNHCR Target of < 5%
Proportion of children 6-23 months who received CSB++ in the last 24 hours	31/130	23.8 (16.9-31.5)	
WOMEN 15-49 years			
Anaemia (non-pregnant)			
Total Anaemia (Hb <12 g/dl)	43/267	16.1 (11.6-21.0)	High if ≥ 40% (WHO) UNHCR Target of < 20%
Mild (Hb 11-11.9)	22/267	8.2 (5.2-12.0)	
Moderate (Hb 8-10.9)	21/267	7.9 (4.9-11.6)	
Severe (Hb <8)	0/267	0	
Programme enrolment pregnant women			
Pregnant women currently enrolled in the ANC	28/29	96.6 (82.2-99.9)	
Pregnant women currently receiving Iron-folic acid pills	27/29	93.1 (77.2-99.2)	
FOOD SECURITY			
Proportion of HH with a ration card	205/205	100	
Proportion of households reporting using the following coping strategies over the past month			

	Number / total	(95% CI)	Classification of public health significance or target (where applicable)
Relied on less preferred and/or less expensive food	196/205	95.6 (91.8-98.0)	
Borrowed food or relied on help from a friend or relative	152/205	74.2 (67.6-80.0)	
Reduced the number of meals eaten in a day	190/205	92.7 (88.2-95.9)	
Limited portion size at mealtime	187/205	91.2 (86.5-94.7)	
Reduced consumption by adults so that children could eat	144/205	70.2 (63.5-76.4)	
Proportion of households reporting using none of the negative coping strategies over the past month	3/205	1.5 (96.5-100)	
DEMOGRAPHY			
Household size and Composition			
Average household size (mean, SD / range)		5.7 ±3.154	
Percent of children U2	175/2186	8.0	
Percent of children U5	414/2186	18.9	
Percent of pregnant women	49/2186	2.24	
Household Head Profile			
Female headed households	190/386	49.2 (44.3-54.2)	
Male headed households	177/386	54.2 (41.0-50.8)	
Children headed households	0/386	0.0 (0.0-0.0)	
Elderly headed households	19/386	4.9 (3.2-7.6)	
Age dependency ratio			
Average age dependency ratio (mean, SD / range)		1.6	
Food Consumption Score (FCS)			
Average FCS (SD / range)	23.86 ± 10.78		
FCS profiles:			
Acceptable	27/205	13.2 (8.8-18.0)	
Borderline	85/205	41.5 (35.1-48.3)	
Poor	93/205	45.4 (39.0-51.7)	

Results Interpretation

Table 2: WHO prevalence thresholds for wasting in children aged 6-59 months

Previous prevalence ranges	Label	New prevalence ranges 2018	Label
-	-	<2.5	Very low
<5%	Acceptable	2.5 - < 5	Low
5 – 9%	Poor	5 - <10	Medium
10 – 14%	Serious	10 - <15	High
>15%	Critical	≥ 15	Very high

Table 3: WHO prevalence thresholds for stunting in children aged 6-59 months

Previous prevalence	Label	New prevalence ranges 2018	Label
-	-	<2.5	Very low
<20%	Acceptable	2.5 - < 10	Low
20 – 30%	Poor	10 - < 20	Medium
30 – 39%	Serious	20 - < 30	High
>40%	Critical	≥ 30	Very high

Table 4: WHO classification of public health significance for the prevalence of anaemia (children 6-59 months and non-pregnant women 15-49 years)[1]

Prevalence %	High	Medium	Low
Anaemia	≥40	**20-39**	**5-19**

RECOMMENDATIONS AND PRIORITIES

Nutrition related

Continue the implementation of the comprehensive Community based Management of Acute Malnutrition (CMAM) program providing both therapeutic and supplementary feeding programs to maintain nutrition status and prevent a possible deterioration, since children residing in the camp remain vulnerable. (UNHCR, UNICEF, WFP and AHA and IRC).

There is need to continue and strengthen active case finding and referral of malnourished children since the survey found the enrolment of SAM and MAM in nutrition program is far below the target and as well two cases of oedema has been identified. Additionally, this will ensure that all children identified with a MUAC less than 12.5cm are referred and enrolled into the management of acute malnutrition programs.

The stunting rate of 19.6% is a concern. Therefore, growth monitoring for all children below two years and provision of health education to their mothers/caregivers on optimal child care and feeding practices is recommended as these measures have been proven effective in addressing the incidence of chronic malnutrition.

The survey found some sub-optimal infant and young child feeding practices. Continued breastfeeding at 2 years (68.2%), introduction of solid, semi-solid or soft foods (61.9%), and

[1] WHO (2000)

consumption of iron-rich or iron fortified foods (56.9%) were below the recommended standards of ≥80%. This calls for the implementation of a comprehensive social behaviour change communication (SBCC) strategy to improve these feeding practices. Further, barriers to implementing of the recommended infant and young child feeding practices should also be investigated.

Only 21.7% of children 6-59 months were reportedly enrolled in the Blanket Supplementary Feeding Programme (BSFP). Households should be followed up to ensure uptake of the monthly BSFP programme for children aged 6-59 months, pregnant and lactating women using a fortified blended food or lipid-based supplement to prevent malnutrition and fill the nutrient gap faced by these vulnerable groups have. Humanitarian partners should also continue to sensitize households on the appropriate utilization of the BSFP ration.

Anaemia levels among children aged 6-59 months in Ajuong Thok camp remained significantly high (39.6%). There is need to continue implementing the anaemia reduction strategy through several measures such as systematic screening and referral of all children with anaemia signs and symptoms (palmar pallor) at the community level. At health level, appropriate diagnosis, treatment and follow up of the detected cases should be carried out (UNHCR, AHA and IRC). Finally, households should be sensitized and supported to access and consume iron-rich or iron fortified foods.

Food security related

Survey results showed that only 13.2% of the households had acceptable food consumption score (FCS), with virtually all households (98.5%) reporting use of one or more negative coping strategies. The food security situation in the camp should be monitored continuously and ensure all households in the camp are reached with the various food and non-food interventions that will help cushion families from food insecurity.

Health related

Despite the fact that rates for measles immunization (96.6%), vitamin A supplementation (96.3%) and deworming (94.5%) were all met expected targets, there is need to maintain the routine Expanded Program of Immunization (EPI) and conduct regular campaigns as a way of preventing incidences of childhood illnesses which have a great impact on the nutritional status of children aged 6-59 months.

Although the prevalence of diarrhoea (12.3%) was relatively low, diarrhea is a major risk factor for acute malnutrition in children. UNHCR and its partners should strengthen the integration of nutrition programme activities with the Water, Sanitation and Hygiene Promotion (WASH) initiatives particularly consumption of safe drinking water, handwashing with soap as well as strengthen counselling and education on the risks associated with use of bottle-feeding.

1 Introduction

This report presents the results of nutrition survey conducted in Ajoung Thok refugee camps from 25th -30th October 2021.
This report is divided into the following sections:

- Background: This section sets out background information related to the health, nutrition and food security situation in the above refugee camps;
- Methodology;
- Results: presents the findings;
- Discussion
- Recommendations.

1.1 Background

Ajuong Thok refugee camp is located in Pariang County of South Sudan's Ruweng State. It is home to refugees from the South Kordofan State of the neighbouring Sudan. The location is 70km away from the Yida settlement, which is less than 50kms away from the northern border of South Sudan and Sudan, and where the refugees started arriving in the Yida settlement of Pariang County in July 2011 following armed clashes between the SPLA-North and the government of Sudan Armed Forces before being relocated to the newly established Ajoung Thok camp.

Ajuong Thok is among the two refugee camps in Pariang, Pamir being the other one. Yida is a settlement where refugees first settled with assistance neither from UNHCR nor from the government and has a sizeable number of refugees with an estimated population of 34116 in November 2021. Officially, Yida is not recognised as a refugee camp but a settlement, and as such only lifesaving assistance is provided to the refugees. This is following the government's directive through the South Sudan Commission for Refugee Affairs (SSCRA) that was issued in April 2013 following the establishment of Ajuong Thok refugee camp in March 2013. The directive highlighted that the refugees in Yida should be relocated to Ajoung Thok. All new arrivals are transferred to either Ajoung Thok or Pamir where a comprehensive protection and assistance package is being offered. The refugee population in Yida continues to be voluntarily relocated to Pamir and Ajoung Thok refugee camps.

Ajuong Thok is located in the green belt of Pariang County which is a forest with red sandy soils. The area is flat terrain surrounded by black cotton soils with poor drainage which floods during the rainy season. The rainy season is between June and October followed by the hot dry season which reaches its peak around March. The survey was conducted end of October and beginning of November which is the harvest season.

Key partners in terms of the provision of the health, nutrition and food security services include UNHCR, WFP, UNICEF and IRC, AHA and SP. UNHCR is mainly involved in providing funding for implementation of various services, coordinating, technical support, monitoring and evaluation of the services offered to the refugees through the partners. WFP's main role is to ensure that the refugee's food security is adequately addressed through the provision of the General Food Ration (GFR) once per month. In addition to this WFP supports the supplementary feeding program which aims at preventing malnutrition and treating moderate malnourished cases. UNICEF in collaboration with UNHCR provides support to the nutrition CMAM and IYCF programmes. AHA implements the health and nutrition program while SP carries out the general food security distribution and implements the water and sanitation programme.

1.2 Description of the population

The SENS was conducted from 25th-30th October 2021. At the end of September 2021, Ajoung Thok had a population of 44,279 individuals. Children less than five years accounted for 15.5% of the population.

The two main religions among the refugee populations are Christianity and Islam. The refugees are mainly from the Nuba Mountains area of South Kordofan and are mainly referred as Nubans. Nubans are manly agriculturalists who also rear livestock such as cattle, goats and sheep. The main crops grown are sorghum, groundnuts, cowpeas and sesame. Maize is grown at a very small scale while sorghum is the staple grain. The surrounding host community are mainly pastoralists, who rely mainly on cattle for their livelihood. There is a small proportion of the host community who practice cultivation of sorghum but at a very small scale.

1.3 Food security situation

All the registered refugees in Ajuong Thok receive the WFP General Food Distribution (GFD) which is the refugees' primary food source. In 2021 from January to June the refugees in Ajuong Thok continued to receive the reduced ration scale. It consisted of 350g sorghum, 35g of yellow split peas, 21ml of vegetable oil and 5g salt. This cumulates to approximately 411 grams/person/day providing 1491 kilocalories/person/day. This provided 71% of the recommended food ration of 2100 kcal/person/day. In July to October the food ration was further reduced to 50% of the recommended 2100Kcal/person/day. 5 SSP was given in kind for POCs to purchase salt per individual.

Table 5: General food ration provision by month - Ajuong Thok refugee camp, 2021

Ration provided in g/p/d	**Standard**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**
Cereal	500g	350	350	350	250	250	250	250	250	250	250
Pulses	50g	35	35	35	25	25	25	25	25	25	25
Vegetable oil	30g	21	21	21	15	15	15	15	15	15	15
Salt	5g	0	0	0	0	0	0	0	0	0	0
CSB+	50g	0	0	0	0	0	0	0	0	0	0
Kcal	2100	1491	1491	1491	1050	1050	1050	1050	1050	1050	1050
	% of standard met	71	71	71	50	50	50	50	50	50	50

1.4 Health situation

AHA offers Health services at primary health care level in Ajoung Thok. In order to improve refugees' health seeking behaviour and to have a sustainable community health programme, UNHCR health, nutrition and WASH partners have a comprehensive community health programme. This is implemented by Community Health Workers (CHW) with the capacity of working in all the three areas.

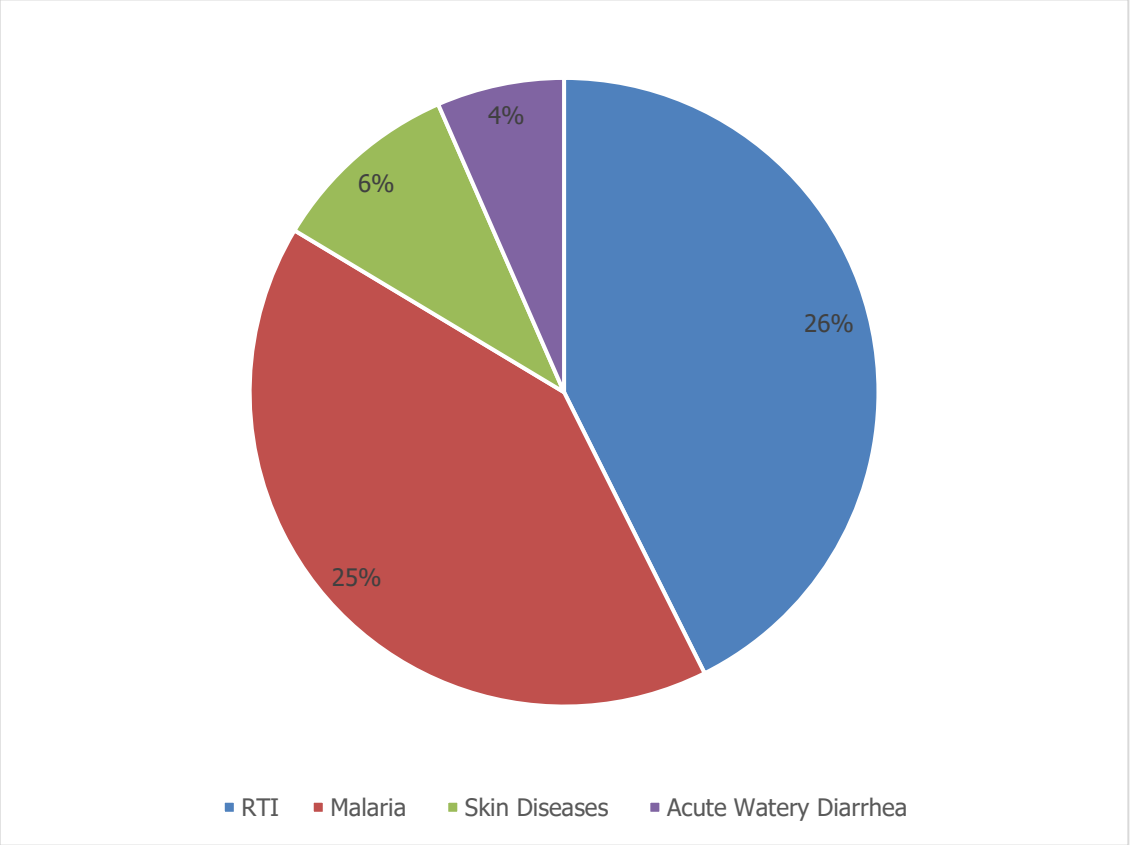
Mortality trends are being monitored using the UNHCR Integrated Refugee Health Information System (irHIS). Based on the UNHCR Health Information System data, the average Crude Mortality Rate (CMR) and Under Five Mortality Rate (U5MR) for Ajuong thok camp were 0.07 and 0.06 respectively as of 2021. These rates remained within the standard thresholds of 0.75/1000/month and 1.5/1000/month indicating effectiveness health services provision in the camp.

The COVID-19 disease outbreak was reported in Ajoung Thok in 2020. Community and facility-based surveillance continued to be implemented to ensure early detection of any disease outbreaks. Routine immunization continued at the facility level and through the biannual National Immunization Days (NIDs) campaign. The NIDs carry out measles immunization, provision of vitamin A and the deworming for both refugees and nationals.

Reproductive health services including 24-hour safe motherhood services in this camp including antenatal care (ANC), safe and skilled delivery, Postnatal Care, family planning continued in 2020 to 2021.

In terms of the main causes of morbidity, respiratory tract infection (RTI) and malaria were commonly reported among children under 5. Other morbidities included skin diseases and acute watery diarrhoea. Figure 1 illustrates the common causes of morbidity among children under 5 years Ajoung Thok.

Figure 1: Major causes of morbidity in children under 5 in Ajuong Thok refugee camp, Jan-Sep 2021



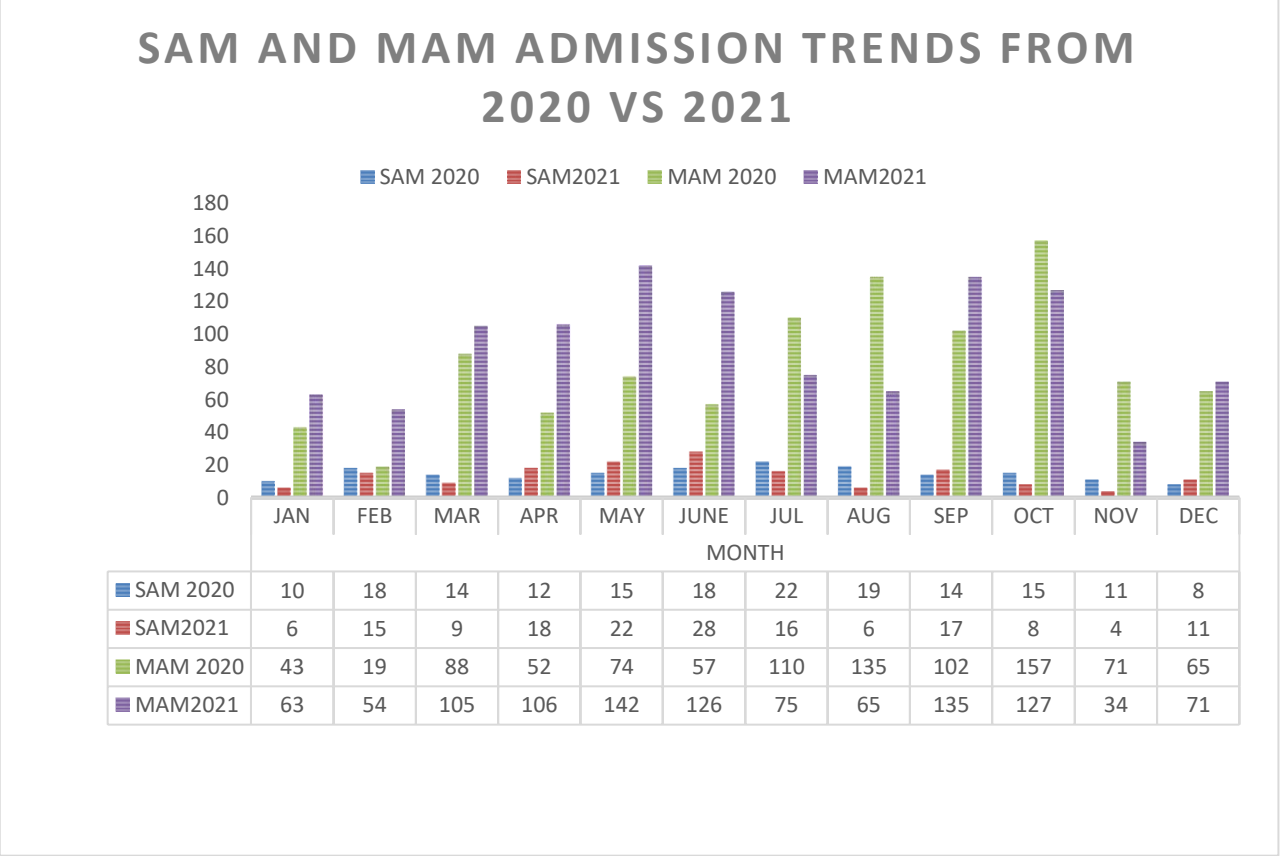
1.5 Nutrition situation

Nutrition services provided at Ajuong Thok refugee camp include:

- Targeted Supplementary Feeding Programmes (TSFP) for moderately acute malnourished 6-59 months using Plumpy'Sup or Corn Soya Blend Plus (CSB++).
- Outpatient and inpatient therapeutic feeding programmes for severely acute malnourished children.
- Blanket Supplementary Feeding Program (BSFP) targeting children 6 to 23 months and Pregnant and Lactating Women (PLW). The children received LNS-MQ 50g/person/day while PLW receive 100g/person/day of CSB++.
- Infant and young child feeding support and promotion programme. The main conduit for this intervention is the mother-to-mother support groups and community health workers. IYCF counselling is also integrated into the Antenatal care (ANC) and Post-Natal Care (PNC) services. There is also integration of IYCF to the Community Management of Acute Malnutrition (CMAM), the Outpatient Department (OPD) and the Expanded Programme for Immunisation (EPI).
- MUAC screening of children 6-59 months at the triage area of the PHCC.
- Community Outreach MUAC screening at the community level.

A total of 1008 children under five years were admitted for malnutrition rehabilitation in Ajuong Thok refugee camp from January to September 2021.

Figure 2: Number of admissions to treatment programmes for SAM and MAM among children aged 6-59 months



	JAN	FEB	MAR	APR	MAY	JUNE	JUL	AUG	SEP	OCT	NOV	DEC
SAM 2020	10	18	14	12	15	18	22	19	14	15	11	8
SAM2021	6	15	9	18	22	28	16	6	17	8	4	11
MAM 2020	43	19	88	52	74	57	110	135	102	157	71	65
MAM2021	63	54	105	106	142	126	75	65	135	127	34	71

WASH:
The partner implementing WASH in Ajuong Thok cam is IRC. Between August and September IRC in undertook a KAP survey to evaluate progress towards achieving the baseline set during the 2019 KAP survey in both Ajuong and pamir camps. 744 households were sampled out of 8493 households present during the time of the survey. The key focus of the survey were access to safe water, safe latrines, hygiene behavioral changes, waste management and access to basic household WASH items. The key findings of the report are summarized in the table below.

TABLE 6: KEY INDICATORS OF WATER SUPPLY IN AJUONG THOK

Indicators	**Baseline (KAY survey 2019)**	**KAP findings (2021**	**Comments**
Indicator type	**Indicators**	**Result**	**Sampled respondents**
Outcome	Percent of households collecting drinking water from protected/treated sources (motorided borehole)	100%	100%	1,448 repondence
Outcome	Percent of households who spend less than 30 minute at water point to collect water for household uses.	99%	98%	1,419 of 1448
Outcome	Percent of household with average 20 or more l/p/d of potable water collected at household level	47%	58	839 of 1448
Outcome	**Average # liters of potable 2 water available per person per day**	**23.40 Liters**	**21.40 liters: (Ajuong thok 22.7; Pamir 20.1)**

51% of the households in Ajuong Thok reported to have access to soap with most reporting they depend on distributions from NGO's.
72% of the households in Ajuong Thok had functional latrines and reported to be using the latrines.
Main challenges noted during the survey were limited water storing capacity, breaking water pumps, inadequate soap for domestic and hygiene use.

2 SURVEY OBJECTIVES

Specific primary objectives of the survey

a. To determine the prevalence of acute malnutrition among children 6-59 months.

b. To determine the prevalence of stunting among children 6-59 months.

c. To determine the coverage of measles vaccination among children 9-59 months.

d. To determine the coverage of vitamin A supplementation in the last six months among children 6-59 months.

e. To determine the coverage of de-worming in the last six months among children 12-59 months

f. To assess the two-week period prevalence of diarrhoea among children 6-59 months.

g. To determine the prevalence of anaemia among children 6-59 months and women of reproductive aged 15-49 years (non-pregnant).

h. To investigate IYCF practices among children 0-23 months.

i. To determine the coverage of ration cards and the duration the GFD ration lasts for recipient households.

j. To determine the extent to which negative coping strategies are used by households.

k. To assess household dietary diversity.

l. To establish workable recommendations on actions to be taken to address the situation.

m. To determine the demographic profile of the population

n. To determine the age dependency ratio

Secondary objectives:

a. To determine the enrolment in targeted supplementary feeding and outpatient feeding programmes for children 6-59 months.

b. To determine enrolment into Antenatal Care clinic and coverage of iron-folic acid supplementation in pregnant women.

c. To determine the coverage of deworming with Mebendazole in the last six months among children aged 12-59 months

3 METHODOLOGY

The survey in Ajuong Thok was a cross-sectional survey that followed the UNHCR Standardized Expanded Nutrition Survey (SENS) version 3, 2018 guidelines http://sens.unhcr.org/ and Standardized Monitoring and Assessments of Relief and Transitions (SMART) methodology https://smartmethodology.org/ guidelines. Systematic random sampling was used to identify the survey respondents.

3.1 Sample size

The sample size was calculated using the Emergency Nutrition Assessment (ENA) for Standardized Monitoring and Assessment of Relief and Transitions (SMART) software version January 11th, 2020 following the UNHCR SENS guidelines version 3 (2019). The GAM prevalence estimated in Ajuong Thok was based on the 2019 survey results. The higher confidence interval was used as little was known about the progress made since the last survey in 2019. The percentage of under-5 and average household size was derived from the UNHCR ProGres database. The total population surveyed was derived from the UNHCR ProGres database. At the end of July 2021, Ajuong Thok had a total population of 44,811. A non-response rate of 10% was used.
The table below indicates the specific parameters used.

Table 6: Parameters used to calculate sample size

Parameters for Anthropometry	Value	Assumptions
Total population in the camp	44,811	Total camp population living in Ajuong Thok camp from ProGress as of July 31, 2021
Estimated Prevalence of GAM (%)	9.9%	The prevalence of Global Acute Malnutrition (GAM) from the last SENS (2019) conducted in Ajuong Thok. The upper limit of the confidence interval was chosen 9.9 % (8.3 - 9.9% CI)
± Desired Precision	3.5	SMART/UNHCR SENS guideline
Design Effect	1	UNHCR SENS guideline
Average HH size	5.3	
% of Children Under Five years old		Percent of children under five years of age and living in the camps was obtained from ProGres, the UNHCR database for refugees, as of July 31st 2021
Children to be included	280	
% Non-Response Households	10%	The expected non-response rate due to refusal or absentees
Households to be included	420	

As the population of children under five was less than 10,000 in camp a correction factor was used while calculating the sample size using ENA for SMART software during sample size calculation.

The sample size for anthropometry and health was used for the IYCF and child anaemia modules. Following UNHCR SENS guidelines half the sample size of anthropometry (every other household) was used as the sample size for women anaemia and food security modules. See the table below for details

Table 7: Sample sizes for each module

Modules	Ajuong Thok Camp
Anthropometry and Health	420
Anaemia – Women	420/2=210
IYCF	420
Demography	420
Food Security	420/2=210

3.2 Sampling procedure: selecting households and individuals

Systematic random sampling was used to identify the survey respondents. Houses/tents were physically labelled with unique numbers per zone/block/compound in each camp. To reduce the non-response rate and ensure results were representative of people living in the camps at the time of the survey, empty shelters as verified through neighbours were labelled but not included in the sampling frame. The sampling interval per camp was calculated based on actual number of houses/tents that were physically verified before the survey and the sample size. Using the list generated from the physical counting and labelling of houses/tents in the camps, a sampling interval for each camp was determined by dividing the total number of verified tents/houses by the estimated sample. The first household was thereafter determined randomly using the lottery method by drawing a random number within the sampling interval. The interval was applied across the sampling frame to generate a list of households to be surveyed in the field. Each team was provided with a list of households to be surveyed daily.

All the eligible household members were included in the survey; that is all children 6 to 59 months and women 15 to 49 years in a sampled household. The interview was conducted in most cases with the mother in the household or in her absence with an adult member of the household who was knowledgeable with the everyday running of the household. The survey defined a household as the number of people who regularly stay together and eat from the same pot.

In the event of an absent household or individual, the team members returned to the household during the day. If the household or individual was not found after returning, the household or individual was counted as an absentee and was not replaced. If an individual or household refused to participate, it was considered a refusal and the individual or household was not replaced with another. If a selected child was disabled with a physical deformity preventing certain anthropometric measurements, the child was still included in the assessment for the relevant indicators. If it was determined that a selected household did not have any eligible children, the relevant questionnaires were administered to the household.

3.3 Questionnaire and measurement methods

The questionnaires are attached in **Appendix 3.**

The questionnaires were prepared in the English language and administered in the local language with the help of the enumerators that spoke the local language (Arabic). The questionnaires were pre-tested before the survey.

Four module questionnaires from SENS were designed to provide information on the relevant

indicators of the different target groups as indicated in the survey objectives. The four-module questionnaire covered the following areas and the following measurements:

Children 6-59 months- These included questions and measurements of children aged 6-59 months. Information was collected on anthropometric status, oedema, and enrolment in selective feeding programmes, immunization (measles), vitamin A supplementation, deworming and morbidity from diarrhea in past two weeks before the survey and hemoglobin status.

Infant 0-23 months- These included questions on infant and young child feeding for children aged 0- 23 months.

Women 15-49 years- These included questions and measurements of women aged 15 – 49 years. Information was collected on women's pregnancy status, coverage of iron-folic acid pills and ANC attendance for pregnant women, and hemoglobin status for non-pregnant women.

Food Security- These included questions on access and use of the GFD ration, negative coping mechanisms used by household members and household dietary diversity.

Measurement methods

Household-level indicators

Food security: The questionnaire used was from UNHCR's Standardized Expanded Nutrition Survey (SENS) Guidelines for Refugee Populations Version 3 (2019).

Individual-level indicators

Sex of children: gender was recorded as male or female.

Birth date or age in months for children 0-59 months: the exact date of birth (day, month, and year) was recorded from either an EPI card, child health card or birth notification if available. If no reliable proof of age was available, age was estimated in months using a local event calendar and recorded in months on the questionnaire/Phone. If the child's age could not be determined by using a local events calendar or by probing, the child's length/height was used for inclusion; the child had to measure between 65 cm and 110 cm.

Age of women 15-49 years: Reported age was recorded in years.

Weight of children 6-59 months: measurements were taken to the closest 100 grams using an electronic scale (SECA scale). All children were weighed without clothes. The double-weighing technique was used to weigh young children unable to stand on their own or unable to understand instructions not to move while on the scale.

Height/Length of children 6-59 months: children's height or length was taken to the closest millimeter using a wooden height board (Shorr Productions). Height was used to decide on whether a child should be measured lying down (length) or standing up (height). Children less than 87cm were measured lying down, while those greater than or equal to 87cm were measured standing up.

Oedema in children 6-59 months: bilateral oedema was assessed by applying gentle thumb pressure on to the tops of both feet of the child for a period of three seconds and thereafter observing for the presence or absence of an indent.

MUAC of children 6-59 months: MUAC was measured at the mid-point of the left upper arm between the elbow and the shoulder and taken to the closest millimeter using a standard tape.

MUAC was recorded in millimeters

Child enrolment in selective feeding programme for children 6-59 months: selective feeding programme coverage was assessed for the outpatient therapeutic programme and for the supplementary feeding programme. This was verified by card or by showing images of the products given at the different programs

Measles vaccination in children 6-59 months: measles vaccination was assessed by checking for the measles vaccine on the EPI card if available or by asking the caregiver to recall if no EPI card was available. For ease of data collection, results were recorded on all children but were only analysed for children aged 9-59 months

Vitamin A supplementation in last 6 months in children 6-59 months: whether the child received a vitamin A capsule over the past six months was recorded from the EPI card or health card if available or by asking the caregiver to recall if no card is available. A vitamin A capsule image was shown to the caregiver when asked to recall.

Deworming in last 6 months in children 12-59 months: whether the child received a deworming tablet over the past six months was recorded by asking the caregiver to recall if information was not available on the EPI card. A deworming tablet sample was shown to the caregiver when asked to recall.

Hemoglobin concentration in children 6-59 months and women 15-49 years: Hb concentration was taken from a capillary blood sample from the fingertip and recorded to the closest gram per deciliter by using the portable HemoCue Hb 301 Analyser (HemoCue, Sweden). If severe anaemia was detected, the child or the woman was referred for treatment immediately.

Diarrhea in last 2 weeks in children 6-59 months: an episode of diarrhea is defined as three loose stools or more in 24 hours. Caregivers were asked if their child had suffered episodes of diarrhea in the past two weeks prior to the survey.

ANC enrolment and iron and folic acid pills coverage: if the surveyed woman was pregnant, it was assessed whether she was enrolled in the ANC programme and was receiving iron-folic acid pills. An iron-folic acid pill image was shown to the pregnant woman when asked to recall.

Infant and young child feeding practices in children 0-23 months*: i*nfant and young child feeding practices was assessed based on UNHCR Standardized Expanded Nutrition Survey (SENS) Guidelines for Refugee Populations version 2 (2013).
Referrals*:* Children aged 6-59 months were referred to health centre/post for treatment when MUAC was < 12.5 cm, WHZ <-2 z-score or oedema was present.

3.4 Case definitions and calculations

Malnutrition in children 6-59 months*:* Acute malnutrition was defined using weight-for-height index values or the presence of oedema and classified as show in the table below. Main results are reported after analysis using the WHO 2006 Growth Standards

Table 8: Definitions of acute malnutrition using weight-for-height and/or oedema in children 6-59 months

Categories of acute malnutrition	Z-scores (WHO Growth Standards 2006)	Bilateral oedema
Global acute malnutrition	< -2 z-scores	Yes/No
Moderate acute malnutrition	< -2 z-scores and ≥ -3 z-scores	No
Severe acute malnutrition	> -3 z-scores	Yes
	< -3 z-scores	Yes/No

Stunting, also known as chronic malnutrition, was defined using height-for-age index values and was classified as severe or moderate based on the cut-offs shown below. Main results are reported according to the WHO Growth Standards 2006.

Table 9: Definitions of stunting using height-for-age in children 6-59 months

Categories of stunting	Z-scores (WHO Growth Standards 2006)
Stunting	<-2 z-scores
Moderate stunting	<-2 z-score and >=-3 z-score
Severe stunting	<-3 z-scores

Underweight was defined using the weight-for-age index values and was classified as severe or moderate based on the following cut-offs. Main results are reported according to the WHO Growth Standards 2006.

Table 10: Definitions of underweight using weight-for-age in children 6-59 months

Categories of underweight	Z-scores (WHO Growth Standards 2006)
Underweight	<-2 z-scores
Moderate underweight	<-2 z-scores and >=-3 z-scores
Severe underweight	<-3 z-scores

Mid Upper Arm Circumference (MUAC) values were used to define malnutrition according to the following cut-offs in children 6-59 months:

Table 11: MUAC malnutrition cut-offs in children 6-59 months

Categories of MUAC values
<125 mm
≥ 115 mm and <125 mm
< 115 mm

Child enrolment in selective feeding programme for children 6-59 months: Feeding programme coverage is estimated during the nutrition survey using the direct method as follows (reference: Emergency Nutrition Assessment: Guidelines for field workers. (Save the Children 2004):

Coverage of SFP programme (%) =

$$\frac{\text{No. of surveyed children with MAM according to SFP criteria who reported being Registered in SFP}}{\text{No. of surveyed children with MAM } \textit{according to SFP admission criteria}} \times 100$$

Coverage of OTP programme (%) =

No. of surveyed children with SAM according to OTP criteria who reported being Registered in OTP x 100
No. of surveyed children with SAM *according to OTP admission criteria*

Infant and young child feeding practices in children 0-23 months: Infant and young child feeding practices were assessed based on the UNHCR SENS IYCF module (Version 2 (2013) that is based on WHO recommendations (WHO, 2007 as follows):

Timely initiation of breastfeeding in children aged 0-23 months:
Proportion of children 0-23 months who were put to the breast within one hour of birth
Children 0-23 months who were put to the breast within one hour of birth
Children 0-23 months of age

Exclusive breastfeeding under 6 months:
Proportion of infants 0–5 months of age who are fed exclusively with breast milk: (including expressed breast milk or from a wet nurse, ORS, drops or syrups (vitamins, breastfeeding minerals, medicines)
Infants 0–5 months of age who received only breast milk during the previous day
Infants 0–5 months of age
Continued breastfeeding at 1 year:
Proportion of children 12–15 months of age who are fed breast milk
Children 12–15 months of age who received breast milk during the previous day
Children 12–15 months of age

Introduction of solid, semi-solid or soft foods:
Proportion of infants 6–8 months of age who receive solid, semi-solid or soft foods
Infants 6–8 months of age who received solid, semi-solid or soft foods during the previous day
Infants 6–8 months of age

Children ever breastfed:
Proportion of children born in the last 24 months who were ever breastfed
Children born in the last 24 months who were ever breastfed
Children born in the last 24 months

Continued breastfeeding at 2 years:
Proportion of children 20–23 months of age who are fed breast milk
Children 20–23 months of age who received breast milk during the previous day
Children 20–23 months of age

Consumption of iron rich or iron fortified foods in children aged 6-23 months
Proportion of children 6–23 months of age who receive an iron-rich or iron-fortified food that is specially designed for infants and young children, or that is fortified in the home.
Children 6–23 months of age who received an iron-rich food or a food that was specially designed for infants and young children and was fortified with iron, or a food that was fortified in the home with a product that included iron during the previous day
Children 6–23 months of age

Bottle feeding:
Proportion of children 0-23 months of age who are fed with a bottle
Children 0–23 months of age who were fed with a bottle during the previous day

Children 0–23 months of age

Anaemia in children 6-59 months and women of reproductive age: Anaemia is classified according to the following cut-offs in children 6-59 months and non-pregnant women of reproductive age. Anaemia cut-offs for pregnant women should be adjusted depending on the stage of pregnancy (gestational age). Pregnant women are not included in routine UNHCR nutrition surveys for the assessment of anaemia due sample size issues (usually a small number of pregnant women is found) as well as the difficulties in assessing gestational age in pregnant women.

Table 12: Definition of anaemia (WHO 2000)

Age/Sex groups	Categories of Anaemia (Hb g/dL)			
	Total	Mild	Moderate	Severe
Children 6 - 59 months	<11.0	10.9 - 10.0	9.9 - 7.0	< 7.0
Non-pregnant adult females 15-49 years	<12.0	11.9 - 11.0	10.9 - 8.0	< 8.0

3.5 Classification of public health problems and targets

Anthropometric data: UNHCR's target for the prevalence of global acute malnutrition (GAM) for children 6-59 months of age by camp, country and region is < 10% and the target for the prevalence of severe acute malnutrition (SAM) is <2%. The table below shows the classification of public health significance of the anthropometric results for children under-5 years of age according to WHO:

Table 13: Classification of public health significance for children under 5 years of age

Prevalence %	**Very High**	**High**	**Medium**	**Low**	**Very low**
Low weight-for-height	≥15	10-<15	5-10	2.5-<5	<2.5
Low height-for-age[20]	≥30	20-<30	10-<20	2.5-<10	<2.5
Label	Critical	Serious	Poor	Acceptable	
Low weight-for-age[21]	≥30	20-29	10-19	<10	

Selective feeding programmes:
UNHCR Strategic Plan for Nutrition and Food Security 2008-2012 includes the following indicators. The table below shows the targeted performance indicators for malnutrition treatment programmes according to UNHCR Strategic Plan for Nutrition and Food Security 2008-2012 (same as Sphere Standards).

Table 14: Performance indicators for selective feeding programmes (UNHCR Strategic Plan for Nutrition and Food Security 2008-2012)

	Recovery	**Case fatality**	**Defaulter rate**	**Coverage**		
				Rural areas	**Urban areas**	**Camps**
SFP	>75%	<3%	<15%	>50%	>70%	>90%
OTP	>75%	<10%	<15%	>50%	>70%	>90%

* Also meet SPHERE standards for performance

Measles vaccination coverage: UNHCR recommends target coverage of ≥95% (same as Sphere Standards).

Vitamin A supplementation coverage: UNHCR Strategic Plan for Nutrition and Food Security (2008-2012) states that the target for vitamin A supplementation coverage for children aged 6-59 months by camp, country and region should be >90%.

Anaemia data: UNHCR Global Strategy for Public Health(2017-2019) states that the targets for the prevalence of anaemia in children 6-59 months of age and in women 15-49 years of age should be <20%. The severity of the public health situation should be classified according to WHO criteria as shown in the table below.

Table 15: Classification of public health signifcance (WHO 2000)

Prevalence %	High	Medium	Low
Anaemia	≥40	20-39	5-19

3.6 Training, coordination and supervision

The surveys were coordinated by Heqian Kuang, Associate Nutrition and Food security Officer, UNHCR Juba, Maria Chidumu, Associate Nutrition and Food security Officer, UNHCR Juba, Mustafa Sebit, Senior public health Associate, UNHCR, Juba, Lilian Igube, Associate Nutrition and Food security Officer, UNHCR, Jamjang, Dr. Akonyu David James, Medical Officer, AHA, Drichi James Lino, Nutrition Officer, AHA, Charles Lobot, Nutrition Officer, IRC, And Ajang Yuot Senior M&E Officer, IRC

A total of six survey teams composed of four members each (one team leader, one haemoglobin measurer, one anthropometric measurer/translator and one anthropometric/haemoglobin measurement assistant were included in each survey.

A five-days training was carried out from 18th to 22nd October 2021 at the Pamir UNHCR conference room. Training topics were shared between the UNHCR and WFP nutritionists and public health officer. The training focused on: the objectives of the survey, roles and responsibilities of each team member, familiarization with the questionnaires by reviewing the purpose of each question; interviewing skills and recording of data; interpretation of calendar of events and age determination; how to take anthropometric measurements, common errors and data recording using the mobile phone Open Data Kit (ODK) technology. A practical session on anthropometric measurements, anaemia testing was also carried out for practice as well as a standardization test. This was followed by a pilot test where each team was asked to collect data from three households. The pilot test was conducted in Pamir using part of the households that had not been sampled to participate in the survey. A feedback session was conducted after the teams returned from the exercise to address challenges encountered.

3.7 Data collection

Data collection in Ajuong Thok lasted six days. Data collection started on 25th and ended on 30th November. The data collection was supervised throughout by UNHCR, IRC and AHA team. Data was collected using the ODK for Android platform using six Samsung Android tablets.

3.8 Data analysis

At the end of each day's data collection, the UNHCR, IRC and AHA coordination and supervision team checked each questionnaire for completeness and then finalized the questionnaires. Once the questionnaires were finalized, they were sent to the server for synchronization and export. After exporting the data, the anthropometric data plausibility check was conducted to identify areas and teams that need more supervision or to be strengthened. Teams that required more supervision were given more attention on the following day of the survey.

The ODK exported data in csv format, for cleaning and analysis the data was saved in Microsoft Excel 2007 format. The nutritional indices were cleaned using flexible cleaning criteria from the observed mean (also known as SMART flags in the ENA for SMART software), rather than the reference mean (also known as WHO flags in the ENA for SMART software). This flexible cleaning approach is recommended in the UNHCR SENS Guidelines (Version 3, 2018) in accordance with SMART recommendations. For the weight-for-height index, a cleaning window of +/- 3 SD value contained in the SMART for ENA software was used.

Anthropometry indices were analyzed using the ENA for SMART Jan 11th, 2020 version. SPSS version 20 was used to analyze all the other data.

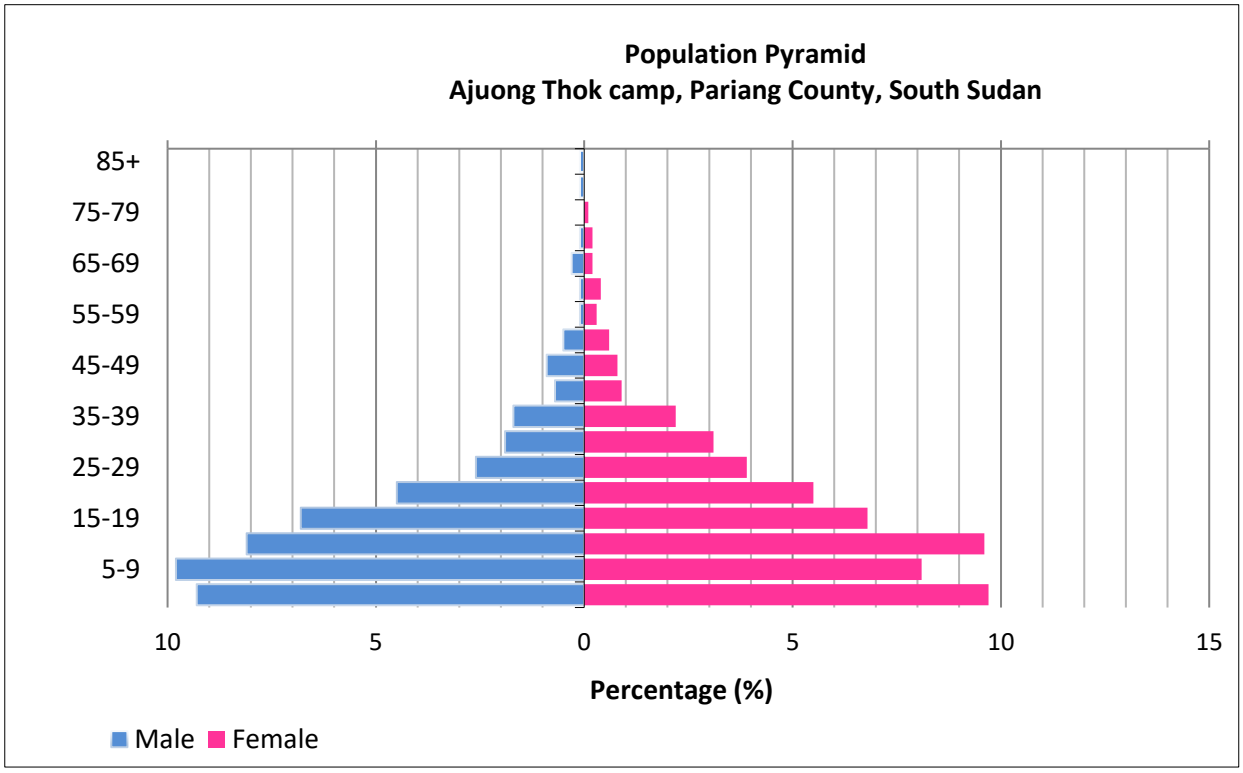
4. **RESULTS**

4.1 Demography indicators

Table 16: Household size and composition

Household size and composition		Results
Population size – Total persons		44,811
Total population surveyed – Total persons (all ages)		2185
Total U2 surveyed		175
Total U5 surveyed		414
Average household size		5.7
Household size categories	1-4 person(s)	39.4%
	5-6 persons	22.3%
	7-9 persons	26.4%
	≥ 10 persons	11.9%
Household composition	Children under two	0.5
	Children under five	1.1
	Children aged 5-14 years	2.0
	Members aged 15-64 years	2.5
	Members aged 65 years and above	0.07
Percent of children U2		8%
Percent of children U5		18.9%
Percent pregnant women (15-49 years)		2.2%
Percent of elders (65 years and above)		1.2%
Sex ratio		0.91

Figure 3: Population pyramid of Ajuong Thok refugee camp



Household head profile

Table 17. Household head profile

	Number/total	% (95% CI)
Female headed households (working age 15-64 years)	190/386	49.2% (44.3-54.2)
Male headed households (working age 15-64 years)	177/386	54.2% (41.0-50.8)
Children headed households (under 15 years)	0/386	0.0% (0.0-0.0)
Elderly headed households (65 years and above)	19/386	4.9% (3.2-7.6)
Mean age of household head in years (SD) [range]	36.3 (12.8) [18.0-93.0]	

Almost half of the household are headed by female and 4.9% of households headed by elderly.

Age dependency ratio

Table 18. Age dependency ratio categories by household

Age dependency categories		Age dependency ratio	Number / Total	% (95% CI)
Category I	**1 dependent or less per non-dependent member**	≤ 1	175/385	45.5% (42.1-55.0)
Category II	**Up to 3 dependents per 2 non-dependent members**	1.1-1.5	47/385	12.2% (9.3-15.9)
Category III	**Up to 2 dependents per non-dependent members (1.5<DR<=2)**	1.6-2.0	60/385	15.6% (12.3-19.6)
Category IV	**More than 2 dependents per non- dependent members (DR>2)**	≥2.1	103/385	26.8% (22.6-31.4)
Mean age dependency ration		Mean (SD) [range]	386	1.6 (1.4) [0.0-Infinity]

There are 26.8% households had more than 2 dependents per non-dependent members, which is a high proportion.

4.2 Sample size reached

The table below shows the actual number of children captured during the survey versus the survey sample target.

Table 19: Sample size reached

Sampling Information	Total planned	Total surveyed	% of target	Non-response rate (%)
Number of households	420	384	91.1	8.1
Number of children 6-59 months	280	374	133.6	

The required sample size was reached in Ajuong Thok.

4.3 Anthropometric results (based on WHO Growth Standards 2006)

The coverage of age documentation was 93% (children having an exact birth date). Only 7 % of the children did not have an exact birthday, therefore stunting and the underweight data can be relied on.

Table 20: Distribution of age and sex of sample

	Boys		Girls		Total		Ratio
AGE (mo)	**no.**	**%**	**no.**	**%**	**no.**	**%**	**Boy:girl**
6-17	41	48.2	44	51.8	85	22.7	0.9
18-29	51	54.8	42	45.2	93	24.9	1.2
30-41	40	57.1	30	42.9	70	18.7	1.3
42-53	38	43.2	50	56.8	88	23.5	0.8
54-59	15	39.5	23	60.5	38	10.2	0.7
Total	185	49.5	189	50.5	374	100.0	1.0

All the children who participated in the survey were considered using the actual age from an official document or using an events calendar to estimate the age of the child.
The overall boy: girl ratio was 1.0 which indicates that both sexes were equally represented in the survey.

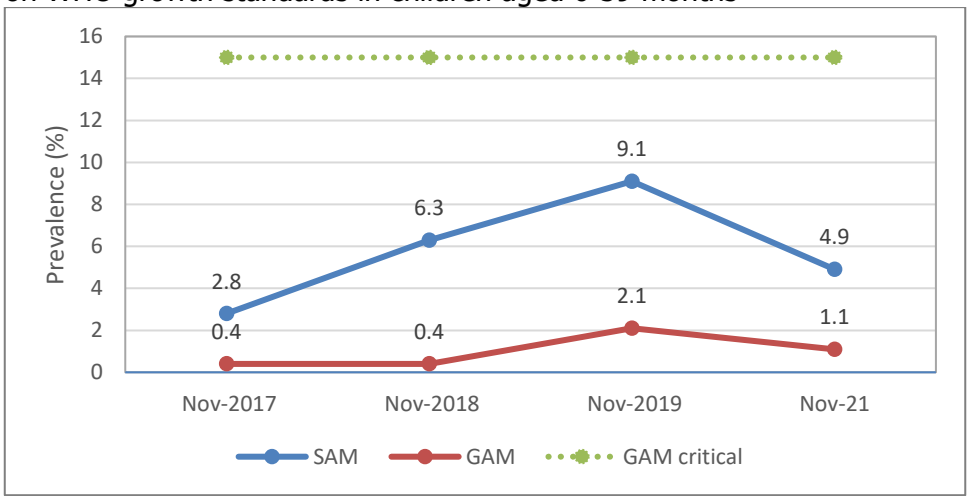
Table 21: Prevalence of acute malnutrition based on weight-for-height z scores (and or oedema) and by sex

	All n = 367	**Boys** n = 181	**Girls** n = 186
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(18) 4.9 % (3.1 - 7.6 95% C.I.)	(14) 7.7 % (4.7 - 12.6 95% C.I.)	(4) 2.2 % (0.8 - 5.4 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(14) 3.8 % (2.3 - 6.3 95% C.I.)	(10) 5.5 % (3.0 - 9.9 95% C.I.)	(4) 2.2 % (0.8 - 5.4 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(4) 1.1 % (0.4 - 2.8 95% C.I.)	(4) 2.2 % (0.9 - 5.5 95% C.I.)	(0) 0.0 % (0.0 - 2.0 95% C.I.)

The prevalence of oedema was 0.5%. Data excluded SMART flags.

Results showed a significant difference between boys and girls in the prevalence of acute malnutrition; p<0.05

Figure 4: Trends in the prevalence of global and severe acute malnutrition based on WHO growth standards in children aged 6-59 months



When the survey results from 2021 are compared to previous survey results from 2018 and 2019, it indicates a decreasing trend in the GAM prevalence in Ajuong Thok.

Table 22: Prevalence of acute malnutrition by age, based on weight-for-height z-scores and/or oedema

		Severe wasting (<-3 z-score)		Moderate wasting (>= -3 and <-2 z-score)		Normal (> = -2 z score)		Oedema	
Age (mo)	**Total no.**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
6-17	83	1	1.2	2	2.4	80	96.4	0	0.0
18-29	91	1	1.1	6	6.6	84	92.3	0	0.0
30-41	69	0	0.0	4	5.8	64	92.8	1	1.4
42-53	86	0	0.0	0	0.0	85	98.8	1	1.2
54-59	38	0	0.0	2	5.3	36	94.7	0	0.0
Total	367	2	0.5	14	3.8	349	95.1	2	0.5

Two cases of severe wasting were observed among the younger children aged 6-17 and 18-29 months while moderate wasting affected all age groups except children in the age category 42-53 months.

Figure 5: Trend in the prevalence of wasting by age in children 6-59 months- Ajoung Thok refugee camp, South Sudan (October 2021)

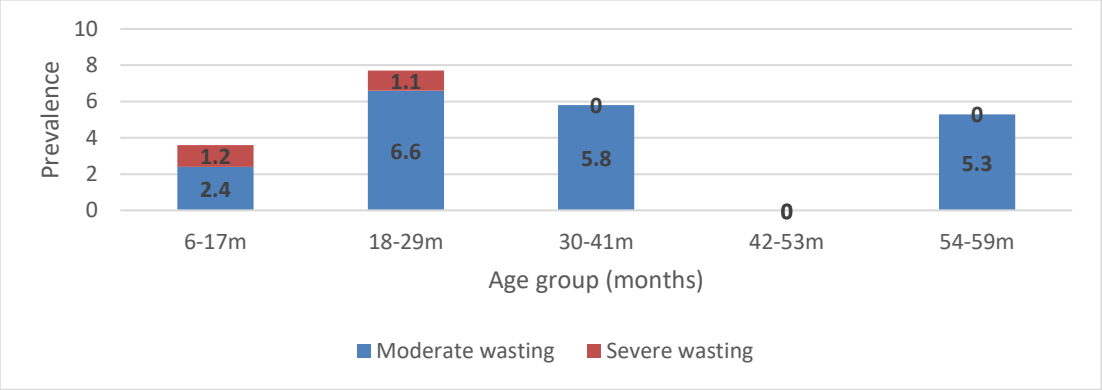
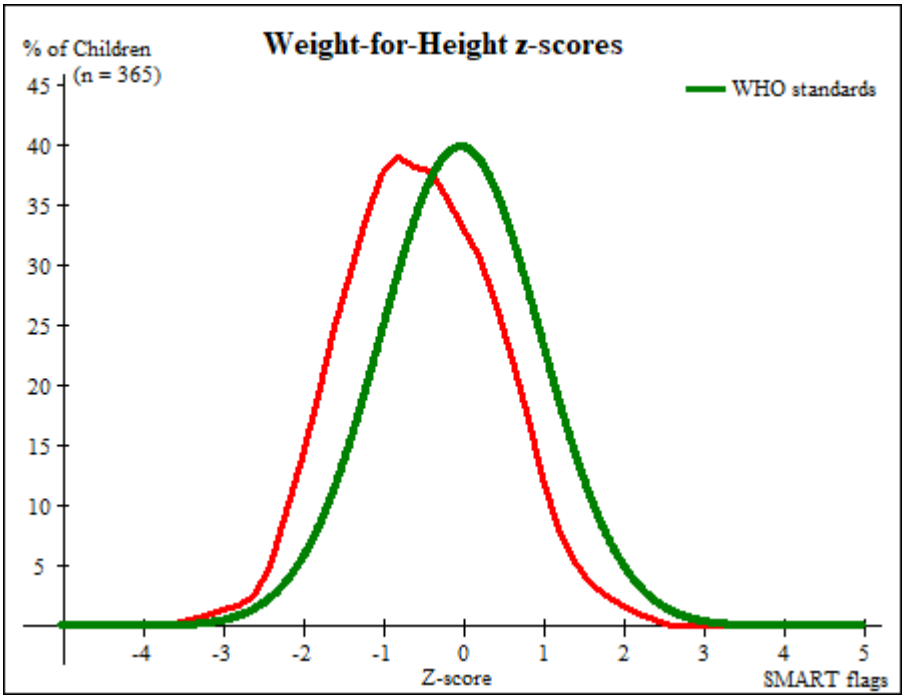


Table 23: Distribution of severe acute malnutrition and oedema based on weight-for-height z-scores

	<-3 z-score	>=-3 z-score
Oedema present	Marasmic kwashiorkor No. 0 (0.0 %)	Kwashiorkor No. 2 (0.5 %)
Oedema absent	Marasmic No. 5 (1.3 %)	Not severely malnourished No. 366 (98.1 %)

Figure 6: Distribution of weight-for-height z-scores (based on WHO growth standards) of survey population compared to reference



The figure above shows that the weight-for-height z-score distribution has shifted to the left, illustrating a poorer status compared to WHO reference population of children aged 6-59 months.

Table 24: Prevalence of malnutrition by MUAC

	All n = 374	**Boys** n = 185	**Girls** n = 189
Prevalence of global malnutrition (< 125 mm and/or oedema)	(8) 2.1 % (1.1 - 4.2 95% C.I.)	(6) 3.2 % (1.5 - 6.9 95% C.I.)	(2) 1.1 % (0.3 - 3.8 95% C.I.)
Prevalence of moderate malnutrition (< 125 mm and >= 115 mm, no oedema)	(6) 1.6 % (0.7 - 3.5 95% C.I.)	(4) 2.2 % (0.8 - 5.4 95% C.I.)	(2) 1.1 % (0.3 - 3.8 95% C.I.)
Prevalence of severe malnutrition (< 115 mm and/or oedema)	(2) 0.5 % (0.1 - 1.9 95% C.I.)	(2) 1.1 % (0.3 - 3.9 95% C.I.)	(0) 0.0 % (0.0 - 2.0 95% C.I.)

The difference in the prevalence of acute malnutrition between boys and girls based on MUAC was not significant, p>0.05.

Table 25: Prevalence of acute malnutrition by age, based on MUAC cut offs and/or oedema

		Severe wasting (< 115 mm)		**Moderate wasting (>= 115 mm and < 125 mm)**		**Normal (> = 125 mm)**		**Oedema**	
Age (mo)	**Total no.**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
6-17	85	0	0.0	3	3.5	82	96.5	0	0.0
18-29	93	0	0.0	2	2.2	91	97.8	0	0.0
30-41	70	0	0.0	0	0.0	70	100.0	1	1.4
42-53	88	0	0.0	1	1.1	87	98.9	1	1.1
54-59	38	0	0.0	0	0.0	38	100.0	0	0.0

Total	374	0	0.0	6	1.6	368	98.4	2	0.5

There was no case of severe wasting based on MUAC across all age groups. However, five cases of moderate wasting based on MUAC were recorded among younger children aged 6-17 and 18-29 months.

Table 26: Prevalence of underweight based on weight-for-age z-scores by sex

	All n = 368	**Boys** n = 181	**Girls** n = 187
Prevalence of underweight (<-2 z-score)	(51) 13.9 % (10.7 - 17.8 95% C.I.)	(27) 14.9 % (10.5 - 20.8 95% C.I.)	(24) 12.8 % (8.8 - 18.4 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(46) 12.5 % (9.5 - 16.3 95% C.I.)	(23) 12.7 % (8.6 - 18.3 95% C.I.)	(23) 12.3 % (8.3 - 17.8 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(5) 1.4 % (0.6 - 3.1 95% C.I.)	(4) 2.2 % (0.9 - 5.5 95% C.I.)	(1) 0.5 % (0.1 - 3.0 95% C.I.)

There was no significant difference in the prevalence of underweight between boys and girls, P<0.05.

Table 27: Prevalence of underweight by age, based on weight-for-age z-scores and/or oedema

		Severe underweight (<-3 z-score)		**Moderate underweight (>= -3 and <-2 z-score)**		**Normal (> = -2 z score)**		**Oedema**	
Age (mo)	**Total no.**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
6-17	83	1	1.2	8	9.6	74	89.2	0	0.0
18-29	92	3	3.3	19	20.7	70	76.1	0	0.0
30-41	69	1	1.4	9	13.0	59	85.5	1	1.4
42-53	86	0	0.0	8	9.3	78	90.7	1	1.2
54-59	38	0	0.0	2	5.3	36	94.7	0	0.0
Total	368	5	1.4	46	12.5	317	86.1	2	0.5

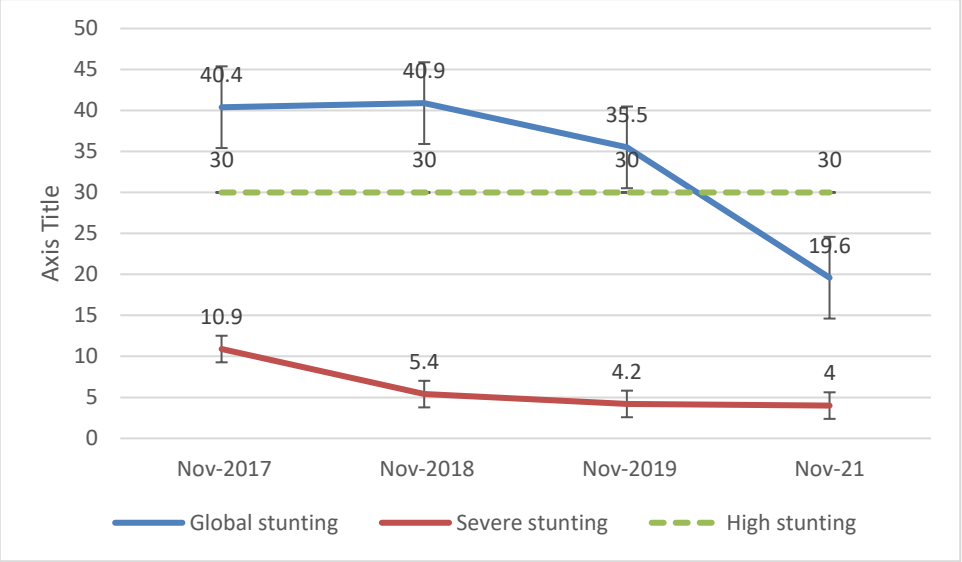
Children aged 18-29 months were found to be most underweight (both severe and moderate) compared to the other age groups.

Table 28: Prevalence of stunting based on height-for-age z-scores and by sex

	All n = 372	**Boys** n = 183	**Girls** n = 189
Prevalence of stunting (<-2 z-score)	(73) 19.6 % (15.9 - 24.0 95% C.I.)	(38) 20.8 % (15.5 - 27.2 95% C.I.)	(35) 18.5 % (13.6 - 24.7 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(58) 15.6 % (12.3 - 19.6 95% C.I.)	(30) 16.4 % (11.7 - 22.4 95% C.I.)	(28) 14.8 % (10.5 - 20.6 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(15) 4.0 % (2.5 - 6.5 95% C.I.)	(8) 4.4 % (2.2 - 8.4 95% C.I.)	(7) 3.7 % (1.8 - 7.4 95% C.I.)

There was no difference in the stunting prevalence between boys and girls, p>0.05.

Figure 7: Trends in the prevalence of global and severe stunting based on WHO growth standards in children 6-59 months



Stunting prevalence in Ajuong Thok indicates a downward trend for moderate stunting but severe stunting has remained relatively the same when compared to results of the 2019 survey

Table 29: Prevalence of stunting by age based on height-for-age Z-Scores

		Severe stunting (<-3 z-score)		**Moderate stunting (>= -3 and <-2 z-score)**		**Normal (> = -2 z score)**	
Age (mo)	**Total no.**	**No.**	**%**	**No.**	**%**	**No.**	**%**
6-17	85	5	5.9	5	5.9	75	88.2
18-29	92	6	6.5	22	23.9	64	69.6
30-41	70	1	1.4	10	14.3	59	84.3
42-53	87	3	3.4	15	17.2	69	79.3
54-59	38	0	0.0	6	15.8	32	84.2
Total	372	15	4.0	58	15.6	299	80.4

Younger children aged 6-17 and 18-29 months were more affected by severe stunting while children in the age group 18-29 months and 42-53 months were more affected by moderate stunting.

Figure 8: Trends in the prevalence of stunting by age in children 6-59 months

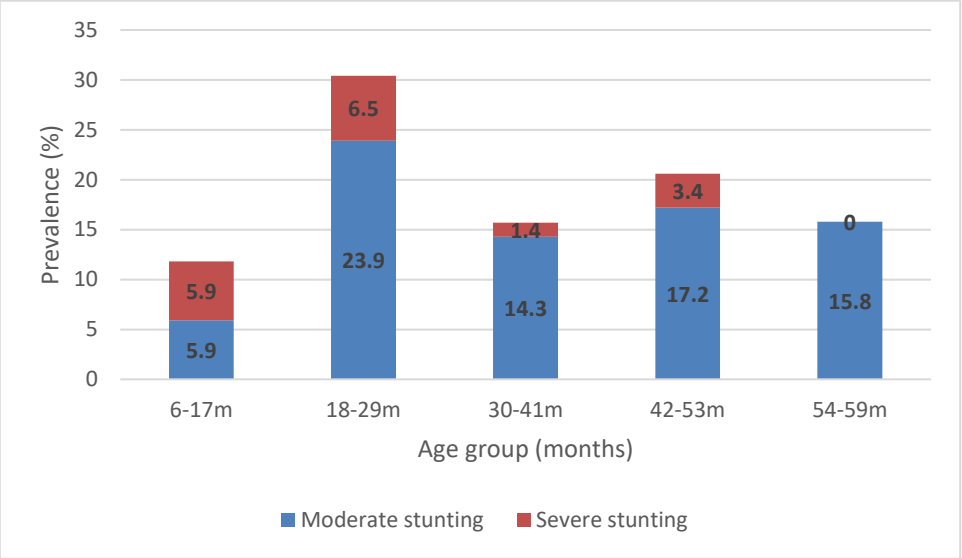
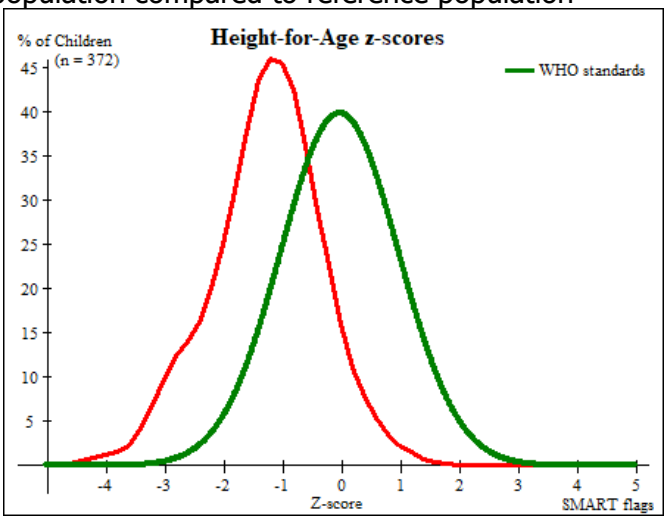


Figure 9: Distribution of height-for-age z-scores (based on WHO growth standards) of survey population compared to reference population



The distribution for height-for-age z-scores for the survey sample has shifted to the left, illustrating poor height for age of the surveyed population compared to the WHO reference population of children aged 6-59 months.

Table 30: Prevalence of overweight based on weight for height cut offs and by sex (no oedema)

	All n = 367	**Boys** n = 181	**Girls** n = 186
Prevalence of overweight (WHZ > 2)	(1) 0.3 % (0.0 - 1.5 95% C.I.)	(1) 0.6 % (0.1 - 3.1 95% C.I.)	(0) 0.0 % (0.0 - 2.0 95% C.I.)
Prevalence of severe overweight (WHZ > 3)	(0) 0.0 % (0.0 - 1.0 95% C.I.)	(0) 0.0 % (0.0 - 2.1 95% C.I.)	(0) 0.0 % (0.0 - 2.0 95% C.I.)

There was no difference in overweight among girls versus boys; p>0.05

Table 31: Prevalence of overweight by age, based on weight for height (no oedema) - Ajoung Thok refugee camp, South Sudan (October 2021)

	Overweight **(WHZ > 2)**	**Severe Overweight** **(WHZ > 3)**

Age (mo)	Total no.	No.	%	No.	%
6-17	83	0	0.0	0	0.0
18-29	91	0	0.0	0	0.0
30-41	69	1	1.4	0	0.0
42-53	86	0	0.0	0	0.0
54-59	38	0	0.0	0	0.0
Total	367	1	0.3	0	0.0

Table 32: Mean Z-scores, design effects and excluded subjects

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	365	-0.52±0.94	1.00	3	6
Weight-for-Age	368	-1.08±0.88	1.00	2	4
Height-for-Age	372	-1.26±0.92	1.00	1	1

* There were two cases of oedema found during the survey.

4.4 Feeding Programme Enrolment Coverage

In Ajuong Thok refugee camp, the OTP and TSFP enrolment coverage based on both all admission criteria and using MUAC and Oedema only was way below the recommended standard of >90%.

Selective feeding programme

Table 33: Nutrition treatment programme enrolment coverage based on all admission criteria (weight-for-height, MUAC, oedema)

	Number/total	**%(95%CI)**
Proportion of children aged 6-59 months with severe acute malnutrition currently enrolled in outpatient therapeutic programme*	1/4	25.0 (0.6-80.6)
Proportion of children aged 6-59 months with moderate acute malnutrition currently enrolled in supplementary feeding programme*	6/18	33.3 (13.3-59.0)

Table 34: Nutrition treatment programme enrolment coverage based on MUAC and oedema only

	Number/total	**%(95%CI)**
Proportion of children aged 6-59 months with severe acute malnutrition currently enrolled in outpatient therapeutic programme	0/0	0
Proportion of children aged 6-59 months with moderate acute malnutrition currently enrolled in supplementary feeding programme*	1/6	16.7 (0.4-64.1)

4.5 Health results

4.5.1 Measles Vaccination Coverage Results

Table 35: Measles vaccination coverage for children aged 9-59 months (N=353)

	Measles (with card) n=96	**Measles (confirmation from mother) n=245**	**Measles (No or don't know) n=12**
YES	27.2% (22.7-31.4)	69.4% (64.6-74.2)	3.4 (1.7-5.4)

The measles vaccination coverage met the recommended target of ≥ 95%.

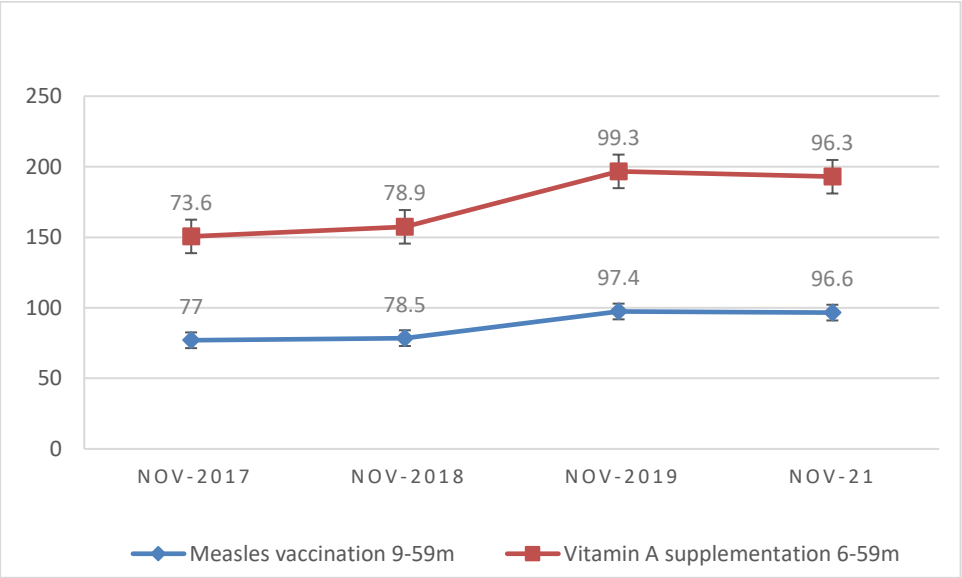
4.5.2 Vitamin A Supplementation Coverage Results

Table 36: Vitamin A Supplementation for Children Aged 6-59 Months within Past 6 Months (N=374)

	Vitamin A capsule (with card) n=10	**Vitamin A capsule (with card or confirmation from mother) n=350**	**Vitamin A capsule (No or don't know) n=14**
YES	2.7% (1.1-4.5)	93.6% (91.2-96.0)	3.7 (2.1-5.9)

The coverage of vitamin A coverage met the recommended target of ≥ 90%.

Figure 10: Trends in the coverage of measles vaccination and vitamin A supplementation in last 6 months from 2017-2021



Measles vaccination and Vitamin A supplementation have stayed relatively constant since November 2019.

4.5.4 Diarrhea and deworming results

Table 37: Prevalence of diarrhea

	Number/total	%(95%CI)
Diarrhoea in the last two weeks (6-59 months)	46/374	12.3 (9.1-15.5)

Table 38. Use of ORS and Zinc during diarrhoea episode

	Number/total	% (95% CI)
ORS use during diarrhoea episode	34/46	73.9% (58.9-85.7)
Zinc tablet or syrup use during diarrhoea episode	27/46	58.7% (43.2-73.0)

Less than 75% of the surveyed children who had diarrhoea episode in the last two weeks received treatment either using ORS or Zinc.

Table 39: Deworming coverage

	Number/total	%(95%CI)
Children received a deworming tablet in the last six months (12-59 months)	309/327	94.5 (91.7-96.9)

Deworming coverage was higher than the recommended target of ≥75%

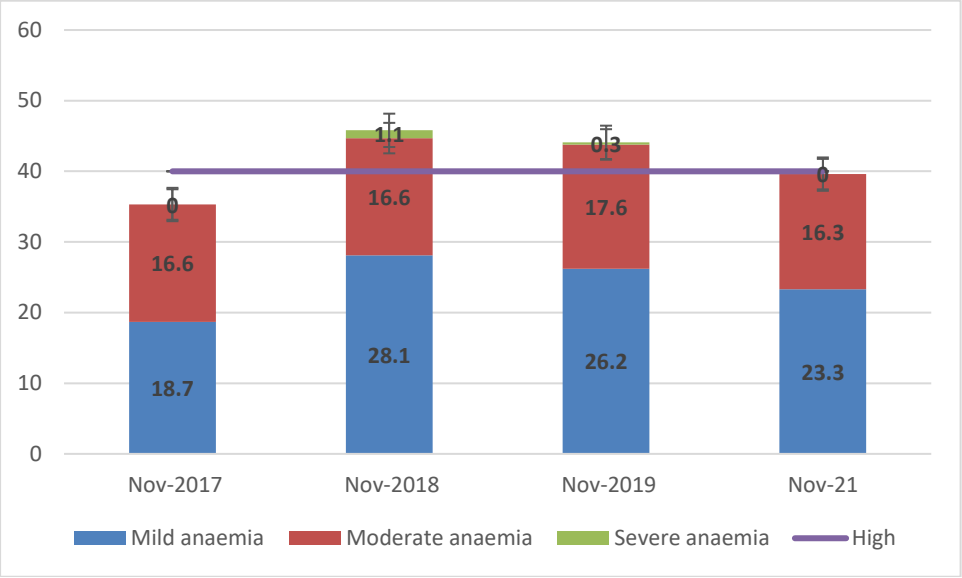
4.5.4 Anaemia results children 6 – 59 months

The total anaemia prevalence among children 6 to 59 months was 44.1(38.3-50.1 95% CI). This is of critical public health significance as it is above 40%. Children aged 6-23 were the most severely affected by anaemia.

Table 40: Prevalence of total anaemia, anaemia categories, and mean haemoglobin concentration in children 6-59 months of age and by age group

	6-59 months n = 374	**6-23 months** n=130	**24-59 months** n=244
Total Anaemia (Hb<11.0 g/dL)	(148) 39.6% (34.8-44.4 95%CI)	(80) 61.5 (53.1-70.0 95%CI)	(68) 27.9 (22.1-33.6 95%CI)
Mild Anaemia (Hb 10.0-10.9 g/dL)	(87) 23.3% (19.0-27.5 95%CI)	(42) 32.3 (24.4-40.3 95%CI)	(45) 18.4 (14.1-24.4 95%CI)
Moderate Anaemia (7.0-9.9 g/dL)	(61) 16.3% (12.6-20.3 95%CI)	(38) 29.2 (21.6-37.7 95%CI)	(23) 9.4 (5.9-13.0 95%CI)
Severe Anaemia (<7.0 g/dL)	0	0	0
Mean Hb (g/dL) [range]	11.19 g/dL [8.1-15.4]	10.52 g/dL [8.1-13.8]	11.55 g/dL [8.2-15.4]

Figure 11: Trends in anaemia categories in children 6-59 months from 2017-2021



The prevalence of mild anaemia decreased marginally in 2021 when compared to that in 2019. Moderate anaemia also reduced slightly but these changes were not statistically significant p>0.05.

Figure 12: Trend in total anaemia (<11 g/dl), and moderate and severe anaemia (<10 g/dl) with 95% CI in children 6-59 months

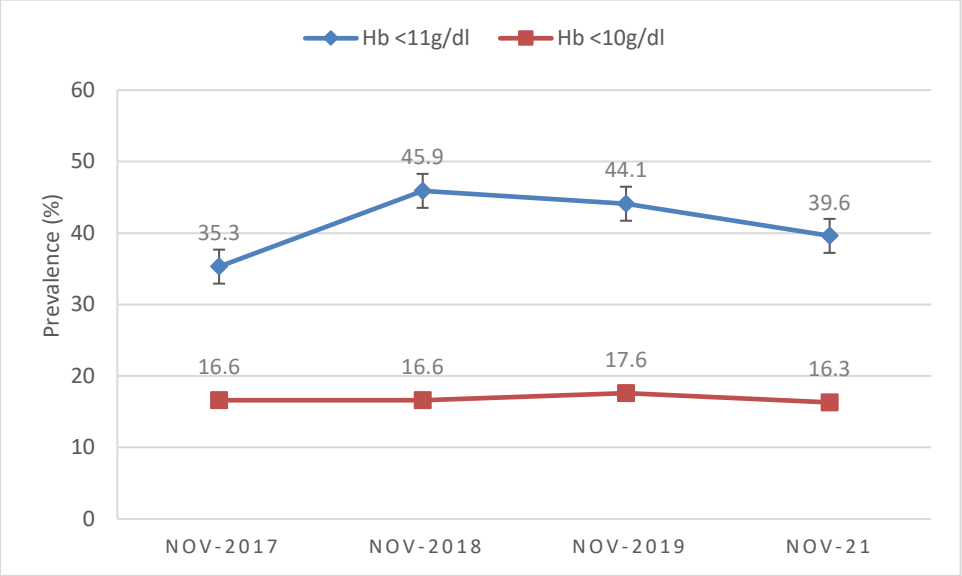
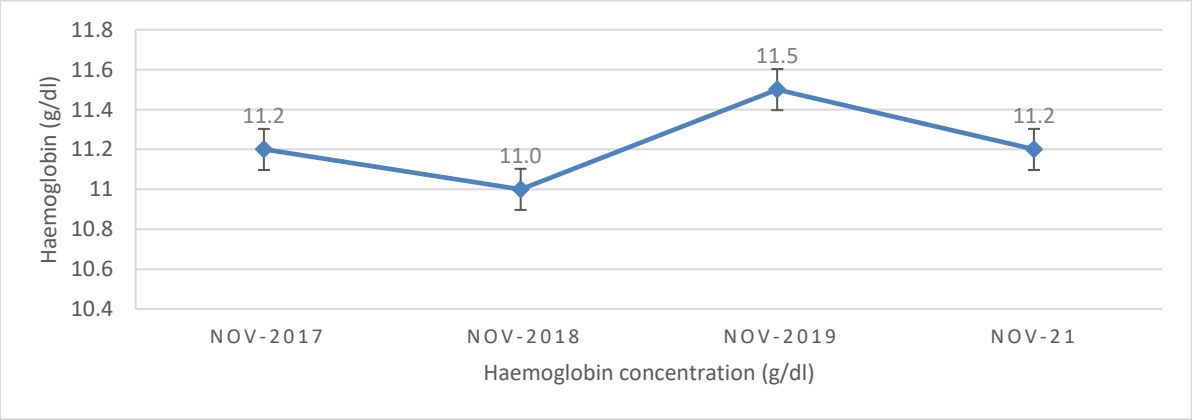


Figure 13: Trend in mean haemoglobin concentration with 95% CI in children 6-59 months

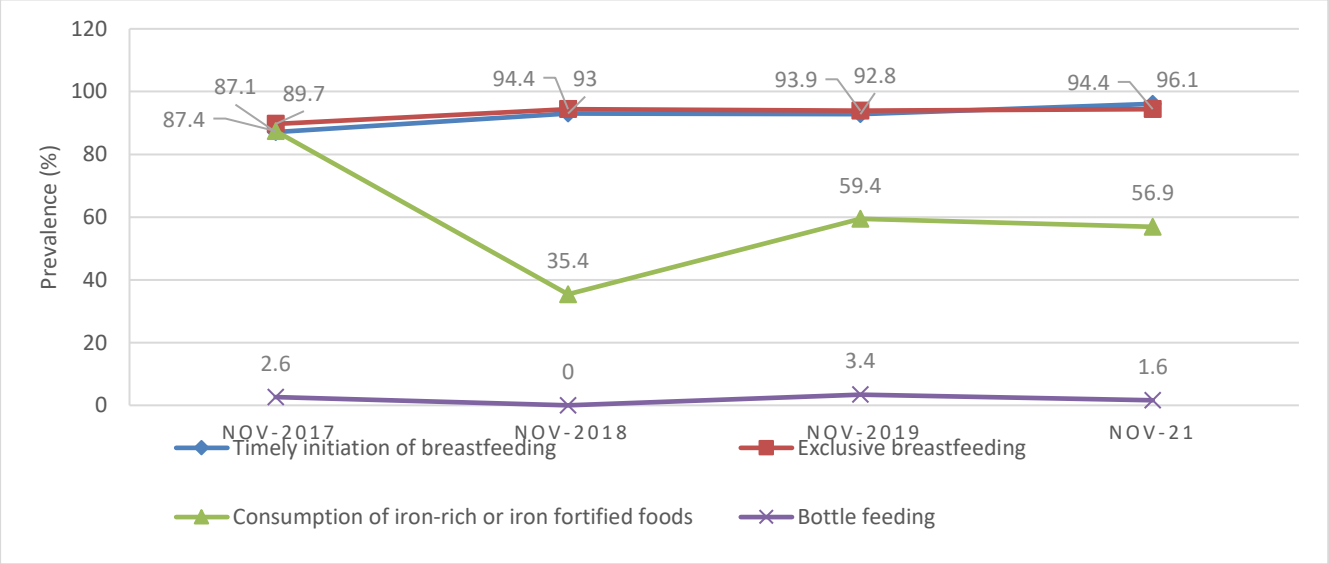


4.6 IYCF results (children 0-23 Months)

Table 41: Prevalence of Infant and Young Child Feeding Practices Indicators

Indicator	Age range	Number/ total	Prevalence (%)	95%CI
Timely initiation of breastfeeding	0-23 months	172/184	93.5	(88.9-96.6)
Exclusive breastfeeding under 6 months	0-5 months	51/54	94.4	(84.6-98.8)
Continued breastfeeding at 1 year	12-15 months	24/26	92.3	(74.9-99.1)
Continued breastfeeding at 2 years	20-23 months	15/25	60.0	(38.7-78.9)
Introduction of solid, semi-solid or soft foods	6-8 months	13/21	61.9	(38.4-81.9)
Consumption of iron-rich or iron- fortified foods	6-23 months	74/130	56.9	(48.0-65.6)
Bottle feeding	0-23 months	3/184	1.6	(0.3-4.7)

Figure 14: Prevalence of Infant and Young Child Feeding Practices



Prevalence of Intake

Infant Formula

Table 42. Prevalence of intake of certain foods in children aged 0-23 months

	Number/total	% (95% CI)
Proportion of children aged 0-23 months who receive infant formula (fortified or non-fortified)	3/184	1.6% (0.3-4.7)
Proportion of children aged 6-23 months who receive CSB++	31/130	23.9% (16.8-32.1)
Proportion of children aged 6-23 months who receive LNS	49/130	37.7% (29.4-46.6)

4.7 Anaemia and physiological status in women 15-49 Years

Table 43: Women Physiological Status and Age

Physiological status	Number/total	% (95% CI)
Non-pregnant	268/297	90.2 (86.3-93.4)
Pregnant	29/297	9.8 (6.6-13.7)
Non-pregnant and non-lactating women	172/297	57.9 (52.1-63.6)
Lactating women with an infant less than 6 months	34/96	35.4 (25.9-45.8)
Lactating women with an infant greater than 6 months	62/96	64.6 (54.2-74.1)
Mean age (range)	25.72 (15-49)	

Table 44. Women Malnutrition Prevalence by MUAC

Physiological status	Number/total	% of sample (95% CI)
MUAC<23.0cm in pregnant and lactating women	7/62	11.3% (4.7-21.9)
MUAC>=23.0cm in pregnant and lactating women	55/62	88.7% (78.1-95.3)

Table 45: Prevalence of anaemia and haemoglobin concentration in non-pregnant women of reproductive age (15-49 Years)

Anaemia - Women of reproductive age 15-49 years	**All** n = 267
Total Anaemia (<12.0 g/dL)	(43) 16.1% (11.9-21.1 95% CI)
Mild Anaemia (11.0-11.9 g/dL)	(22) 8.2% (5.2-12.2 95% CI)
Moderate Anaemia (8.0-10.9 g/dL)	(21) 7.9% (4.9-11.8 95% CI)
Severe Anaemia (<8.0 g/dL)	0
Mean Hb, g/dL [range]	12.98 [9-16]

Figure 15: Trends in anaemia categories in women of reproductive age (non-pregnant) from 2017-2021

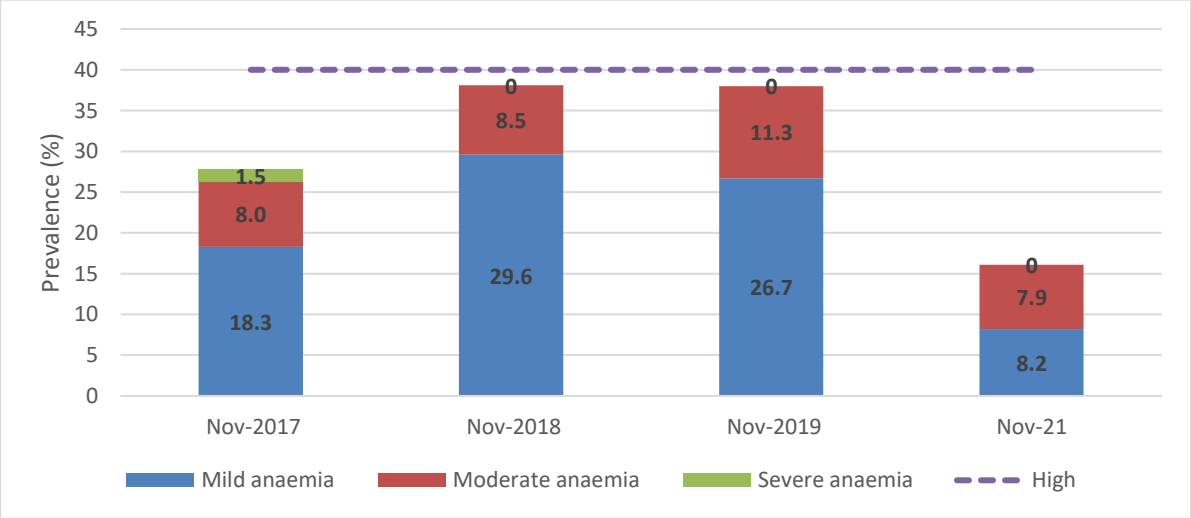
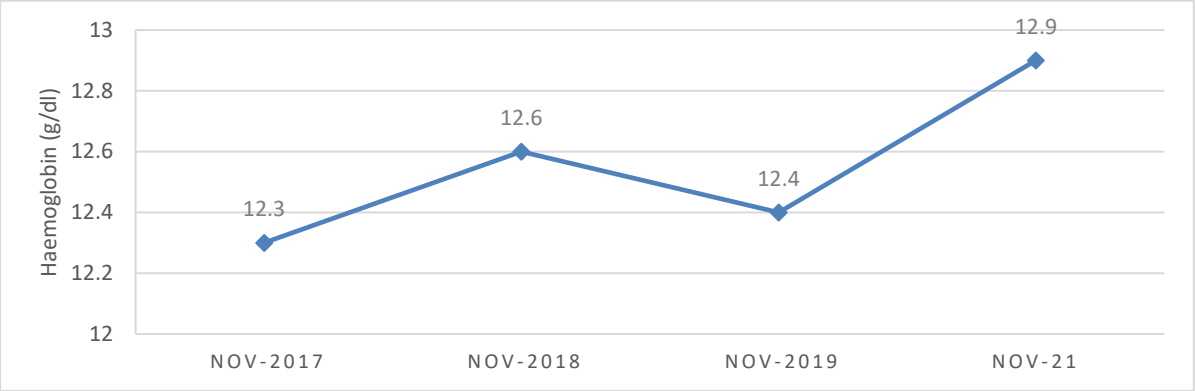


Figure 16: Trends in mean haemoglobin concentration with 95% CI in women of reproductive age (non-pregnant)



The mean difference in haemoglobin between 2021 and 2019 was not statistically significant, p>0.05.

Table 46: ANC Enrolment and Iron-Folic Acid Pills Coverage among Pregnant Women (15-49 Years)

	Number /total	**%(95%CI)**
Currently enrolled in ANC programme	28/29	96.6(82.2-99.9)
Currently receiving iron-folic acid pills	27/29	93.1(77.2-99.2)

4.8 Food security

4.8.1 Access to food assistance

Table 47: Ration card coverage

	Number/total	%(95%CI)
Proportion of households with a ration card	205/205	100

All the surveyed households had a ration card.

Table 48: Duration of the general in-kind food distribution

	Number (days)	
Mean [range]	16.81 [1-30]	

CASH assistance and utilisation

Table 49: CASH for milling assistance coverage

	Number/total	%(95%CI)
Proportion of households received Cash in the last cycle	205/205	100

Table 50: Description of cash utilization

Basic needs not met by the households:	Number/total	% (95% CI)
Food	190/205	92.7% (88.2-95.9)
Water	0/205	0.0%
Hygiene items, clothes, shoes	43/205	21.0% (15.6-27.2)
Health costs (including medicines)	10/205	4.9% (2.4-8.8)
Rent, shelter repair, household items (e.g. mattress, blankets, jerrycan), utilities and bills (e.g. electricity, water bills, phone calling credit)	4/205	2.0% (0.5-4.9)
Firewood / fuel for cooking or heating	7/205	3.4% (1.4-6.9)
Assets for a livelihood activity (e.g. seeds, tools, farming, fishing, petty trade, etc.)	2/205	1.0% (0.1-3.5)
Debts repayment	9/205	4.4% (2.0-8.2)
Saved some money, support other family members, relatives, friends	2/205	1.0% (0.1-3.5)
Education (e.g. school fees, uniform, books)	1/205	0.5% (0.0-2.7)
Other	55/205	26.8% (20.9-33.5)

Coverage of basic needs

Table 51. Description of basic needs not met by the households

Basic needs not met by the households:	Number/total	% (95% CI)
Food	101/205	49.3% (42.2-56.3)
Water	0/205	0.0%
Hygiene items, clothes, shoes	161/205	78.5% (72.3-84.0)
Health costs (including medicines)	15/205	7.3% (4.2-11.8)

Rent, shelter repair, household items (e.g. mattress, blankets, jerrycan), utilities and bills (e.g. electricity, water bills, phone calling credit)	44/205	21.5% (16.1-27.7)
Firewood / fuel for cooking or heating	41/205	20.0% (14.8-26.1)
Assets for a livelihood activity (e.g. seeds, tools, farming, fishing, petty trade, etc.)	17/205	8.3% (4.9-13.0)
Debts repayment	11/205	5.4% (2.7-9.4)
Saved some money, support other family members, relatives, friends	10/205	4.9% (2.4-8.8)
Education (e.g. school fees, uniform, books)	42/205	20.5% (15.2-26.7)
Other	57/205	27.8% (21.8-34.5)

The category of basic needs cannot be met reported the most are: food, hygiene items, others, house, education, and fuel for cooking, others.

Table 52. Households by categories of coverage of basic needs

Proportion of households in each category of coverage of basic needs	Number/total	% (95% CI)
All basic needs are met (100%)	0/205	0.0%
More half basic needs are met (>50%)	203/205	99.0% (96.5-99.9)
Few basic needs are met (<50%)	2/205	1.0% (0.1-3.5)
Basic needs are not met (0%)	0/205	0.0%

Most families reported can meet all basic needs, most households reported more than half of their basic needs are met.

4.8.2 Negative household coping strategies

Table 53: Food coping strategies used by the surveyed population over the past month

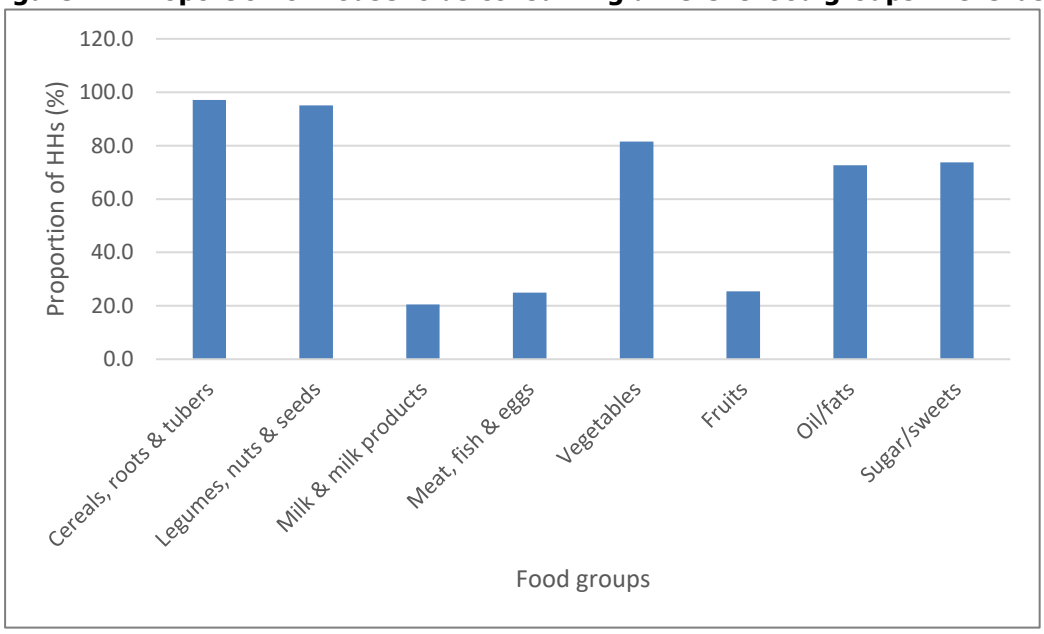
	Number/total	%(95%CI)
Proportion of households reporting using the following coping strategies over the past month*:		
Relied on less preferred and/or less expensive food	196/205	95.6 (91.8-98.0)
Borrowed food or relied on help from a friend or relative	152/205	74.2 (67.6-80.0)
Reduced the number of meals eaten in a day	190/205	92.7 (88.2-95.9)
Limited portion size at mealtime	187/205	91.2 (86.5-94.7)
Reduced consumption by adults so that children could eat	144/205	70.2 (63.5-76.4)
Proportion of households reporting using none of the negative coping strategies over the past month	3/205	1.5 (96.5-100)
Average rCSI (mean, SD / range)	205	16.9 (9.2)

4.8.3 Food Consumption Score

Table 54: Average Food Consumption Score (FCS) and proportion by Classification

Food consumption score	Number/total	%(95%CI)
Average FCS (mean, SD/range)	205	23.9 (10.8)
Poor: 0-21	93/205	45.4 (39.0-51.7)
Borderline: 21.5-35	85/205	41.5 (35.1-48.3)
Acceptable: >35	27/205	13.2 (8.8-18.0)

Figure 17: Proportion of households consuming different food groups in the last 7 days



Cereals, pulses, vegetables, oils/fats and sugar were the most consumed food groups.

Table 55. Consumption frequency categories of each nutrient rich food groups (FCS-N)

Nutrient rich food groups	Consumption frequency categories	Number/total	% (95% CI)
Vitamin A rich foods	Never	56/205	27.3% (21.3-34.0)
	Sometimes	144/205	70.2% (63.5-76.4)
	At least daily	5/205	2.4% (0.8-5.6)
Protein rich foods	Never	7/205	3.4% (1.4-6.9)
	Sometimes	180/205	87.8% (82.5-92.0)
	At least daily	18/205	8.8% (5.3-13.5)
Haem iron rich foods	Never	178/205	86.8% (81.4-91.1)
	Sometimes	27/205	13.2% (8.9-18.6)
	At least daily	0/205	0.0%

In terms of the nutrient rich food, 72.6% households reported consumed Vitamin A rich foods (sometimes or daily), 96.6% reported consumed protein rich foods, while only 13.2% reported consumed Haem iron rich foods.

Table 56. Food acquisition sources

Food acquisition sources	Number/total	% (95% CI)
Purchase (using cash grants and/or with their own cash)	160/205	78.1% (71.8-83.5)
Own production (crops, livestock, fishing/ hunting, gathering)	24/205	11.7% (7.7-16.9)
Borrowed (loan/credit from traders)	11/205	5.4% (2.7-9.4)
Received as gift (from family relatives or friends/neighbour)	3/205	1.5% (0.3-4.2)
Food assistance	4/205	2.0% (2.0-98.5)
Other	3/205	1.5% (0.3-4.2)

The main source for food reported was purchasing (78.1%), followed by own production and gift.

5 LIMITATIONS

- TSFP/OTP coverage results should be interpreted with caution due to the small number of cases that were sampled during the survey. This indicator is rather interpreted as measuring enrolment coverage not programme coverage. These is coupled with Covid-19 program adaptations where screening was limited to MUAC and edema.

- Due to the small survey sample size for some indicators such as the exclusive breastfeeding "introduction of solid, semi-solid or soft foods" and the "continued breastfeeding at 2 years" indicators, these results have to be interpreted with caution.

- The training and the questionnaires were in English, but questionnaires were administrated in Arabic. This could have affected the understanding of the questions and ultimately the responses given.

6 DISCUSSION

Nutritional Status of Young Children

In Ajuong Thok, the prevalence of GAM was 4.9% (3.1-7.6 95% C.I) which is acceptable, whereas the prevalence of SAM was 1.1 (0.4-2.8), which is below the <2% of critical (UNHCR classification). Compared to the situation in 2019, the nutrition situation has improved significantly (p=0.0397), but the situation may deteriorate in the presence of aggravating factors, particularly because most households (86.9%) reported borderline and poor food consumption score (FCS), and the vast majority (98.5%) reported using food coping strategies. The CMAM program continued within the year in Ajuong Thok and there were adequate therapeutic feeding supplies with no pipeline breaks. In addition to the CMAM program was the prevention of malnutrition/bridge the nutrient gap, BSFP which continued throughout the year without any pipeline break. All children aged 6-23 months were targeted and received 200g/person/day super cereal plus monthly, however this was reduced to 100g/person/day as of July. Both treatment and prevention of acute malnutrition interventions should be continued to keep the prevalence to the acceptable level (GAM <5%).

The 2021 global stunting prevalence in in Ajuong Thok was 19.6% (15.9-24.0 95% C.I). This is categorized as ″poor or medium″ according to WHO standards. Severe stunting was 4.0% (2.5-6.5 95% CI). Stunting prevalence reduced slightly from 22.7% (20.8-24.8 95% C.I) recorded in 2019. Stunting has been on a downward trend since 2017.There was notable achievement in terms of increased ANC coverage (96.6%) as well as the reduction of the anaemia prevalence from 34% (26.5-42.2) in 2019 to 14.5% (10.8-18.5) in 2021. No case of acute malnutrition based on MUAC (<21 CM) was found among the PLWs. Other likely contributors to stunting include poor health especially diarrhoeal diseases. However, diarrhoea prevalence was low at 12.3% (9.1-15.5) which may partly explain the reduction in the stunting prevalence. Generally, stunting levels were highest in the age category 18-29 months which indicates vulnerability during the post the breast-feeding period. Inappropriate childcare and feeding practices could be contributing to this.

Morbidity

12.3% of children aged 6-59 months in Ajuong Thok camp were reported to have had diarrhoea in the last two weeks prior to the survey indicating that diarrhoea related morbidity is a concern. Interventions to prevent diarrhoea, including safe drinking-water, use of improved sanitation and hand washing with soap need to be strengthened and maintained. To reduce the morbidity caseload there is also the need to maintain the current health service provision.

Programme enrolment coverage

The OTP and TSFP programme enrolment coverage indicator using WHZ, MUAC and oedema in Ajuong Thok did not meet the recommended standard of >90%. The OTP and TSFP coverage measure the enrolment efficacy of these programmes. Although the sample sizes of these indicators were very low to allow meaningful conclusions to be drawn, the coverage highlights the high rate of exclusion under the Ajoung Thok OTP and TSFP nutrition programmes, this could partly be explained by Covid-19 related program adaptations where community screening was limited to MUAC and edema, and hence many eligible children were missed out. There is need to strengthen case finding both at the community level and the screening at the facility level. Only a small proportion of the children that met the WHZ score admission criteria were enrolled in the supplementary feeding programme (35.7%) in Ajoung Thok) while no child that met the WHZ score or MUAC admission criteria was enrolled in the outpatient therapeutic feeding programme.
According to survey data, only 21.7% of children 6-59 months were enrolled in BSFP, however

this has to be interpreted in the context that only children 6-23month are eligible for BSFP support. This finding supports the finding that only 13.2% of households reported acceptable food consumption.

Measles vaccination, Vitamin A supplementation and deworming coverage

The coverage of measles vaccination in Ajuong Thok was 96.6% which met the recommended ≥95. Vitamin A supplementation was (96.3%) met target coverage of ≥90%. Ante natal coverage in Ajuong Thok was 96.6% up from 90.5% reported in 2019.
Routine vaccination and campaigns should continue in 2022 to ensure the recommended standards are maintained.
Deworming coverage was 94.5% which was much higher than the 74% coverage seen in 2019 and the UNHCR target of ≥75%.

Anaemia among Young Children and Women

Total anaemia prevalence among children aged 6 to 59 months in Ajoung Thok was 39.6% (34.8-44.4 95% C.I), a slight reduction from the 45.9% (39.7-52.2 95% C.I) reported in 2019. However, the present prevalence is not significantly different from the 40% level of public health significance (WHO classification). The anaemia problem was more pronounced among children aged 6 to 23 months than in older children. Total anaemia prevalence among this age group was 61.5% in Ajoung Thok compared to 27.9% among children aged 24 to 59 months.

Although anaemia prevalence was high, majority of the children were mildly anaemic. The prevalence of mild and moderate anaemia among children aged 6 to 59 in Ajuong Thok was 23.3% and 16.3%. There was no case of severe anaemia reported in this survey. The decrease in moderate and severe anaemia is a positive trend as it indicates a decrease in anaemia severity.

The prevalence of anaemia among women aged 15-49 years (non-pregnant) was 14.5% in Ajoung Thok. According to the WHO classification the women anaemia prevalence is of low public health significance. This indicates an improvement in maternal nutrition. The survey showed ANC coverage of 96.6% in Ajoung Thok. Iron-folic acid coverage was 93.1%.

IYCF Indicators

From the survey results proportion of children 0-23 months that had timely initiation of breast milk within the first hour of delivery was 96.1% in Ajoung Thok. Early initiation (within one hour of birth) of exclusive breastfeeding significantly reduces the risk of neonatal mortality. Infants for whom initiation of breastfeeding is delayed to more than 24 hours after birth are 2.4 times more likely to die during their first month of life. Efforts to ensure all delivered children receive timely initiation of breast milk should thus be continued.

The rate of exclusive breastfeeding for the first six months of life was 94.4% in Ajoung Thok. The risk of neonatal death is increased approximately fourfold if milk-based fluids or solids are provided to breastfed neonates. Breastmilk alone (exclusive) satisfies the nutritional and fluid requirements of an infant for the first complete six months of life in all settings and climates.[34]
Continued breastfeeding at 1 year was 96.0% in Ajoung Thok and up to two years was 68.2%.
These results indicate there is a relatively positive uptake of initiation of timely and exclusive breastfeeding and the need to continue breast feeding up to one year which all met the UNHCR target of ≥ 85%; ≥ 75% and ≥ 90% respectively. This should continue being enforced. Uptake and practice of continued breastfeeding into the second-year needs to be continually strengthened in order to maintain the UNHCR target of ≥60%.

Timely introduction of complementary feeding among children 6 to 8 months in Ajuong Thok reduced from 92.5% reported in 2019 to 69.1% in 2021. After six months, adequate and appropriate infant complementary foods become necessary to complement breastmilk in order to meet the energy and other nutrient requirements of the infant (timely complementary feeding). There is need to ensure IYCF messaging addresses this important component of complementary feeding as this has a direct bearing on stunting outcomes of the children.

1.6% of the surveyed children aged 0-23 months were bottle fed in Ajoung Thok. The 1.6% of these bottle-fed infants reportedly received infant formula. The proportion of bottle-fed and infant formula fed children showed a downward trend in 2021 compared to 2019.

The IYCF results should be interpreted with caution as the sample is small to draw meaningful conclusions. These findings, however, give an idea of the status of infant and young feeding practices among the surveyed population.

Food Security

Only 13.2% of the households reported acceptable food consumption score (FCS).
Nearly all households (98.5%) reported using one or more negative coping strategies (relied on less preferred and/or less expensive food (22.2%), borrowed food or relied on help from a friend or relative (17.3%), reduced the number of meals eaten in a day (21.8%), limited portion size at mealtime (21.8%), and reduced consumption by adults so that children could eat (16.3%). Only 1.5% said they did not use any of the food coping strategies to fill the food assistance gap.

7 RECOMMENDATIONS AND PRIORITIES

Nutrition related

Continue implementing the comprehensive Community based Management of Acute Malnutrition (CMAM) program providing both therapeutic and supplementary feeding programs to maintain the current normal nutrition status and prevent a possible deterioration, since children residing in the camp remain vulnerable. (UNHCR, UNICEF, WFP and AHA and IRC).

Continue and strengthen case finding and referral of malnourished children since the survey found two cases of oedema. Additionally, this will ensure that all children identified with a MUAC less than 12.5cm are referred and enrolled into the management of acute malnutrition programs.

The stunting prevalence of 19.6% is a concern. Therefore, growth monitoring for all children below two years and provision of health education to their mothers/caregivers on optimal child care and feeding practices is recommended as these measures have been proven effective in addressing the incidence of chronic malnutrition.

The survey found some sub-optimal infant and young child feeding practices. Continued breastfeeding at 2 years (68.2%), introduction of solid, semi-solid or soft foods (61.9%), and consumption of iron-rich or iron fortified foods (56.9%) were below the recommended standards of ≥80%. This calls for the implementation of a comprehensive social behavior change communication (SBCC) strategy to improve these feeding practices. Further, barriers to implementing of the recommended infant and young child feeding practices should also be investigated.

Only 21.7% of children 6-59 months were reportedly enrolled in the Blanket Supplementary Feeding Programme (BSFP). Households should be followed up to ensure uptake of the monthly BSFP programme for children aged 6-59 months, pregnant and lactating women using a fortified blended food or lipid-based supplement to prevent malnutrition and fill the the nutrient gap faced by these vulnerable groups have. Humanitarian partners should also continue to sensitize households on the appropriate utilization of the BSFP ration.

Anaemia levels among children aged 6-59 months in Ajuong Thok camp remained significantly high (39.6%). There is need to continue implementing the anaemia reduction strategy in through several measures such as systematic screening and referral of all children with anaemia signs and symptoms (palmar pallor) at the community level. At health level, appropriate diagnosis, treatment and follow up of the detected cases should be carried out (UNHCR, AHA and IRC). Finally, households should be sensitized and supported to access and consume iron-rich or iron fortified foods.

Food security related

Survey results showed that only 13.2% of the households had acceptable food consumption, with virtually all households (98.5%) reporting use of one or more food coping strategies. The food security situation in the camps should be monitored continuously and ensure all households in the camp are reached with the various food and non-food interventions that will help cushion families from food insecurity.

Health related

Despite the fact that rates for measles immunization (96.6%), vitamin A supplementation (96.3%) and deworming (94.5%) were all met and exceeded, there is need to maintain the routine Expanded Program of Immunization (EPI) and conduct regular campaigns when required as a way of preventing incidences of childhood illnesses which have a great impact

on the nutritional status of children aged 6-59 months.

Although the prevalence of diarrhoea (12.3%) was relatively low, diarrhea is a major risk factor for acute malnutrition in children. UNHCR and its partners should strengthen the integration of nutrition programme activities with the Water, Sanitation and Hygiene (WASH) initiatives particularly consumption of safe drinking water, handwashing with soap as well as strengthen counselling and education on the risks associated with use of bottle-feeding.

APPENDICES

Appendix 1: Name of contributors.

No.	Name	Role	Organization
1	Isaiah Musa	Team Leader	AHA
2	Gasim Idris	Assistant anthropometric measurer	AHA
3	Isaac Jacob	HB measurer	AHA
4	Ateib Hessen	Haemoglobin measurer	AHA
5	Kumi Ditti Chocho	Anthropometric measurer	AHA
6	Dr. Akonyu David James	Supervisor/Trainer	AHA
7	Lomurye Emmanuel Geri	Supervisor/Trainer	AHA
8	Ajang Yuot	Supervisor/Trainer	IRC
9	Drichi James Lino	Supervisor/coordinator/Trainer	AHA
10	Lobut Charles Yengi	Supervisor/coordinator/Trainer	IRC
11	Maria Chidumu	Lead coordinator	UNHCR
12	Lilian Igube	Coordinator	UNHCR
12	Sebit Mustafa	Coordinator	UNHCR
13	Taarik Kodi	Team Leader	AHA
14	Zabulun Samahan	Team Leader	AHA
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24	Omar Tijani	Anthropometric Measurer	IRC
25	Bulkan	Assistant Anthropometric Measurer	IRC
26	Kukuman David	Anthropometric Measurer	IRC
27	Basma Mubarak	Assistant Anthropometric Measurer	IRC
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Report review
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Funding
UNHCR, IRC and AHA supported the survey. UNICEF and WFP funded most of the nutrition and food security program.

Appendix: 2 Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	**Score**
Flagged data	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
(% of out of range subjects)			0	5	10	20	**0** (1.6 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	**0** (p=0.836)
Age ratio(6-29 vs 30-59)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	**0** (p=0.523)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	**0** (3)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	**0** (7)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	**0** (7)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
.			and	and	and	or	
.	Excl	SD	>0.9	>0.85	>0.80	<=0.80	
			0	5	10	20	**0** (0.94)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	**0** (0.08)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	**0** (-0.19)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<=0.001	
			0	1	3	5	**0** (p=)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	**0** %

The overall score of this survey is 0 %, this is excellent.

Appendix 3: Survey questionnaires

DEMOGRAPHY
1 questionnaire per household
THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT

No	QUESTION	ANSWER CODES	
SECTION IDENTIFICATION THIS SECTION IS TO BE COMPLETED IN ALL SELECTED HOUSEHOLDS. THIS MODULE IS MANDATORY TO COMPLETE.			
ID1	Camp Name CAMPNAME	|_____|	
ID2	Section Code / Number SECTION		|___|___|___|
ID3	Zone Code / Number ZONE		|___|___|___|
ID4	Block Code / Number BLOCK		|___|___|___|
ID5	Date of interview (dd/mm/yyyy) SURVDAT	Day/Month/Year.....|___|___| /|___|___| / |___|___||___|___|	
ID6	Cluster Number CLUSTER		|___|___|
ID7	Team Number TEAM		|___|___|
ID8	Household Number HH		|___|___|___|

MEMBER OF THE HOUSEHOLD.

No	QUESTION	ANSWER CODES	
SECTION DM1: Household Head Information			
Note	THESE QUESTIONS NEED TO BE ASKED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSEHOLD.		
DM1A	Was consent given for conducting the interview? ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW. DMCONST	Yes ..... 1 No ..... 2 Absent 3	|___| IF ANSWER IS 2 or 3 STOP HERE
DM1B	Was consent given for conducting the interview using Mobile Data Collection (use of smartphone or tablet)? ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW. MDCCONST	Yes ..... 1 No ..... 2 Absent 3	|___| IF ANSWER IS 2 or 3 STOP HERE
DM2	What is the sex of the household head? THE HOUSEHOLD HEAD IS THE PERSON RESPONSIBLE FOR MAKING THE DECISIONS FOR	Male ..... m Female ..... f	|___|

	THE HOUSEHOLD AS A WHOLE. USE THE TERM AGREED UPON DURING THE TRAINING. HHHSEX		
DM3	What is the age of the household head (years)? YOU DO NOT NEED TO SEE PROOF OF AGE. Lower limit=6 Upper limit=98 HHHAGE	RECORD THE NUMBER IN YEARS IF KNOWN. RECORD 97 IF 97 YEARS OR OLDER. RECORD 98 IF UNKNOWN.	|___|___| years
DM4	What is the country of origin of the household head? (OPTIONAL) HHHCTRY	Country A..... 1 Country B..... 2 Country C..... 3 Country D ..... 4 Country E..... 5 Other ..... 6 Don't know 8	|___|
SECTION DM2: Mixed populations SENS (out-of-camp settings) (if applicable)			
Note	THESE QUESTIONS NEED TO BE ASKED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSEHOLD. EXPLAIN TO THE RESPONDENT THAT THESE QUESTIONS WILL BE KEPT CONFIDENTIAL.		
DM5	Is the household head a national of this country [INSERT COUNTRY]? (IF APPLICABLE) HHHHOST	Yes ..... 1 No ..... 2 Don't know 8	|___| IF ANSWER IS 2 OR 8 GO TO DM7
DM6	Has the household head been forced to move from his/her place of origin? (IF APPLICABLE) HHHIDP	Yes ..... 1 No ..... 2 Don't know 8	|___| GO TO DM8
DM7	Has the household head been forced to move from his/her country of origin to this country [INSERT COUNTRY]? (IF APPLICABLE) HHHREFUG	Yes ..... 1 No ..... 2 Don't know 8	|___|
SECTION DM3: Survey of Household Members			
DM8	What is the total number of household members? Lower limit=1 Upper limit=30 DMHHSIZE	RECORD THE NUMBER.	|___|___| people
Note	ASK INTERVIEWEE IF THOSE ARE ALL THE MEMBERS IN THE HOUSEHOLD AND THAT NO ONE IS MISSING. THESE QUESTIONS NEED TO BE COMPLETED FOR EACH HH MEMBER WHO LIVES IN THE HOUSEHOLD.		
DM9	Name of household member ONLY WRITE FIRST NAME. NAME	|_____|	
DM10	What is the sex of the household member? HHMSEX	Male ..... m Female..... f	|___|
DM11	What is the age of the household member (years)? YOU DO NOT NEED TO SEE PROOF OF AGE. Lower limit=0 Upper limit=98 HHMAGE	RECORD THE NUMBER IN YEARS IF KNOWN. IF AGE IS LESS THAN 1 YEAR, RECORD 0. RECORD 97 IF 97 YEARS OR OLDER. RECORD 98 IF UNKNOWN.	|___|___| years

DM12	Is the household member currently pregnant? HHMPREG	Yes ..... 1 No ..... 2 Don't know 8	|___|
SECTION DM4: Time of Arrival in Country of Asylum (optional/if applicable)			
Note	EXPLAIN TO THE RESPONDENT THAT THESE QUESTIONS WILL BE KEPT CONFIDENTIAL AND WILL NOT AFFECT THE ASSISTANCE THEY RECEIVE / ARE ENTITLED TO.		
DM13	Did all household members arrive to [*camp name / country of asylum*] at the same time? (OPTIONAL/IF APPLICABLE) ARRIVE	Yes ..... 1 No ..... 2 Don't know 8	|___| IF ANSWER IS 2 GO TO DM15
DM14	When did the household arrive to [*camp name / country of asylum*]? (OPTIONAL/IF APPLICABLE) ARRIDATE	1 month ago [*INSERT MONTH*] ..... 01 2 months ago [*INSERT MONTH*] ..... 02 3 months ago [*INSERT MONTH*] ..... 03 4 months ago *[INSERT MONTH*] ..... 04 5 months ago [*INSERT MONTH*] ..... 05 6 months ago [*INSERT MONTH*] ..... 06 7 months ago [*INSERT MONTH*] ..... 07 8 months ago [*INSERT MONTH*] ..... 08 9 months ago [*INSERT MONTH*] ..... 09 10 months ago [*INSERT MONTH*] ..... 10 11 months ago [*INSERT MONTH*] ..... 11 12 months ago [*INSERT MONTH]* ..... 12 1-2 years ago ..... 13 2-3 years ago ..... 14 >3 years ago ..... 15 Other *[TO BE ADAPTED]* ..... 16 Don't know 98	|___|___|
DM15	Was consent given for taking the GPS coordinates of the household? (OPTIONAL) GPSCONST	Yes ..... 1 No 2	|___|
Note	Summary messages WRITE DOWN THE SUMMARY DATA PROVIDED BELOW ON THE PARTICIPANTS AND MEASURES CONTROL SHEET.		
DM16	Total number of children under 5 (0-4 years) |___|___| children under-5 TOTU5		
DM17	Total number of women aged 15-49 years |___|___| women TOTWM		
DM18	Total number of pregnant women aged 15-49 years |___|___| pregnant women TOTPREG		
	Interviewer: I confirm that questionnaire is complete: yes/no		
	Supervisor: I confirm that questionnaire is complete.: yes/no MESSAGE TO INTERVIEWER: DO NOT ANSWER THIS QUESTION.		

Summary			
Years old	Female	Male	Total
U2 (0-1 years)	|___|___| TOTFU2	|___|___| TOTMU2	|___|___| TOTU2
U5 (0-4 years)	|___|___| TOTFU5	|___|___| TOTMU5	|___|___| TOTU5
5-14 (5-14 years)	|___|___| TOTF514	|___|___| TOTM514	|___|___| TOT514
14 years or younger (0-14 years)	|___|___| TOTFU15	|___|___| TOTMU15	|___|___| TOTU15
Between 15 years and 64 years	|___|___| TOTF1564	|___|___| TOTM1564	|___|___| TOT1564
65 years and older	|___|___| TOTF65OLD	|___|___| TOTM65OLD	|___|___| TOT65OLD
Total household size (all ages)	|___|___| HHFSIZE	|___|___| HHMSIZE	|___|___| DMHHSIZE

FOOD SECURITY
1 questionnaire per household

THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO THE MAIN CARETAKER WHO IS RESPONSIBLE FOR COOKING THE MEALS.

No	QUESTION	ANSWER CODES	
SECTION IDENTIFICATION THIS SECTION IS TO BE COMPLETED IN ALL SELECTED HOUSEHOLDS. THIS MODULE IS MANDATORY TO COMPLETE.			
ID1	Camp Name CAMPNAME	|_____|	
ID2	Section Code / Number SECTION		|___|___|___|
ID3	Zone Code / Number ZONE		|___|___|___|

ID4	Block Code / Number BLOCK		|___|___|___|
ID5	Date of interview (dd/mm/yyyy) SURVDAT	Day/Month/Year…..|___|___| /|___|___| / |___|___||___|___|	
ID6	Cluster Number CLUSTER		|___|___|
ID7	Team Number TEAM		|___|___|
ID8	Household Number HH		|___|___|___|

No	QUESTION	ANSWER CODES	
SECTION FS1: Food assistance and cooking fuel (if applicable)			
Note	THIS QUESTIONNAIRE NEED TO BE ASKED TO THE MAIN CARETAKER WHO IS RESPONSIBLE FOR COOKING THE MEALS.		
FS1	Was consent given for conducting the interview? ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW. FSCONST	Yes..... 1 No.....2 Absent.....3	|___| IF ANSWER IS 2 or 3 STOP HERE
FS2	What is your household's assistance category? (IF APPLICABLE) HASSIST	Category A.....1 Category B.....2 Category C.....3 Category D.....4 Other ..... 6 Don't know..... 8	|___|
FS3	Does your household receive food assistance (general in-kind food distribution and/or cash grants and/or food vouchers) [INSERT LOCAL NAMES OF FOOD ASSISTANCE PROGRAMMES]? FOODASS	Yes..... 1 No..... 2 Don't know..... 8	|___| IF ANSWER IS 1 OR 8 GO TO FS5
FS4	Why do you not have access to the food assistance programmes [INSERT LOCAL NAMES OF FOOD ASSISTANCE PROGRAMMES]? YNOFOODA	Ration card and/or cash grants and/or food voucher not given even if eligible.....1 Not registered.....2 Registered but determined not eligible....3 Other ..... 6 Don't know..... 8	|___| GO TO FS10
FS5	How many days did the food from the general in-kind food distribution from the [INSERT] cycle of [INSERT LAST CYCLE MONTH] last? (IF APPLICABLE) Lower limit=1 Upper limit=98 GFDLAST	RECORD THE NUMBER OF DAYS IF KNOWN. RECORD 98 IF UNKNOWN.	|___|___|
FS6	Does your household receive cash grants to meet basic needs [INSERT LOCAL NAME FOR CASH GRANTS]? (IF APPLICABLE) CASH	Yes..... 1 No..... 2 Don't know..... 8	|___| IF ANSWER IS 2 OR 8 GO TO FS8
FS7	How did you spend the cash grants you	Food 01	

	received in [INSERT LAST CYCLE MONTH OR DISTRIBUTION]? (IF APPLICABLE) SELECT ALL THAT APPLY. CASHSPNT: FOOD / WATER / HYGIENE / HEALTH / HOUSE / FUELA / LIVELI / DEBTS / SAVING / EDUCA / OTHER / DKN	Water ..... 02 Hygiene items, clothes, shoes..... 03 Health costs (including medicines) ..... 04 Rent, shelter repair, household items (e.g. mattress, blanket, jerrycan), utilities and bills (e.g. electricity, water bills, phone calling credit) ..... 05 Firewood/fuel for cooking or heating.... 06 Assets for a livelihood activity (e.g. seeds, tools, farming, fishing, petty trade, etc.) ..... 07 Debt repayment..... 08 Save some money or gave to other family members, relatives, friends ..... 09 Education (e.g. school fees, uniform, books) ..... 10 Other ..... 96 Don't know..... 98	|___|___|
FS8	Does your household receive a food voucher [INSERT LOCAL NAME OF FOOD VOUCHER] for general food needs? (IF APPLICABLE) VOUCHER	Yes..... 1 No..... 2 Don't know..... 8	|___| IF ANSWER IS 2 OR 8 GO TO FS10
FS9	Did you sell any of the vouchers or products accessed with food vouchers received in [INSERT LAST CYCLE MONTH OR DISTRIBUTION] to access other goods and/or services? (IF APPLICABLE) SELLVOU	Yes..... 1 No..... 2 Don't know..... 8	|___|
FS10	Which of your household's basic needs can you not meet? DO NOT READ THE ANSWERS. SELECT ALL THAT APPLY. NEEDSNOT: FOODB / WATERB / HYGIENEB / HEALTHB / HOUSEB / FUELB / LIVELIB / DEBTSB / SAVINGB / EDUCAB / NEEDSMET / OTHERB / DKNB	Food ..... 01 Water ..... 02 Hygiene items, clothes, shoes..... 03 Health costs (including medicines) ..... 04 Rent, shelter repair, household items (e.g. mattress, blanket, jerrycan), utilities and bills (e.g. electricity, water bills, phone calling credit) ..... 05 Firewood/fuel for cooking or heating.... 06 Assets for a livelihood activity (e.g. seeds, tools, farming, fishing, petty trade, etc.) ..... 07 Debt repayment..... 08 Save some money or support other family members, relatives, friends ..... 09 Education (e.g. school fees, uniform, books) ..... 10 All basic needs are met ..... 11 Other ..... 96 Don't know..... 98	|___|___|
FS11	What cooking fuel does your household usually use? (IF APPLICABLE)	Wood.....01 Charcoal .....02 Kerosene .....03 Biogas.....04 Liquid petroleum gas (LPG).....05	|___|___|

	HHFUEL	Ethanol ..... 06 Briquettes..... 07 Other ..... 96 Don't know..... 98	
FS12	Does your household receive cooking fuel assistance? (IF APPLICABLE) FUEL	Yes..... 1 No..... 2 Don't know..... 8	|___| IF ANSWER IS 2 or 8 GO TO FS14
FS13	How many days did the fuel from the [INSERT] cycle of [INSERT LAST CYCLE MONTH] last? (IF APPLICABLE) Lower limit=1 Upper limit=98 FUELLAST	RECORD THE NUMBER OF DAYS IF KNOWN (RECORD 98 IF UNKNOWN)	|___|___|
SECTION FS2: Coping Strategies and Reduced Coping Strategy Index (rCSI)			
Note	EXPLAIN TO THE RESPONDENT THAT THE QUESTIONS APPLY TO ALL HOUSEHOLD MEMBERS AND NOT ONLY TO HIM/HER.		
FS14	In the past 4 weeks, have you or anyone in your household needed to stop a child from attending school? (OPTIONAL) SCHOOL	Yes..... 1 No..... 2 Don't know.....8	|___|
FS15	In the past 4 weeks, have you or anyone in your household needed to sold any assets that would not have normally sold in order to buy food or basic goods (e.g. sold items such as a car, motorbike, plough, sewing machine, tools, seed stock, livestock, productive land)? (OPTIONAL) SELLLIV	Yes..... 1 No..... 2 Don't know..... 8	|___|
FS16	In the past 4 weeks, have you or anyone in your household needed to ask for money from strangers (begging)? (OPTIONAL) BEG	Yes..... 1 No..... 2 Don't know..... 8	|___|
FS17	In the past 4 weeks, have you or anyone in your household needed to move to a poorer quality shelter? (OPTIONAL) SHELTER	Yes..... 1 No..... 2 Don't know..... 8	|___|
FS18	In the past 4 weeks, have you or anyone in your household needed to send household members under the age of 16 to work? (OPTIONAL) CHILDLAB	Yes..... 1 No..... 2 Don't know..... 8	|___|
FS19	In the past 4 weeks, have you or anyone in your household needed to send a member of the household to work far away? (OPTIONAL)	Yes..... 1 No..... 2 Don't know..... 8	|___|

	WORKAWAY		
FS20	In the past 4 weeks, have you or anyone in your household needed to engage in activities for money or items that you feel puts you or other members of your household at risk of harm (e.g. illegal activities like hunting, fishing, survival sex, drug dealing, early marriage, joining armed groups, etc.)? (OPTIONAL) RISKYACT	Yes..... 1 No..... 2 Don't know..... 8	|___|
FS21	In the past 4 weeks, have you or anyone in your household needed to skip paying rent / debt repayments to meet other needs? (OPTIONAL) RENTDEBT	Yes..... 1 No..... 2 Don't know..... 8	|___|
FS22	In the past 4 weeks, have you or anyone in your household needed to take out new loans or borrowed money? (OPTIONAL) LOANBRW	Yes..... 1 No..... 2 Don't know..... 8	|___|
FS23	In the past 4 weeks, have you or anyone in your household needed to reduce expenditure on hygiene items, water, baby items, health or education in order to meet household food needs? (OPTIONAL) REDUCE	Yes..... 1 No..... 2 Don't know..... 8	|___|
Note	EXPLAIN TO THE RESPONDENT THAT THE QUESTIONS APPLY TO ALL HOUSEHOLD MEMBERS AND NOT ONLY TO HIM/HER.		
FS24	In the past 7 days, how many days did your household rely on less preferred and/or less expensive food due to lack of food or money to buy food? Lower limit=0 Upper limit=7 LESSEXP	RECORD THE NUMBER OF DAYS, FROM 0-7.	|___|
FS25	In the past 7 days, how many days did your household borrow food or rely on help from a friend or relative due to lack of food or money to buy food? Lower limit=0 Upper limit=7 BRW	RECORD THE NUMBER OF DAYS, FROM 0-7.	|___|
FS26	In the past 7 days, how many days did your household reduce the number of meals eaten in a day due to lack of food or money to buy food? Lower limit=0 Upper limit=7 LESSMEAL	RECORD THE NUMBER OF DAYS, FROM 0-7.	|___|

FS27	In the past 7 days, how many days did your household limit portion sizes at mealtime due to lack of food or money to buy food? Lower limit=0 Upper limit=7 REDMEAL	RECORD THE NUMBER OF DAYS, FROM 0-7.	|___|
FS28	In the past 7 days, how many days did your household reduce consumption by adults so children could eat, due to lack of food or money to buy food? IN HOUSEHOLDS WIHTOUT CHILDREN UNDER 5 YEARS OF AGE, THE ANSWER SHOULD BE '0'. Lower limit=0 Upper limit=7 REDADULT	RECORD THE NUMBER OF DAYS, FROM 0-7.	|___|
SECTION FS3 : FCS and FCS-N			
FS29	How many days over the last 7 days, did members of your household eat the following food items, prepared and/or consumed at home? READ THE LIST OF FOODS AND DO NOT PROBE. ONLY RECORD THE CONSUMPTION OF SIGNIFICANT QUANTITIES OF FOOD BY THE HOUSEHOLD. WRITE '0' IF NOT CONSUMED IN THE LAST 7 DAYS.		
		Number of days eaten in past 7 days	
	1. In the past 7 days, how many days did your household eat any [INSERT CEREALS LOCALLY AVAILABLE] (*e.g. wheat, corn/maize, barley, buckwheat, millet, oats, rice, rye, sorghum, teff*) or any foods made from these such as [INSERT LOCAL FOODS] (*e.g. bread, porridge, noodles, ugali, nshima, pasta*). Or any [INSERT WHITE ROOTS AND TUBERS LOCALLY AVAILABLE] *(e.g. green bananas, lotus root, parsnip, taro, plantains, white potatoes, white yam, white cassava, white sweet potato)* or any foods made from roots such as [INSERT LOCAL FOODS]. Or any [INSERT OTHER STARCHY FOODS LOCALLY AVAILABLE] *(e.g. green bananas, plantains)* CRLROTU	|___| Lower limit=0 Upper limit=7	
	2. In the past 7 days, how many days did your household eat any [INSERT LEGUMES, NUTS AND SEEDS LOCALLY AVAILABLE] *(e.g. dried beans, chickpeas, lentils, nuts, seeds)* or any foods made from these such as [INSERT LOCAL FOODS] *(e.g. hummus, peanut butter)* PULSE	|___| Lower limit=0 Upper limit=7	
	3. In the past 7 days, how many days did your household eat any [INSERT MILK AND MILK PRODUCTS LOCALLY AVAILABLE] *(e.g. fresh milk, sour milk, infant formula, cheese, kefir, yogurt)* MILK	|___| Lower limit=0 Upper limit=7	
	4. In the past 7 days, how many days did your household eat any meat, fish and eggs *(e.g. goat, beef, chicken, pork, blood, fish including canned tuna, snails, and/or other seafood, eggs)* PROT	|___| IF ANSWER IS 0 GO TO QUESTION 5 Lower limit=0 Upper limit=7	

	4.1. In the past 7 days, how many days did your household eat any [INSERT FLESH MEAT LOCALLY AVAILABLE] *(e.g. beef, goat, lamb, mutton, pork, rabbit, chicken, duck, cane rat, guinea pig, rat, agouti frogs, snakes, insects)* FLSHMT	|___| Lower limit=0 Upper limit=7
	4.2. In the past 7 days, how many days did your household eat any [INSERT ORGAN MEAT OR BLOOD-BASED FOODS LOCALLY AVAILABLE] *(e.g. liver, kidney, heart)* ORGMT	|___| Lower limit=0 Upper limit=7
	4.3. In the past 7 days, how many days did your household eat any [INSERT FRESH, DRIED OR CANNED FISH OR SHELLFISH LOCALLY AVAILABLE] *(e.g. anchovies, tuna, sardines, shark, whale, roe/fish eggs, clam, crab, lobster, crayfish, mussels, shrimp, octopus, squid, sea snails)* FISHSF	|___| Lower limit=0 Upper limit=7
	4.4. In the past 7 days, how many days did your household eat any eggs from [INSERT EGGS LOCALLY AVAILABLE] *(e.g. eggs from chicken, duck, guinea fowl)* EGGS	|___| Lower limit=0 Upper limit=7
	5. In the past 7 days, how many days did your household eat any [INSERT ANY VEGETABLES AND LEAVES LOCALLY AVAILABLE] *(e.g. spinach, cassava leaves, onion, carrot, lettuce, bamboo shoots, cabbage, pepper, tomato, eggplant, zucchini, etc.)* VEGL	|___| IF ANSWER IS 0 GO TO QUESTION 6 Lower limit=0 Upper limit=7
	5.1. In the past 7 days, how many days did your household eat any [INSERT VITAMIN A RICH VEGETABLES AND TUBERS LOCALLY AVAILABLE] *(e.g. carrot, pumpkin, squash, or sweet potato that are orange inside, red sweet pepper)* VITAV	|___| Lower limit=0 Upper limit=7
	5.2. In the past 7 days, how many days did your household eat any [INSERT DARK GREEN LEAFY VEGETABLES LOCALLY AVAILABLE INLCUDING WILD FORMS AND VITAMIN A RICH LEAVES] (*e.g. amaranth, arugula (rocket), cassava leaves, kale, broccoli, spinach*) GREENV	|___| Lower limit=0 Upper limit=7
	6. In the past 7 days, how many days did your household eat any [INSERT ANY FRUITS LOCALLY AVAILABLE INCLUDING WILD FRUITS], and 100% fruit juice made from these *(e.g. mango, apricot, peach, apple, avocados, banana, coconut flesh, lemon, orange, etc.)* FRT	|___| IF ANSWER IS 0 GO TO QUESTION 7 Lower limit=0 Upper limit=7
	6.1. In the past 7 days, how many days did your household eat any [INSERT VITAMIN A RICH FRUITS LOCALLY AVAILABLE], and 100% fruit juice made from these *(e.g. mango (ripe, fresh and dried), cantaloupe melon (ripe), apricot (fresh or dried), ripe papaya,*	|___| Lower limit=0 Upper limit=7

	passion fruit (ripe), dried peach) VITAFRT		
	7. In the past 7 days, how many days did your household eat any [INSERT OILS AND FATS LOCALLY AVAILABLE] added to food or used for cooking *(e.g. vegetable / nut oil made from almond, avocado, canola, coconut, cottonseed, groundnut, maize, olive, rapeseed, safflower, sesame, soybean, sunflower/walnut, ghee, butter, margarine, mayonnaise, palm oil -not red palm oil, shortenings, sour cream)* FATS	|___| Lower limit=0 Upper limit=7	
	8. In the past 7 days, how many days did your household eat any [INSERT SWEETS, SWEETENED SODA OR JUICE DRINKS AND SUGARY FOODS LOCALLY AVAILABLE] *(e.g. sugar, honey, syrup, soda drinks, chocolates, candies, cookies, sweet biscuits and cakes)* SWTS	|___| Lower limit=0 Upper limit=7	
	9. In the past 7 days, how many days did your household eat any [INSERT SPICES, CONDIMENTS AND BEVERAGES LOCALLY AVAILABLE] *(e.g. black pepper, salt, chilies, soy sauce, hot sauce, fish powder, fish sauce, ginger, herbs, magi cubes, ketchup, mustard, coffee, tea, milk/cream in small quantities)* SPICE	|___| Lower limit=0 Upper limit=7	
	10. In the past 7 days, how many days did your household eat any [INSERT SPECIALIZED NUTRITIOUS FOODS AVAILABLE] *(e.g. CSB, Super Cereals)* (IF APPLICABLE) SPENUTF	|___| Lower limit=0 Upper limit=7	
FS30	How was this food acquired? FOODSOU	Purchase (using cash grants and/or with their own cash).....01 Own production (crops, livestock, fishing/hunting, gathering).....02 Traded goods/services, barter.....03 Borrowed (loan/credit from traders) .....04 Receive as gift (from family relatives or friend/neighbor .....05 In-kind or voucher based food assistance06 Other.....96 Don't know 98	|___|___|
ID9	Please take a GPS reading (OPTIONAL) AVOID TAKING IT INSIDE THE HOUSE OR UNDER TREES (TO MAKE IT FASTER). GPS	|_____|	
	Interviewer: I confirm that questionnaire is complete: yes/no		
	Supervisor: I confirm that questionnaire is complete.: yes/no MESSAGE TO INTERVIEWER: DO NOT ANSWER THIS QUESTION.		

CHILDREN 0-59 ANTHROPOMETRY, HEALTH, IYCF & ANAEMIA

1 questionnaire per child 0-59 months

THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO ALL CHILDREN BETWEEN 0-59 MONTHS IF THE IYCF MODULE IS INCLUDED (OR 6-59 MONTHS OF AGE IF THE IYCF MODULE IS NOT INCLUDED).

No	QUESTION	ANSWER CODES	
SECTION IDENTIFICATION THIS SECTION IS TO BE COMPLETED IN ALL SELECTED HOUSEHOLDS. THIS MODULE IS MANDATORY TO COMPLETE.			
ID1	Camp Name CAMPNAME	|_____|	
ID2	Section Code / Number SECTION		|___|___|___|
ID3	Zone Code / Number ZONE		|___|___|___|
ID4	Block Code / Number BLOCK		|___|___|___|
ID5	Date of interview (dd/mm/yyyy) SURVDAT	Day/Month/Year.....|___|___| /|___|___| / |___|___||___|___|	
ID6	Cluster Number CLUSTER		|___|___|
ID7	Team Number TEAM		|___|___|
ID8	Household Number HH		|___|___|___|

No	QUESTION	ANSWER CODES	
SECTION CHILD1: Details of the Child 0-59 months or 6-59 months THIS SECTION IS TO BE ADMINISTERED TO ALL CHILDREN IN THE SELECTED HOUSEHOLDS BETWEEN 0-59 MONTHS OR 6-59 MONTHS: DEPENDING ON WHICH SENS MODULE IS INCLUDED.			
Note	THESE QUESTIONS NEED TO BE ASKED TO THE MOTHER OR THE MAIN CAREGIVER.		
CH1	ID Number ID		|___|___|
CH2	Was consent given for conducting the interview and the measurements? ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW AND THE MEASUREMENTS. CHCONST	Yes ..... 1 No 2	|___| IF ANSWER IS 2 STOP HERE
CH3	Name of the child ONLY WRITE FIRST NAME. CHNAME	|_____|	
CH4	Sex of [NAME OF CHILD]? SEX	Male ..... m Female..... f	|___|
CH5	Do you have an official age documentation for [NAME OF CHILD]? XDOBK	Yes ..... 1 No 2	|___| IF ANSWER IS 2 GO TO CH7

CH6	[NAME OF CHILD]'s date of birth THE EXACT BIRTH DATE SHOULD ONLY BE TAKEN FROM AN AGE DOCUMENTATION SHOWING DAY, MONTH AND YEAR OF BIRTH. FOR PAPER-BASED SURVEYS: RECORD FROM AGE DOCUMENTATION. LEAVE BLANK IF NO VALID AGE DOCUMENTATION. BIRTHDAT	Day/Month/Year.....|___|___| /|___|___| / ___|___||___|___|	
CH7	Age of [NAME OF CHILD] in months Lower limit=0 months (or 6 months if the IYCF module is not included) Upper limit=59.99 months MONTHS	SINCE NO AGE DOCUMENTATION IS AVAILABLE, ESTIMATE AGE USING A LOCAL EVENTS CALENDAR. FOR PAPER-BASED SURVEYS: IF AGE DOCUMENTATION AVAILABLE, RECORD THE AGE IN MONTHS FROM THE DATE OF BIRTH.	|___|___|months
Note	Verify that the child is ${MONTHS} months old. Remember, if they are older than 59 months; they are not eligible for inclusion and you should stop here.		
SECTION CHILD2: Time of Arrival in Country of Asylum (optional/if applicable) THIS SECTION IS TO BE ADMINISTERED TO ALL CHILDREN BETWEEN 0 AND 59 MONTHS OF AGE (OR BETWEEN 6 AND 59 MONTHS IS THE IYCF MODULE IS NOT INCLUDED).			
Note	EXPLAIN TO THE RESPONDENT THAT THESE QUESTIONS WILL BE KEPT CONFIDENTIAL AND WILL NOT AFFECT THE ASSISTANCE THEY RECEIVE / ARE ENTITLED TO.		
CH8	Does [NAME OF CHILD] arrive to [camp name / country of asylum] before or after [INSERT THE EVENT RESPONSIBLE FOR THE INFLUX OF REFUGEES]? (OPTIONAL/IF APPLICABLE) CHARRIVE	Arrived before [*INSERT EVENT*].....1 Arrived after [*INSERT EVENT*] (new arrival)2 Don't know 8	|___|
SECTION CHILD3: Nutrition, Health and Anaemia Status of the Child 6-59 months THIS SECTION IS TO BE ADMINISTERED TO ALL CHILDREN BETWEEN 6 AND 59 MONTHS OF AGE. EXCLUDE HB MEASUREMENTS IF SENS MODULE 3 (ANAEMIA MODULE) IS NOT INCLUDED. IN MDC SURVEYS, THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (<6 MONTHS).			
CH9	Is [NAME OF CHILD] currently present in the household? CHPRES	Yes ..... 1 No 2	|___| IF ANSWER IS 2 GO TO CH16
CH10	[NAME OF CHILD]'s weight in kilograms (±0.1kg) DON'T FORGET THE DECIMAL. Lower limit=3.0kg Upper limit=31.0kg WEIGHT		|___|___|. |___| kg
CH11	Was the [NAME OF CHILD] dressed with clothes for the weight measurement? (OPTIONAL) CLOTHES	Yes ..... y No ..... n	|___|
CH12	[NAME OF CHILD]'s length/height in cm (±0.1cm) DON'T FORGET THE DECIMAL.		|___|___|___|. |___| cm

	Lower limit=54.0cm Upper limit=124.0cm HEIGHT		
CH13	Was [NAME OF CHILD] measured lying down or standing up? MEASURE	Child lying down ..... l Child standing up..... h	|___|
CH14	Clinical examination: Does the [NAME OF CHILD] present bilateral pitting oedema? EDEMA	Yes ..... y No ..... n	|___|
CH15	[NAME OF CHILD]'s middle upper arm circumference (MUAC) in mm (±1mm) or cm (±0.1cm) MEASURE LEFT ARM. APPLICABLE ONLY IF MUAC MEASURED IN CM: DON'T FORGET THE DECIMAL. Lower limit=70mm Upper limit=235mm MUAC		|___|___|___|mm OR |___|___|. |___| cm
CH16	Is [NAME OF CHILD] currently being treated in [NAME OF NUTRITION PROGRAMMES] for malnutrition? SHOW COMMODITY GIVEN IN TSFP AND TFP (OTP/SC). ENROL	Yes TSFP..... 1 Yes TFP (OTP/SC) ..... 2 No ..... 3 Don't know 8	|___|
CH17	Is [NAME OF CHILD] currently enrolled in the BSFP? (IF APPLICABLE) SHOW COMMODITY/PACKAGING GIVEN IN BSFP. BSFP	Yes ..... 1 No ..... 2 Don't know 8	|___|
CH18	Has [NAME OF CHILD] been vaccinated against measles? CHECK VACCINATION CARD (ONLY FOR CHILDREN OLDER THAN 9 MONTHS). MEASLES	Yes, card ..... 1 Yes, recall ..... 2 No or don't know 3	|___|
CH19	Has [NAME OF CHILD] received a vitamin A capsule in the past six months? CHECK VACCINATION/HEALTH CARD AND SHOW CAPSULE. VITA	Yes, card ..... 1 Yes, recall ..... 2 No or don't know 3	|___|
CH20	Was [NAME OF CHILD] given any drug for intestinal worms in the last six months? (IF APPLICABLE) SHOW TABLET. DEWORM	Yes ..... 1 No ..... 2 Don't know 8	|___|
CH21	Has [NAME OF CHILD] had diarrhoea in the past 2 weeks? CASE DEFINITION: THREE OR MORE LOOSE OR LIQUID STOOLS DURING 24 HOURS. DIAR	Yes ..... 1 No ..... 2 Don't know 8	|___| IF ANSWER IS 2 OR 8 GO TO CH23
CH22	Did you give [INSERT LOCAL NAME FOR WHO ORS] to [NAME OF CHILD] when s/he had diarrhoea? (OPTIONAL)	Yes ..... 1 No ..... 2 Don't know 8	|___|

	SHOW ORS SACHET. DIARORS		
CH23	Did you give zinc tablets or syrup to [NAME OF CHILD] when s/he had diarrhoea? (OPTIONAL) SHOW ZINC TABLET OR SYRUP. DIARZINC	Yes ..... 1 No ..... 2 Don't know 8	|___|
CH24	Units of measurement of your HemoCue device (g/dL or g/L) HBUNIT	g/dL ..... gdl g/L..... gl	|___|___|___|
CH25	[NAME OF CHILD]'s haemoglobin (Hb) in g/dL (±0.1 g/dL) or in g/L (±1g/L) APPLICABLE ONLY IF HB MEASURED IN G/DL: DON'T FORGET THE DECIMAL. Lower limit=2.0g/dL Upper limit=22.0g/dL CHHB		|___|___|. |___|g/dL OR |___|___|___|g/L
CH26	Automatic referral for child with signs of acute malnutrition who is not already enrolled in a nutrition programme: • Child needs to be referred for moderate acute malnutrition (if MUAC<125mm and MUAC≥115 mm and/or WHZ<-2 and WHZ≥-3 and if ENROL equals to 3 or 8). • Child needs to be referred for severe acute malnutrition (if MUAC<115mm and/or WHZ<-3 and/or bilateral pitting oedema is yes and if ENROL equals to 3 or 8). FILL OUT A REFERRAL FORM: ONE SLIP IS FOR THE MOTHER/CAREGIVER AND THE OTHER IS FOR THE HEALTH FACILITY. REFMAM/REFSAM		
CH27	Automatic referral for child who has severe anaemia: • Child needs to be referred for severe anaemia (if Hb<7.0g/dL). FILL OUT A REFERRAL FORM: ONE SLIP IS FOR THE MOTHER/CAREGIVER AND THE OTHER IS FOR THE HEALTH FACILITY. REFANEM		
SECTION IYCF1: Breastfeeding Status of the Child 0-23 months (part 1) THIS SECTION IS TO BE ADMINISTERED TO THE MOTHER OR THE MAIN CAREGIVER WHO IS RESPONSIBLE FOR FEEDING THE CHILD AND THE CHILD SHOULD BE BETWEEN 0 AND 23 MONTHS OF AGE. EXCLUDE IF SENS MODULE 3 (IYCF MODULE) IS NOT INCLUDED. IN MDC SURVEYS, THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (≥24 MONTHS).			
Note	THESE QUESTIONS NEED TO BE ASKED TO THE MOTHER OR THE MAIN CAREGIVER WHO IS RESPONSIBLE FOR FEEDING THE CHILD.		
IF1	Has [NAME OF CHILD] ever been breastfed? EVERBF	Yes ..... 1 No ..... 2 Don't know 8	|___| IF ANSWER IS 2 or 8 GO TO IF4
IF2	How long after birth did you first put [NAME OF CHILD] to the breast? INITBF	Less than one hour ..... 1 Between 1 and 23 hours ..... 2 More than 24 hours ..... 3 Don't know 8	|___|
IF3	Was [NAME OF CHILD] breastfed yesterday during the day or at night?	Yes ..... 1 No 2	|___|

	YESTBF	Don't know..... 8	

SECTION IYCF2: Breastfeeding Status of the Child 0-23 months (part 2)
THIS SECTION IS TO BE ADMINISTERED TO THE MOTHER OR THE MAIN CAREGIVER WHO IS RESPONSIBLE FOR FEEDING THE CHILD AND THE CHILD SHOULD BE BETWEEN 0 AND 23 MONTHS OF AGE. EXCLUDE IF SENS MODULE 3 (IYCF MODULE) IS NOT INCLUDED.

IN MDC SURVEYS, THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (≥24 MONTHS).

IF4	Now I would like to ask you about liquids that [NAME OF CHILD] may have had yesterday during the day and at night. I am interested in whether your child had the item even if it was combined with other foods. Yesterday, during the day or at night, did [NAME] receive any of the following? ASK ABOUT EVERY LIQUID. EVERY QUESTION MUST HAVE AN ANSWER. IF ITEM WAS GIVEN, SELECT 'YES'. IF ITEM WAS NOT GIVEN, SELECT 'NO'. IF CAREGIVER DOES NOT KNOW, SELECT 'DON'T KNOW'.		Yes No DK	
	4A. Plain water WATER	4A.....1	2 8	
	4B. Infant formula, for example [INSERT LOCALLY AVAILABLE BRAND NAMES OF INFANT FORMULA, *ALL TYPES*] INFORM	4B.....1	2 8	
	4C. Milk such as tinned, powdered, or fresh animal milk, for example [INSERT LOCALLY AVAILABLE BRAND NAMES OF TINNED AND POWDERED MILK] MILK	4C.....1	2 8	
	4D. Juice or juice drinks, for example [INSERT LOCALLY AVAILABLE BRAND NAMES OF JUICE DRINKS] JUICE	4D.....1	2 8	
	4E. Clear broth BROTH	4E.....1	2 8	
	4F. Sour milk or yogurt, for example [insert local names] YOGURT	4F.....1	2 8	
	4G. Thin porridge, for example [INSERT LOCAL NAMES] THINPOR	4G.....1	2 8	
	4H. Tea or coffee with milk WHTEACOF	4H.....1	2 8	
	4I. Any other water-based liquids, for example [INSERT OTHER WATER-BASED LIQUIDS AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] (e.g. *sodas, other sweet drinks, herbal infusion, gripe water, clear tea with no milk, black coffee, ritual fluids)* WATLQD	4I.....1	2 8	
IF5	Yesterday, during the day or at night, did [NAME] eat solid or semi-solid (soft, mushy) food? FOOD	Yes.....1 No..... 2 Don't know..... 8		|___|

SECTION IYCF3: Bottle Feeding for the Child 0-23 months
IN MDC SURVEYS, THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (≥24 MONTHS).

IF6	Did [NAME OF CHILD] drink anything from a bottle with a nipple yesterday during the day or at night? BOTTLE	Yes.....1 No.....---..... 2 Don't know..... 8	|___|

SECTION IYCF4: Iron -fortified or Iron-rich Foods for the Child 6-23 months
IN MDC SURVEYS, THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (<6 MONTHS AND

≥24 MONTHS).			
IF7	Now I would like to ask you about some particular foods [NAME OF CHILD] may eat. I am interested in whether your child had the item even if it was combined with other foods. Yesterday, during the day or at night, did [NAME] consume any of the following? ASK ABOUT EVERY ITEM. EVERY QUESTION MUST HAVE AN ANSWER. IF ITEM WAS GIVEN, SELECT 'YES'. IF ITEM WAS NOT GIVEN, SELECT 'NO'. IF CAREGIVER DOES NOT KNOW, SELECT 'DON'T KNOW'. Yes No DK		
	7A. [INSERT COMMON MEAT, FISH, POULTRY AND LIVER/ORGAN FLESH FOODS USED THE LOCAL SETTING] *(e.g. beef, goat, lamb, mutton, pork, rabbit, chicken, duck, liver, kidney, heart)* FLESHFD	7A……..1 2 8	
	7B. [INSERT FBF AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] (e.g. CSB+, WSB+) (IF APPLICABLE) FBF	7B……..1 2 8	
	7C. [INSERT FBF++ AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] *(e.g. CSB++, WSB++)* (IF APPLICABLE) FBFSUPER	7C……..1 2 8	
	7D. [INSERT RUTF PRODUCTS AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] *(e.g. Plumpy'Nut®, eeZeePaste™)* (IF APPLICABLE) SHOW SACHET. RUTF	7D……..1 2 8	
	7E. [INSERT RUSF PRODUCTS AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] *(e.g. Plumpy'Sup®, eeZeeRUSF™)* (IF APPLICABLE) SHOW SACHET. RUSF	7E……..1 2 8	
	7F. [INSERT LNS PRODUCTS AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] *(e.g. Nutributter®, eeZee20™, Plumpy'doz®, eeZee50™)* (IF APPLICABLE) SHOW SACHET / POT. LNS	7F……..1 2 8	
	7G. [INSERT LOCALLY AVAILABLE BRAND NAMES OF *IRON FORTIFIED* INFANT FORMULA] *(e.g. Nan, S26 infant formula)* (IF APPLICABLE) INFORMFE	7G……..1 2 8	
	7H. [INSERT ANY *IRON FORTIFIED* SOLID, SEMI-SOLID OR SOFT FOODS DESIGNED SPECIFICALLY FOR INFANTS AND YOUNG CHILDREN AVAILABLE IN THE LOCAL SETTING THAT ARE DIFFERENT THAN DISTRIBUTED COMMODITIES AND USE LOCALLY AVAILABLE BRAND NAMES] *(e.g. Cerelac, Weetabix)* (IF APPLICABLE) FOODFE	7H……..1 2 8	
IF8	Yesterday, during the day or at night, did [NAME] consume any food to which you added a [INSERT LOCAL NAME FOR MICRONUTRIENT POWDER OR SPRINKLES]	Yes……..1 No…….. 2 Don't know…….. 8	|___|

	like this? (IF APPLICABLE) SHOW MICRONUTRIENT POWDER SACHET. MNP		
ID9	Please take a GPS reading (OPTIONAL) AVOID TAKING IT INSIDE THE HOUSE OR UNDER TREES (TO MAKE IT FASTER). GPS	|_____|	
	Interviewer: I confirm that questionnaire is complete: yes/no		
	Supervisor: I confirm that questionnaire is complete.: yes/no MESSAGE TO INTERVIEWER: DO NOT ANSWER THIS QUESTION.		

WOMEN ANTHROPOMETRY, HEALTH & ANAEMIA
1 questionnaire per woman 15-49 years

THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO ALL ELIGIBLE WOMEN AGED BETWEEN 15 AND 49 YEARS IN THE SELECTED HOUSEHOLD.

No	QUESTION	ANSWER CODES	
SECTION IDENTIFICATION THIS SECTION IS TO BE COMPLETED IN ALL SELECTED HOUSEHOLDS. THIS MODULE IS MANDATORY TO COMPLETE.			
ID1	Camp Name CAMPNAME	|_____|	
ID2	Section Code / Number SECTION		|___|___|___|
ID3	Zone Code / Number ZONE		|___|___|___|
ID4	Block Code / Number BLOCK		|___|___|___|
ID5	Date of interview (dd/mm/yyyy) SURVDAT	Day/Month/Year…..|___|___| /|___|___| / |___|___||___|___|	
ID6	Cluster Number CLUSTER		|___|___|
ID7	Team Number TEAM		|___|___|
ID8	Household Number HH		|___|___|___|

No	QUESTION	ANSWER CODES	
SECTION WM1: Details of the Woman 15-49 years THIS SECTION IS TO BE ADMINISTERED TO ALL ELIGIBLE WOMEN AGED BETWEEN 15 AND 49 YEARS IN THE SELECTED HOUSEHOLDS.			
Note	THESE QUESTIONS NEED TO BE ASKED TO EACH ELIGIBLE WOMAN.		
WM1	ID Number		

	WMID		|___|
WM2	Was consent given for conducting the interview and the measurements? ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW AND THE MEASUREMENTS. WMCONST	Yes.....1 No.....2 Absent.....3	|___| IF ANSWER IS 2 OR 3 STOP HERE
WM3	Name of the woman ONLY WRITE FIRST NAME. WMNAME	|_____|	
WM4	Age of [NAME OF WOMAN] in years ONLY WOMEN BETWEEN 15 AND 49 ARE BEING INTERVIEWED. Lower limit=15 years Upper limit=49 years WMAGE		|___|___|years
SECTION WM2: Anthropometry, Physiological and Anaemia Status of the Woman 15-49 years THIS SECTION IS TO BE ADMINISTERED TO ALL ELIGIBLE WOMEN BETWEEN 15 AND 49 YEARS IN THE SELECTED HOUSEHOLD.			
WM5	Are you pregnant? PREGNANT	Yes.....1 No.....2 Don't know.....8	|___| IF ANSWER IS 2 OR 8 GO TO WM8
WM6	Are you currently enrolled in the ANC programme? ANC	Yes.....1 No.....2 Don't know.....8	|___|
WM7	Are you currently receiving iron-folate pills? SHOW PILL. FEREC	Yes.....1 No.....2 Don't know.....8	|___|
WM8	Are you currently breastfeeding? (OPTIONAL) LACTAT	Yes.....1 No.....2 Don't know.....8	|___| IF ANSWER IS 2 OR 8 GO TO WM10
WM9	Is the child you are breastfeeding younger than 6 months old? (OPTIONAL) LACTATU6	Yes.....1 No.....2 Don't know.....8	|___|
WM10	Are you currently enrolled in the BSFP? (IF APPLICABLE) SHOW COMMODITY/PACKAGING GIVEN IN BSFP. WMBSFP	Yes.....1 No.....2 Don't know.....8	|___|
WM11	[NAME OF WOMAN]'s MUAC in mm (±1mm) or cm (±0.1cm) (OPTIONAL) MEASURE LEFT ARM. APPLICABLE ONLY IF MUAC MEASURED IN CM: DON'T FORGET THE DECIMAL. Lower limit=160 mm Upper limit=500 mm WMMUAC		|___|___|___|mm OR |___|___|. |___| cm

WM12	Units of measurement of your HemoCue device (g/dL or g/L) WMHBUNIT	g/dL .....gdl g/L .....gl	|___|
WM13	[NAME OF WOMAN]'s haemoglobin in g/dL (±0.1 g/dL) or in g/L (±1g/L) APPLICABLE ONLY IF HB MEASURED IN G/DL: DON'T FORGET THE DECIMAL. Lower limit=2.0g/gL Upper limit=22.0g/dL WMHB		|___|___|. |___| g/dL OR |___|___|___| g/L
ID9	Please take a GPS reading (OPTIONAL) AVOID TAKING IT INSIDE THE HOUSE OR UNDER TREES (TO MAKE IT FASTER). GPS	|_____|	
WM14	Automatic referral for woman with signs of acute malnutrition: • Woman needs to be referred for acute malnutrition (if MUAC< [INSERT VALUE] mm) (TO BE INCLUDED ONLY IF MUAC IS MEASURED). FILL OUT A REFERRAL FORM: ONE SLIP IS FOR THE WOMAN AND THE OTHER IS FOR THE HEALTH FACILITY. WMREFMAL		
WM15	Automatic referral for woman who has severe anaemia: • Woman needs to be referred for severe anaemia (if Hb<8.0g/dL). FILL OUT A REFERRAL FORM: ONE SLIP IS FOR THE WOMAN AND THE OTHER IS FOR THE HEALTH FACILITY. WMREFAN		
	Interviewer: I confirm that questionnaire is complete: yes/no		
	Supervisor: I confirm that questionnaire is complete.: yes/no MESSAGE TO INTERVIEWER: DO NOT ANSWER THIS QUESTION.		

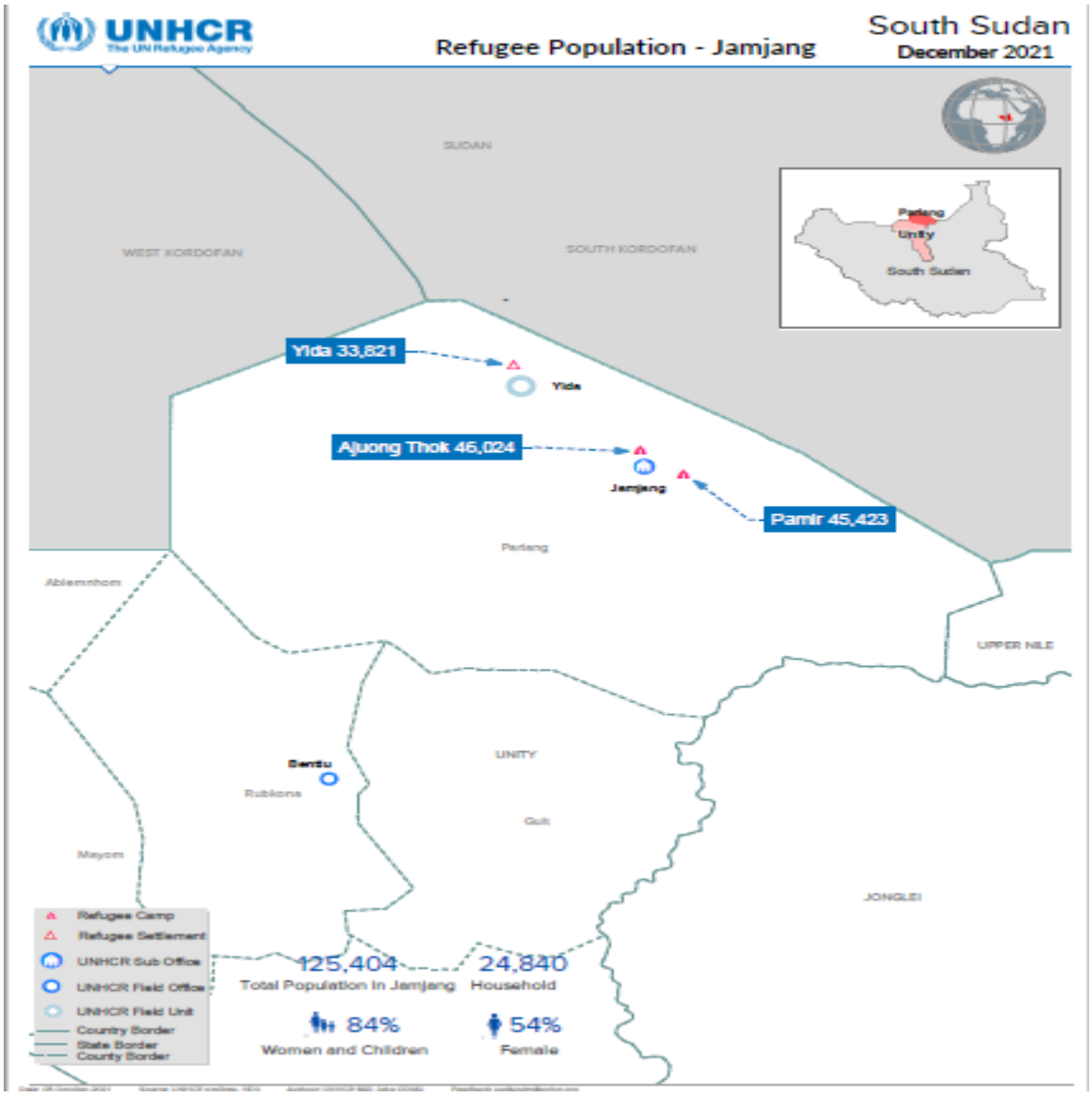
Appendix 4: Events Calendar

Seasons	Religious Holidays	Other Events	Months / Years	Age (M)	Height Range
Groundnut harvest		Global hand-washing day	October 2021	0	
1st Maize harvest			September 2021	1	
Weeding of crops, Last groundnut harvest		World breastfeeding week	August 2021	2	
Sorghum, maize groundnut planting continues			July 2021	3	
Rain starts, Sorghum, maize groundnut planting		World refugee day (20 June)	June 2021	4	
		SPLA day	May 2021	5	
Land preparation start			April 2021	6	
Land preparation start		Celebration of Yusuf Kuwa	March 2021	7	65-70 cm
			February 2021	8	
		New year celebrations	January 2021	9	
	Christmas (25 Dec)	World Aid Day	December 2020	10	71-76 cm
Sorghum harvest			November 2020	11	
Groundnut harvest	Comboni day	Global hand-washing day	October 2020	12	
1st Maize harvest	Bible course		September 2020	13	
Weeding of crops, Last groundnut harvest		World breastfeeding week	August 2020	14	
Sorghum, maize groundnut planting continues			July 2020	15	77-80 cm
Rain starts, Sorghum, maize groundnut planting		World refugee day (20 June)	June 2020	16	
		SPLA day	May 2020	17	
Land preparation start			April 2020	18	
Land preparation start		Celebration of Yusuf Kuwa	March 2020	19	
			February 2020	20	
		New year celebrations	January 2020	21	
	Christmas (25 Dec)	World Aid Day	December 2019	22	81-86 cm
Sorghum harvest			November 2019	23	
Groundnut harvest	Comboni day	Global hand-washing day	October 2019	24	
1st Maize harvest	Bible course		September 2019	25	
Weeding of crops, Last groundnut harvest		World breastfeeding week	August 2019	26	
Sorghum, maize groundnut planting continues			July 2019	27	
Rain starts, Sorghum, maize groundnut planting		World refugee day (20 June)	June 2019	28	87-90 cm
		SPLA day	May 2019	29	
Land preparation start			April 2019	30	
Land preparation start		Celebration of Yusuf Kuwa	March 2019	31	
			February 2019	32	

		New year celebrations	January 2019	33	
	Christmas (25 Dec)	World Aid Day	December 2018	34	
Sorghum harvest			November 2018	35	
Groundnut harvest	Comboni day	Global hand-washing day	October 2018	36	
1st Maize harvest	Bible course		September 2018	37	
Weeding of crops, Last groundnut harvest		World breastfeeding week	August 2018	38	91-99 cm
Sorghum, maize groundnut planting continues			July 2018	39	
Rain starts, Sorghum, maize groundnut planting		World refugee day (20 June)	June 2018	40	
		SPLA day	May 2018	41	
Land preparation start			April 2018	42	
Land preparation start		Celebration of Yusuf Kuwa	March 2018	43	
			February 2018	44	
		New year celebrations	January 2018	45	
	Christmas (25 Dec)	World Aid Day	December 2017	46	
Sorghum harvest			November 2017	47	
Groundnut harvest	Comboni day	Global hand-washing day	October 2017	48	
1st Maize harvest	Bible course		September 2017	49	
Weeding of crops, Last groundnut harvest		World breastfeeding week	August 2017	50	100-110 cm
Sorghum, maize groundnut planting continues		SPLA day	July 2017	51	
Rain starts, Sorghum, maize groundnut planting		World refugee day (20 June)	June 2017	52	
		SPLA day	May 2017	53	
Land preparation start			April 2017	54	
Land preparation start		Celebration of Yusuf Kuwa	March 2017	55	
			February 2017	56	
		New year celebrations	January 2017	57	
Groundnut harvest	Christmas (25 Dec)	World Aid Day	December 2016	58	
Sorghum harvest	Comboni day	Global hand-washing day	November 2016	59	
			October 2016	60	

Dark grey areas are for children not eligible for 6-59 months surveys.

Appendix 5: Pamir and Ajoung Thok location in Unity, South Sudan/Photo Gallary



SENS-Survey Team ready for field work at Ajoung Thok Nutrition site

Enumerators interviewing a respondent on the food security questionnaire.

One of the enumerator taking temperature as part of the Covid19 screening protocol.

Enumerators preparing to take anthropometric measurements