Food Security and Nutrition Assessment in Host Community Final Report

South West:	**Isingiro, Kamwenge, and Kyegwegwa**
Midwest:	**Hoima and Kiryandongo**
West Nile:	**Adjumani, Arua, Moyo, Yumbe, Lamwo and Koboko**

Data Collected: October 2017

GoU **UNHCR** **UNICEF** **WFP**

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ACRONYMS AND ABBREVIATIONS

ANC	Ante Natal Clinic
CDR	Crude Death Rate
CI	Confidence Interval
CHWs	Community Health Workers
CSB	Corn-Soya Blend
DEFF	Design effect
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
HAZ	Height-for-Age z-score
Hb	Haemoglobin
HH	Household
HIS	Health Information System
LLINTs	Long-Lasting Insecticidal Nets
IYCF	Infant and Young Child Feeding
Lpppd	Litres Per Person Per Day
LNS	Lipid-based Nutrient Supplement
MAM	Moderate Acute Malnutrition
MCH	Maternal and Child Heath
MOH	Ministry of Health
MUAC	Middle Upper Arm circumference
NCHS	National Centre for Health Statistics
OTP	Outpatient Therapeutic Programme
PDM	Post Distribution Monitoring
ProGres	UNHCR registration database for refugees
SAM	Severe Acute Malnutrition
SC	Stabilization Centre
SD	Standard Deviation
SFP	Supplementary Feeding Programme
SMART	Standardised Monitoring & Assessment of Relief & Transitions
TFP	Therapeutic Feeding Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Funds
WASH	Water Sanitation and Hygiene

WAZ	Weight-for-Age z-score
WHZ	Weight-for-Height z-score
WFP	World Food Programme

EXECUTIVE SUMMARY

The annual Food Security and Nutrition Assessment was organised and conducted in the districts hosting refugees. This is joint assessment led by MoH in close collaboration by UNHCR, WFP and UNICEF. Data were collected in the month of October 2017. UNHCR provided the funding to support this exercise. The 2017 is the third FSNA covering the 11 districts hosting refugees in the country. Samples were calculated from host population using the 2014 national censues reports. In each district Sub-Counties boardering the settlements were surveyed. The systematic random sampling was used to obtain the sampled households in each surveyed location. Households were selected independently and had equal chance of being selected. Sample sizes were calculated using ENA for SMART software where estimated popualtions from sub counties boardering the settlements were used. The survey teams reached about 2788 households, the total population surveyed was 9,666, including 3,262 children below 5 years were interviewed for the anthropometric and health measurements. 3404 women at reproductive age (15-49 years) were interviewed for the women module. 2788 households were interviewed for the Food Security, WASH and Mosquito net modules and retrospective mortality.

In the subsample of households selected for the survey, anaemia testing was conducted among haemoglobin concentration in children 6-59 months and women 15-49 years; the parents or guardians gave consent for the children. 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 machine. Anthropometric, infant, and young child feeding practices were collected from children, 0-59 months. The survey findings show that acute malnutrition, stunting and anaemia among children and women at reproductive age continue to be the nutritional problems of public health importance in the districts hosting refugees in Uganda.

The younger children up to the age of two years are the most at risk groups. They deserve special attention from the stakeholders providing public health, food-complementary feeding, nutrition and livelihood services. The prevalence of global acute malnutrition is still high and classified as "poor" according to WHO cut off points. The global acute malnutrition ranged from 5.3% in Kiryandongo to 10.8% in Arua. Other locations which had higher prevalence of GAM are Lamwo (10.1%), Kyegegwa (8.5%), Isingiro (8.2%) and Moyo (8.0%). Stunting was found high in three districts; Kyegegwa (36.3%), Hoima (34.5%), Isingiro (30.3%), where it is classified as "critical" based on the WHO cut off points. Confirmation of measles vaccination by card and recall was highest in Kamwenge district (95.1%), this was followed by; Moyo district at 93.1%, Isingiro (93.0%), Yumbe (92.9%), and Kyegegwa (91.8%). High anaemia prevalence exceeding 40% WHO cut off point's classification was found in the districts hosting refugees.

The population mentioned that market (purchase with cash) was the main source of food acquisitions reported by households. Yumbe reported 100% of the households would purchase their food from a market with cash while in Kamwenge 99.2 percentage of the household would purchase their food with cash from a market. Own food production was the second most important food sources among households whereby 90.1% of the households in Moyo district would obtain their food through own productions.

Table 1: Summary Table of Results

	Isingiro Host Community		Kyegwegwa Host Community		Classification of public health significance or target (where applicable)
	Number /Total	% (95% CI)	Number /Total	% (95% CI)	
CHILDREN 6-59 months					
Acute Malnutrition (WHO 2006 Growth Standards)					
Global Acute Malnutrition (GAM)	39/478	8.2 %(6.0 - 11.0)	24/282	8.5 %(5.8 - 12.4)	Critical if ≥ 15%
Moderate Acute Malnutrition (MAM)	37/478	7.7 %(5.7 - 10.5)	22/282	7.8 %(5.2 - 11.5)	
Severe Acute Malnutrition (SAM)	2/478	0.4 %(0.1 - 1.5)	2/282	0.7 %(0.2 - 2.5)	
Oedema				0.4%	
Mid Upper Arm Circumference (MUAC)					
MUAC <125mm and/or oedema	32/250	6.6%(4.7-9.2)	15/285	5.3%(3.2-8.6)	
MUAC 115-124 mm	26/250	5.4%(3.7-7.8)	10/285	3.5%(1.9-6.4)	
MUAC <115 mm and/or Oedema	6/250	1.2%(0.6-2.7)	5/285	1.8%(0.7-4.2)	
Stunting (WHO 2006 Growth Standards)					
Total Stunting	142/468	30.3 %(26.4 - 34.7	102/281	36.3 %(30.9 - 42.1)	Critical if ≥ 40%
Severe Stunting	28/468	6.0 %(4.2 - 8.5)	12/281	4.3 %(2.5 - 7.3)	
Programme coverage					
Measles vaccination with card or recall (9-59 months)	423/455	93.0%(90.2-95.0)	246/268	94.0%(90.5-96.3)	Target of ≥ 95%
Vitamin A supplementation within past 6 months with card or recall	419/482	86.9%(83.6-89.7)	269/285	94.4%(91.0-96.5)	Target of ≥ 90%
Diarrhoea					
Diarrhoea in last 2 weeks	61/482	12.7%(10.0-15.9)	45/285	15.8%(12.0-20.5)	
Anaemia					
Total Anaemia (Hb<11 g/dl)	192/482	39.8%(35.5-44.3)	93/285	32.6%(27.4-38.3)	High if ≥ 40%
Mild (Hb 10-10.9)	130/482	27.0%(23.2-31.1)	51/285	17.9%(13.9-22.8)	
Moderate (Hb 7-9.9)	48/482	10.0%(7.65-13.0)	37/285	13.0%(9.5-17.4)	
Severe (Hb<7)	14/482	2.9%(1.7-4.8)	5/285	1.6%(0.7-4.2)	
CHILDREN 0-23 months					
IYCF indicators					
Timely initiation of breastfeeding	183/204	89.7%(84.7-93.2)	97/120	80.8%(72.8-86.9)	
Exclusive breastfeeding under 6 months	59/76	77.6%(66.8-85.7)	27/33	81.8%(64.6-91.7)	
Consumption of iron-rich or iron-fortified	163/165	98.8%(95.3-99.7)	90/94	95.7%(89.1-98.4)	

foods					
Bottle feeding	63/241	26.1%(21.0-32.1)	15/127	11.8%(7.2-18.7)	
WOMEN 15-49 years					
Anaemia (non-pregnant)					
Total Anaemia (Hb<12 g/dl)	119/474	25.1%(21.4-29.2)	55/227	24.2%(19.1-30.2)	High if ≥ 40%
Mild (Hb 11-11.9)	59/474	12.4%(9.8-15.7)	32/227	14.1%(10.1-19.3)	
Moderate (Hb 8-10.9)	44/474	9.3%(7.0-12.3)	19/227	8.4%(5.4-12.8)	
Severe (Hb<8)	16/474	3.4%(2.1-5.4)	4/227	1.8%(0.7-4.6)	
FOOD SECURITY					
Negative household coping strategies					
Proportion of households reporting using none of the coping strategies over the past month	123/479	25.7%(22.0-29.8)	170/319	53.3%(47.8-58.7)	Critical Range: ≤49%
Household dietary diversity					
Average HDDS (mean, SD/ range)	4.5 Mean, 1.7 SD		5.3 Mean, 2.0 SD		
WASH					
Water quality					
Proportion of households using improved drinking water source	166/479	34.7%(30.5-39.0)	161/319	50.5%(45.0-55.9)	
Water quantity					
Proportion of households that use:					
≥ 20 lpppd	180/479	37.6%(33.3-42.0)	56/319	17.6%(13.8-22.1)	Target of ≥20 lpppd
15 - <20 lpppd	61/479	12.7(10.0-16.0)	30/319	9.4%(6.6-13.1)	
<15 lpppd	238/479	49.7(45.2-54.2)	233/319	73.0%(67.9-77.6)	
Satisfaction with drinking water supply					
Proportion of households that say they are satisfied with drinking water supply	194/479	40.5%(36.2-45.0)	110/319	34.5%(29.5-39.9)	
Safe excreta disposal					
Proportion of households that use:					
An improved excreta disposal facility (improved toilet facility, 1 household)	215/479	44.9%(40.5-49.4)	29/319	9.1%(6.4-12.8)	
A shared family toilet (improved toilet facility, 2 households)	5/479	1.0%(0.4-2.5)	7/319	2.2%(1.0-4.5)	
A communal toilet (improved toilet facility, 3 households or more)	3/479	0.6%(0.2-1.9)	4/319	1.3%(0.5-3.3)	
An unimproved toilet (unimproved toilet facility or public toilet)	256/479	53.4%(49.0-57.9)	279/319	87.5(83.3-90.7)	

MOSQUITO NET COVERAGE					
Mosquito net ownership					
Proportion of households owning at least one LLINT	415/479	86.6%(83.3-89.4)	142/319	44.5%(39.1-50.0)	
Average number of persons per LLINT (mean)		2.0		2.4	
Mosquito Net Utilisation					
Proportion of household members (all ages) who slept under an LLINT	1699/2056	82.6%(80.9-84.2)	603/984	61.3%(58.2-64.3)	Target of >80%
Proportion of children 0-59 months who slept under an LLINT	320/371	86.3%(82.4-89.4)	158/253	62.5%(56.2-68.4)	
Proportion of pregnant women who slept under an LLINT	64/73	87.7(77.8-93.5)	41/51	80.4%(66.9-90.2)	

	Hoima Host Community		Kamwenge Host Community		Kiryandongo Host Community		Classification of public health significance or target (where applicable)
	Number /Total	% (95% CI)	Number /Total	% (95% CI)	Number /Total	% (95% CI)	
CHILDREN 6-59 months							
Acute Malnutrition (WHO 2006 Growth Standards)							
Global Acute Malnutrition (GAM)	22/305	7.2 %(4.8 - 10.7)	19/287	6.6 %(4.3-10.1	15/281	5.3 %(3.3 - 8.6)	Critical if ≥ 15%
Moderate Acute Malnutrition (MAM)	20/305	6.6 %(4.3 - 9.9)	17/287	5.9 %(3.7 - 9.3	15/281	5.3 %(3.3 - 8.6)	
Severe Acute Malnutrition (SAM)	2/305	0.7 %(0.2 - 2.4)	2/287	0.7 %(0.2 - 2.5)	0/281	0.0 %(0.0 - 1.3)	
Oedema							
Mid Upper Arm Circumference (MUAC)							
MUAC <125mm and/or oedema	28/306	9.2%(6.4-12.9)	9/287	3.1%(1.6-5.9)	23/281	8.2%(5.5-12.0)	
MUAC 115-124 mm	26/306	8.5%(5.8-12.2)	9/287	3.1%(1.6-5.9)	22/281	7.8%(5.2-11.6)	
MUAC <115 mm and/or Oedema	2/306	0.7%(0.2-2.6)	0/287	0%(0-0)	1/281	0.4%(0.0-2.5)	
Stunting1 (WHO 2006 Growth Standards)							
Total Stunting	106/303	35.0%(29.8-40.5)	81/285	28.4 %(23.5-33.9)	72/277	26.0 %(21.2-31.5)	Critical if ≥ 40%
Severe Stunting	15/303	5.0%(3.0 - 8.0)	11/285	3.9 %(2.2 - 6.8)	9/277	3.2 %(1.7 - 6.1)	
Programme coverage							
Measles vaccination with card or recall (9-59 months)	242/282	85.5%(80.9-89.2)	251/263	95.1%(91.7-97.1)	229/254	89.1%(84.7-92.4)	Target of ≥ 95%
Vitamin A supplementation within past 6 months with card or recall	250/306	81.7%(77.0-85.6)	281/287	97.9%(95.4-99.1)	255/281	90.7%(86.7-93.6)	Target of ≥ 90%
Diarrhoea							
Diarrhoea in last 2 weeks	35/306	11.4%(8.3-15.5)	21/287	7.3%(4.8-11.0)	46/281	16.4%(12.5-21.2)	
Anaemia							
Total Anaemia (Hb<11 g/dl)	95/306	31.0%(26.1-36.5)	109/287	38.0%(32.5-43.7)	140/281	49.8%(44.0-55.7)	High if ≥ 40%
Mild (Hb 10-10.9)	53	17.3%(13.5-22.0)	51/287	17.8%(13.8-22.6)	84/281	29.9%(24.8-35.5)	
Moderate (Hb 7-9.9)	38	12.4%(9.2-16.6)	55/287	19.2%(15.0-24.1)	52/281	18.5%(14.4-23.5)	
Severe (Hb<7)	4	1.3%(0.5-3.4)	3/287	1.0%(0.3-3.2)	4/281	1.4%(0.5-3.7)	
CHILDREN 0-23 months							
IYCF indicators							
Timely initiation of breastfeeding	115/129	89.1%(82.5-93.5)	122/130	93.8%(88.1-96.9)	91/105	86.7%(78.7-92.0)	

[1] Note that z-scores for height-for-age require accurate ages to within two weeks (CDC/WFP: A manual: Measuring and Interpreting Mortality and Malnutrition, 2005).

Exclusive breastfeeding under 6 months	29/32	90.6%(74.2-97.0)	27/36	75(58.2-86.6)	20/26	76.9%(56.7-89.4)	
Consumption of iron-rich or iron-fortified foods	111/118	94.1%(88.0-97.2)	99/105	94.3%(87.8-97.4)	110/114	96.5%(91.0-98.7)	
Bottle feeding	27/150	18%(12.6-25.0)	29/141	20.6%(14.7-28.1)	33/140	23.6%(17.2-31.3)	
WOMEN 15-49 years							
Anaemia (non-pregnant)							
Total Anaemia (Hb<12 g/dl)	49/208	23.6%(18.3-29.8)	51/246	20.7%(16.1-26.3)	58/140	41.4%(33.5-49.8)	High if ≥ 40%
Mild (Hb 11-11.9)	31/208	14.9%(10.7-20.4)	29/246	11.8%(8.3-16.5)	25/140	17.9(12.3-25.1)	
Moderate (Hb 8-10.9)	15/208	7.2%(4.4-11.6)	16/246	6.5%(4.0-10.4)	29/140	20.7%(14.8-28.3)	
Severe (Hb<8)	3/208	1.4%(0.5-4.4)	6/246	2.4%(1.1-5.3)	4/140	2.9%(1.1-7.4)	
FOOD SECURITY							
Negative household coping strategies							
Proportion of households reporting using none of the coping strategies over the past month		57.0%(51.2-62.7)		73.5%(68.1-78.3)		80.5%(74.6-85.2)	Critical Range: ≤49%
Average HDDS (mean, SD/ range)	4.8 Mean, 1.8 SD		5.7 Mean, 2.2 SD		4.8 Mean, 2.2 SD		Max HDDS is 12
WASH							
Water quality							
Proportion of households using improved drinking water source	152/284	53.5%(47.7-59.3)	201/287	70.0%(64.5-75.1)	158/215	73.5%(67.2-79.0)	
Water quantity							
Proportion of households that use:							
≥ 20 lpppd	89/284	31.3%(26.2-37.0)	119/287	41.5%(35.9-47.3)	82/215	38.1%(31.9-44.8)	Target of ≥20 lpppd
15 - <20 lpppd	28/284	9.9%(6.9-13.9)	40/287	13.9%(10.4-18.5)	25/215	11.6%(8.0-16.7	
<15 lpppd	167/284	58.8%(53.0-64.4)	128/287	44.6%(38.9-50.4)	108/215	50.2%(43.6-56.9)	
Satisfaction with drinking water supply							
Proportion of households that say they are satisfied with drinking water supply	73/284	25.7%(20.9-31.1)	159/287	55.4%(49.6-61.1)	54/215	25.1%(19.8-31.4)	
Safe excreta disposal							
Proportion of households that use:							
An improved excreta disposal facility (improved toilet facility, 1 household)	19/284	6.7%(4.3-10.3)	113/287	39.4%(33.9-45.2)	58/215	27.0(21.5-33.3)	
A shared family toilet (improved toilet	0/284	0%(0-0)	12/287	4.2%(2.4-7.2)	6/215	2.8%(1.3-6.1)	

facility, 2 households)							
A communal toilet (improved toilet facility, 3 households or more)	0/284	0%(0-0)	8/287	2.8%(1.4-5.5)	9/215	4.2%(2.3-7.9)	
An unimproved toilet (unimproved toilet facility or public toilet)	265/284	93.3%(89.7-95.7)	154/287	53.7%(47.9-59.4)	142/215	66.0%(59.4-72.1)	
MOSQUITO NET COVERAGE							
Mosquito net ownership							
Proportion of households owning at least one LLINT	96/284	33.8%(28.5-39.5)	261/287	90.9%(87.0-93.8)	88/215	40.9%(34.5-47.6)	
Average number of persons per LLINT (mean)		2.0		2.1		2.7	
Mosquito Net Utilisation							
Proportion of household members (all ages) who slept under an LLINT	425/733	58.0%(54.4-61.5)	1049/1211	86.6%(84.6-88.4)	347/708	49.0%(45.3-52.7)	Target of >80%
Proportion of children 0-59 months who slept under an LLINT	96/146	65.8%(57.5-73.4)	250/289	86.5%(82.0-90.2)	99/175	56.6%(48.9-64.0)	
Proportion of pregnant women who slept under an LLINT	18/24	75.0%(53.3-90.2)	37/42	88.1%(74.4-96.0)	12/19	63.2%(38.4-83.7)	

	Adjumani Host Community		Arua Host Community		Koboko Host Community		Classification of public health significance or target (where applicable)
	Number /Total	% (95% CI)	Number /Total	% (95% CI)	Number /Total	% (95% CI)	
CHILDREN 6-59 months							
Acute Malnutrition (WHO 2006 Growth Standards)							
Global Acute Malnutrition (GAM)	17/296	5.7 %(3.6 - 9.0)	30/278	10.8 %(7.7-15.0)	16/221	7.2 %(4.5 - 11.4)	Critical if ≥ 15%
Moderate Acute Malnutrition (MAM)	16/296	5.4 %(3.4 - 8.6)	28/278	10.1 %(7.1 - 14.2)	15/221	6.8 %(4.2 - 10.9	
Severe Acute Malnutrition (SAM)	1/296	0.3 %(0.1 - 1.9)	2/278	0.7 %(0.2 - 2.6)	1/221	0.5 %(0.1 - 2.5	
Oedema							
Mid Upper Arm Circumference (MUAC)							
MUAC <125mm and/or oedema	22/296	7.4%(4.9-11.0)	15/278	5.4%(3.3-8.8)	6/221	2.7%(1.2-5.9)	
MUAC 115-124 mm	20/296	6.8%(4.4-10.2)	14/278	5.0%(3.0-8.3)	6/221	2.7%(1.2-5.9)	
MUAC <115 mm and/or Oedema	2/296	0.7%(0.2-2.7)	1/278	0.4%(0.1-2.5)	0/221	0%(0-0)	
Stunting2 (WHO 2006 Growth Standards)							
Total Stunting	18/296	6.1 %(3.9 - 9.4)	67/278	24.1 %(19.4-29.5)	48/221	21.7 %(16.8-27.6)	Critical if ≥ 40%
Severe Stunting	3/296	1.0 %(0.3 - 2.9)	6/278	2.2 %(1.0 - 4.6)	5/221	2.3 %(1.0 - 5.2)	
Programme coverage							
Measles vaccination with card or recall (9-59 months)	250/280	89.3%(85.1-92.4)	235/263	89.4%(85.0-92.6)	182/206	88.3%(83.2-92.1)	Target of ≥ 95%
Vitamin A supplementation within past 6 months with card or recall	272/296	91.9%(88.2-94.5)	259/278	93.2%(89.5-95.6)	201/221	91.0%(86.4-94.1)	Target of ≥ 90%
Diarrhoea							
Diarrhoea in last 2 weeks	37/296	12.5%(9.2-16.8)	44/278	15.8%(12.0-20.6)	18/221	8.1%(5.2-12.6)	
Anaemia							
Total Anaemia (Hb<11 g/dl)	98/296	44.3%(37.9-51.0)	132/278	47.5%(41.7-53.4)	71/221	32.1%(26.3-38.6)	High if ≥ 40%
Mild (Hb 10-10.9)	65/296	29.4%(23.8-35.8)	63/278	22.7%(18.1-28.0)	48/221	21.7%(16.8-27.7)	
Moderate (Hb 7-9.9)	29/296	13.1%(9.3-18.3)	62/278	22.3%(17.8-27.6)	19/221	8.6%(5.5-13.1)	
Severe (Hb<7)	4/296	1.8%(0.7-4.7)	7/278	2.5%(1.2-5.2)	4/221	1.8%(0.7-4.7)	
CHILDREN 0-23 months							
IYCF indicators							
Timely initiation of breastfeeding	109/141	77.3%(69.6-83.5)	82/108	75.9%(66.9-83.1)	57/81	70.4%(59.5-79.3)	

[2] Note that z-scores for height-for-age require accurate ages to within two weeks (CDC/WFP: A manual: Measuring and Interpreting Mortality and Malnutrition, 2005).

Exclusive breastfeeding under 6 months	40/41	97.6%(84.2-99.7)	25/26	96.2%(76.4-99.5)	8/11	72.7%(39.8-91.5)	
Consumption of iron-rich or iron-fortified foods	106/120	88.3%(81.2-93.0)	89/97	91.8%(84.3-95.8)	77/81	95.1%(87.5-98.1)	
Bottle feeding	25/161	15.5%(10.7-22.0)	22/123	17.9%(12.1-25.7)	18/92	19.6%(12.7-29.0)	
WOMEN 15-49 years							
Anaemia (non-pregnant)							
Total Anaemia (Hb<12 g/dl)	94/284	33.1%(27.9-38.8)	83/259	32.0%(26.6-38.0)	56/193	29.0%(23.0-35.8)	High if ≥ 40%
Mild (Hb 11-11.9)	41/284	14.4%(10.8-19.03)	61/259	23.6%(18.8-29.1)	33/193	17.1%(12.4-23.1)	
Moderate (Hb 8-10.9)	30/284	10.6%(7.5-14.7)	10/259	3.9%(2.1-7.0)	18/193	9.3%(5.9-14.3)	
Severe (Hb<8)	23/284	8.1%(5.4-11.9)	12/259	4.6%(2.6-8.0)	5/193	2.6%(1.1-6.1)	
FOOD SECURITY							
Food distribution							
Negative household coping strategies							
Proportion of households reporting using none of the coping strategies over the past month	213/311	68.5%(63.1-73.4)	184/252	73.0%(67.2-78.1)	51/90	56.7%(46.2-66.5)	Critical Range: ≤49%
Household dietary diversity							
Average HDDS (mean, SD/ range)	3.6 Mean, 1.6 SD		5.8 Mean, 2.2 SD		5.5 Mean, 2.2 SD		Max HDDS is 12
WASH							
Water quality							
Proportion of households using improved drinking water source	311/311	100%	191/252	75.8%(70.1-80.7)	67/90	74.4%(64.4-82.4)	
Water quantity							
Proportion of households that use:							
≥ 20 lpppd	178/311	57.2%(51.7-62.6)	88/252	34.9%(29.3-41.0)	24/90	26.7%(18.5-36.8)	Target of ≥20 lpppd
15 - <20 lpppd	42/311	13.5%(10.1-17.8)	18/252	7.1%(4.5-11.1)	11/90	12.2%(6.9-20.8)	
<15 lpppd	91/311	29.3%(24.5-34.6)	146/252	57.9%(51.7-63.9)	55/90	61.1%(50.6-70.6)	
Satisfaction with drinking water supply							
Proportion of households that say they are satisfied with drinking water supply	262/311	84.2%(79.8-87.9)	111/252	44.0%(38.0-50.3)	57/90	63.3%(52.9-72.7)	
Safe excreta disposal							
Proportion of households that use:							
An improved excreta disposal facility (improved toilet facility, 1 household)	207/311	66.6%(61.1-71.6)	81/252	32.1%(26.7-38.2)	33/90	36.7%(27.3-47.1)	

A shared family toilet (improved toilet facility, 2 households)	14/311	4.5%(2.7-7.5)	21/252	8.3%(5.5-12.5)	13/90	14.4%(8.5-23.4)	
A communal toilet (improved toilet facility, 3 households or more)	6/311	1.9%(0.9-4.2)	20/252	7.9%(5.2-12.05)	5/90	5.6%(2.3-12.7)	
An unimproved toilet (unimproved toilet facility or public toilet)	84/311	27.0%(22.4-32.2)	130/252	51.6%(45.4-57.7)	39/90	43.3%(33.5-53.8)	
MOSQUITO NET COVERAGE							
Mosquito net ownership							
Proportion of households owning at least one LLINT	248/311	79.7%(74.9-83.9)	131/252	52.0%(45.8-58.1)	48/90	53.3%(43.0-63.4)	
Average number of persons per LLINT (mean)		2.3		2.4		2.7	
Mosquito Net Utilisation							
Proportion of household members (all ages) who slept under an LLINT	1294/1530	84.6%(82.7-86.3)	662/855	77.4%(74.5-80.1)	276/370	74.6%(69.9-78.8)	Target of >80%
Proportion of children 0-59 months who slept under an LLINT	313/357	87.7%(83.8-90.9)	119/147	80.9%(73.7-86.9)	57/70	81.4%(70.3-89.7)	
Proportion of pregnant women who slept under an LLINT	29/31	93.5%(78.6-99.2)	21/23	91.3%(71.9-98.9)	7/11	63.6%(30.8-89.1)	

	Moyo Host Community		Lamwo Host Community		Yumbe Host Community		Classification of public health significance or target (where applicable)
	Number /Total	% (95% CI)	Number /Total	% (95% CI)	Number /Total	% (95% CI)	
CHILDREN 6-59 months							
Acute Malnutrition (WHO 2006 Growth Standards)							
Global Acute Malnutrition (GAM)	20/249	8.0 %(5.3 - 12.1)	27/268	10.1 %(7.0 - 14.3)	30/309	9.7 %(6.9 - 13.5)	Critical if ≥ 15%
Moderate Acute Malnutrition (MAM)	18/249	7.2 %(4.6 - 11.1)	25/268	9.3 %(6.4 - 13.4)	28/309	9.1 %(6.3 - 12.8)	
Severe Acute Malnutrition (SAM)	2/249	0.8 %(0.2 - 2.9)	2/268	0.7 %(0.2 - 2.7)	2/309	0.6 %(0.2 - 2.3)	
Oedema							
Mid Upper Arm Circumference (MUAC)							
MUAC <125mm and/or oedema	14/249	5.6%(3.4-9.3)	14/268	5.2%(3.1-8.6)	15/309	4.9%(2.9-7.9)	
MUAC 115-124 mm	13/249	5.2%(3.1-8.8)	12/268	4.5%(2.6-7.7)	15/309	4.9%(2.9-7.9)	
MUAC <115 mm and/or Oedema	1/249	0.4%(0.1-2.8)	2/268	0.7%(0.2-2.9)	0/309	0%(0-0)	
Stunting39 (WHO 2006 Growth Standards)							
Total Stunting	64/237	27.0 %(21.8 - 33.0	49/268	18.3 %(14.1 - 23.3)	60/304	19.7 %(15.7-24.6)	Critical if ≥ 40%
Severe Stunting	16/237	6.8 %(4.2 - 10.7	3/268	1.1 %(0.4 - 3.2)	8/304	2.6 %(1.3 - 5.1)	
Programme coverage							
Measles vaccination with card or recall (9-59 months)	215/231	93.1(89.0-95.7)	230/258	88.8%(84.3-92.1)	273/292	92.9%(89.3-95.3)	Target of ≥ 95%
Vitamin A supplementation within past 6 months with card or recall	229/249	92.0%(87.9-94.8)	257/268	95.9%(92.7-97.7)	290/309	93.9%(90.6-96.0)	Target of ≥ 90%
Diarrhoea							
Diarrhoea in last 2 weeks	26/249	10.4%(7.2-14.9)	49/268	18.3%(14.1-23.4)	30/309	9.7%(6.9-13.6)	
Anaemia							
Total Anaemia (Hb<11 g/dl)	104/249	41.8%(35.8-48.0)	133/268	49.6%(43.7-55.6)	125/309	40.5%(35.1-46.0)	High if ≥ 40%
Mild (Hb 10-10.9)	46/249	18.5%(14.1-23.8)	67/268	25%(20.2-30.5)	77/309	24.9%(20.4-30.1)	
Moderate (Hb 7-9.9)	54/249	21.7%(17.0-27.3)	60/268	22.4%(17.8-27.8)	42/309	13.6%(10.2-17.9)	
Severe (Hb<7)	4/249	1.6%(0.6-4.2)	6/268	2.2%(1.0-4.9)	6/309	1.9%(0.9-4.3)	
CHILDREN 0-23 months							
IYCF indicators							
Timely initiation of breastfeeding	84/93	90.3%(82.4-94.9)	73/85	85.9%(76.7-91.8)	84/127	66.1%(57.5-73.9)	

[3] Note that z-scores for height-for-age require accurate ages to within two weeks (CDC/WFP: A manual: Measuring and Interpreting Mortality and Malnutrition, 2005).

Exclusive breastfeeding under 6 months	17/22	77.3%(55.0-90.4)	9/12	75%(43.3-92.2)	28/32	87.5%(70.6-95.3)	
Consumption of iron-rich or iron-fortified foods	81/85	95.3%(88.1-98.2)	83/91	91.2%(83.3-95.6)	92/99	92.9%(85.8-96.6)	
Bottle feeding	20/107	18.7%(12.4-27.3)	15/103	14.6%(8.9-22.8)	9/131	6.9%(3.6-12.7)	
WOMEN 15-49 years							
Anaemia (non-pregnant)							
Total Anaemia (Hb<12 g/dl)	46/159	28.9%(22.4-36.5)	73/209	34.9%(28.8-41.7)	74/247	30.0%(24.6-36.0)	High if ≥ 40%
Mild (Hb 11-11.9)	20/159	12.6%(8.2-18.7)	42/209	20.1%(15.2-26.1)	45/247	18.2%(13.9-23.5)	
Moderate (Hb 8-10.9)	23/159	14.5%(9.8-20.9)	27/209	12.9%(9.0-18.2)	25/247	10.1%(6.9-14.6)	
Severe (Hb<8)	3/159	1.9%(0.6-5.7)	4/209	1.9%(0.7-5.0)	4/247	1.6%(0.6-4.2)	
FOOD SECURITY							
Negative household coping strategies							
Proportion of households reporting using none of the coping strategies over the past month	60/79	75.9%(65.3-84.1)	45/211	21.3%(16.3-27.4)	199/261	76.2%(70.7-81.0)	Critical Range: ≤49%
Household dietary diversity							
Average HDDS (mean, SD/ range)	5.1 Mean, 2.0 SD		3.9 Mean, 1.8 SD		4.9 Mean, 1.9 SD		Max HDDS is 12
WASH							
Water quality							
Proportion of households using improved drinking water source	79/79	100%	210/211	99.5%(96.7-100.0)	184/261	70.5%(64.7-75.7)	
Water quantity							
Proportion of households that use:							
≥ 20 lpppd	31/79	39.2%(29.1-50.4)	147/211	69.7%(63.1-75.5)	81/261	31.0%(25.7-36.9)	Target of ≥20 lpppd
15 - <20 lpppd	14/79	17.7%(10.7-27.8)	35/211	16.6%(12.1-22.2)	29/261	11.1%(7.8-15.5)	
<15 lpppd	34/79	43.0%(32.5-54.2)	29/211	13.7%(9.7-19.1)	151/261	57.9%1(51.8-63.7)	
Satisfaction with drinking water supply							
Proportion of households that say they are satisfied with drinking water supply	74/79	93.7%(85.6-97.4)	162/211	76.8%(70.6-82.0)	98/261	37.5%(31.9-43.6)	
Safe excreta disposal							
Proportion of households that use:							
An improved excreta disposal facility (improved toilet facility, 1 household)	27/79	34.2%(24.5-45.3)	66/211	31.3%(25.4-37.9)	33/261	12.6%(9.1-17.3)	

A shared family toilet (improved toilet facility, 2 households)	9/79	11.4%(6.0-20.5)	16/211	7.6%(4.7-12.0)	5/261	1.9%(0.8-4.5)	
A communal toilet (improved toilet facility, 3 households or more)	1/79	1.3%(0.2-8.5)	26/211	12.3%(8.5-17.5)	0/261	0%(0-0)	
An unimproved toilet (unimproved toilet facility or public toilet)	42/79	53.2%(42.1-63.9)	103/211	48.8%(42.1-55.6)	223/261	85.4%(80.6-89.2)	
MOSQUITO NET COVERAGE							
Mosquito net ownership							
Proportion of households owning at least one LLINT	61/79	77.2%(66.6-85.2)	189/211	89.6%(84.7-93.0)	120/261	46.0%(40.0-52.1)	
Average number of persons per LLINT (mean)		1.5		1.2		1.1	
Mosquito Net Utilisation							
Proportion of household members (all ages) who slept under an LLINT	379/505	75.0%(71.1-78.6)	868/1021	85.0%(82.7-87.1)	843/1139	74.0%(71.4-76.5)	Target of >80%
Proportion of children 0-59 months who slept under an LLINT	119/167	71.3%(63.8-77.9)	247/434	56.9%(52.1-61.6)	143/309	46.3%(40.6-52.0)	
Proportion of pregnant women who slept under an LLINT	12/15	80.0%(51.9-95.7)	23/46	50.0%(34.9-65.1)	22/31	70.9%(51.9-85.8)	

BACKGROUND

Current Status

Uganda, as at the end of October 2017, has been hosting about 1.4 million refugees across 12 districts in Uganda. The refugees live alongside their Ugandan hosts in the settlements. The total refugees and asylum seekers in each district hosting refugees was: 226,449 Adjumani, 222,639 Arua, 101,333 Kampala, 57,202 Kiryandongo, 27,583 Kyegegwa, 35,791 Hoima, 123,985 Moyo, 108,255 Isingiro, 75,852 Kamwenge, 285,969 Yumbe and 30,292 Lamwo and 4,441 Koboko.

Social Economic Status

Uganda has increased its efforts to attain its Sustainbale Development Goals (SDGs). One of the SDG that the country aims to achieve is to increase the proportion of the population with sustainable access to an improved water source in both urban and rural areas. In Uganda on average 78% of the population, use an improved source of drinking water.

Anthropometric, Anaemia and Health Measurements

Weight-for-height, which describes current nutritional status; a child who is below -2 SD from the reference median for weight-for-height is considered too thin for his or her height, or wasted. Overall, 4 percent of children are wasted and 1 percent are severely wasted (below -3 SD).

Stunting which is a measure of linear growth is monitoried in the country through Height-for-age. A child who is below -2 SD from the reference median for height-for-age is considered short for his or her age, or stunted. The data show that 29 percent of children under 5 are considered to be short for their age or stunted (below -2 SD), and 9 percent are severely stunted (below -3 SD).

Child health programmes are implemented in the country; this includes; immunization, vitamin A supplementation and deworming programmes. Some of the achievements includes: children received BCG vaccination, 95% the first dose of DPT-HepB-Hib, 95% the first (non-birth) dose of polio, and 87% the first dose of the pneumococcal vaccine. 80% of children received a measles vaccination. Furthermore, 79% of children received the recommended 3 doses of DPT-HepB-Hib, 66% the three doses of polio, and 64% the three doses of the pneumococcal vaccine.

Maternal Child Health and Nutrition Programme

Significant achievements have been made in redcuing the fertility rate in the country. The recent data suggest that fertility in the country has declined from 7.4 children per woman in 1988-89 to 5.4 children per woman in 2016. Infant and under 5year's mortality rates have significantly improved in Uganda. Recent data indicate that the infant mortality rate is 43 deaths per 1,000 live births and the overall under-5 mortality rate is 64 deaths per 1,000 live births. Women at reproductive age (15-49) who had a live birth are assisted by skilled health workers; data suggest that the proportional of women receiving antenatal care from a skilled provider is 97.3%. The MoH through the Local District Authority implements the integrated management of acute malnutrition in the districts hotsing refugees. A pporoximately 12000-national and refugee children were treated for severe and moderate acute malnutrition, with a cure rate of 78 per cent in the ITC and 76% in the SFP.

Water, Sanitation and Hygiene

The main reliable sources of water to most areas in the districts hosting refugees as is with other rural sectors is the public boreholes which account for about 43%, while also about 26% of population in the rural sector fetch drinking water from from an un-improved water sources. It is also worth to note that approximately 14% fetch drinking water from unprotected dug wells. In

this context, an improved water sources are assumed to be of a suitable quality: a piped water supply into the home or a yard/plot, a public tap/standpipe, a tube well/borehole (with pump), a protected dug well, a protected spring and rainwater collection. On the sanitation side, the coverage and use of improved single household owned toilet that is not shared which is usually the easiest to keep clean is still low in the country, estimated at around 16%. In this assessment, an improved toilet is the one that hygienically separates human excreta from human contact. The types of technology that is likely to meet this criterion are: flush to piped sewer system; flush to septic tank; pour flush to pit; composting toilet; VIP latrine; pit latrine with a floor / slab.

Distribution and utilization of Long Lasting Treated Insecticide Treated Nets (LLITN)
People sleeping under LLITNs are protected against mosquito bites, henceforth, when more than 80% of the population sleeps under LLITN it can reduce the prevalence of malaria in the community. Overall, in Uganda, approximately about 94% of the households own at least one LLINT, and 62% of households have at least one LLITN for every two persons who sleep in the houses. Data also suggest that 69% of the total population, 74% of the children below 5 years and 75% pregnant women sleep under LLINT and 45% of pregnant women received two or more doses of intermittent preventive treatment for malaria during their ANC visits.

General Objectives of the Survey

The overall objective of the FSNA is to assess the general nutrition, food security and health status of refugees and formulate workable recommendations for appropriate nutritional and public health interventions.

Specific Primary Objectives:

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 assess the prevalence of anaemia among children aged 6-59 months and non- pregnant women of reproductive age (15- 49 years).
d. To assess the two-week period prevalence of diarrhoea, fever and ARI among children 6-59 months.
e. To determine the coverage of vitamin A supplementation in the last six months among children 6-59 months.
f. To determine the coverage of deworming in the last six months among children 24-59 months.
g. To determine the coverage of measles vaccination in children 9- 59 months.
h. To investigate IYCF practices among children 0-23 months.
i. To determine the ownership and utilization of mosquito nets (all types and long- lasting insecticidal nets (LLINs)) in households especially children 0-59 months, and pregnant women
j. To determine the population's access to, and use of improved water, sanitation and hygiene facilities.
k. To determine the coverage of ration cards and the duration the general food ration lasts for recipient households.
l. To determine the extent to which negative coping strategies are used by households.
m. To assess household dietary diversity.
n. To identify priority areas in programme implementation and propose informed recommendations for future programming to both the government and Host Community.
o. To assess crude and under-five mortality rates in the camps in the last three months.

Secondary Objectives

p. To determine the coverage of enrollment in selective feeding programmes (SC, OTP, BSFP and TSFP) for children 6-59 months.
q. To determine enrolment into Antenatal Care clinic and coverage of iron-folic acid supplementation in pregnant women.
r. To assess the nutritional status of women at reproductive age (pregnant women excluded) measuring mid upper arm circumference.

Methodology

Th survey covered 11 districts hosting refugees in Uganda, the cross-sectional survey were conducted in each designated settlement and host population using systematic random sampling. The sampling unit were the houses which were pre-identified in each block, a separate list was prepared and the houses were verified and labelled by the Village Health Teams (VHTs). To reduce non-response rate and ensure results are representative of people actually living in the settlements at the time of the survey, unoccupied houses, as verified through neighbours and refugee leadership hierarchy were not included in the sampling frame. The VHTs in the settlements were allocated specific number of households to cover during outreaches.

Sampling Procedure: Selecting households and target individual samples

Using the list generated from the physical counting and confirmed houses in the settlements by the VHTs, sampling interval for each settlement was calculated by dividing the total number of verified and confirmed households by the calculated sample. At the beginning of the data collection in the settlements, determination of the first household was done using the random number tables. Houses were counted to the end of the randomly selected direction and were numbered in papers. Papers were folded and applying a lottery method, randomly a number was picked this number was became the sampling interval. The sampling interval was used across the sampling frame to generate a list of households that were visited during data collection.

Based on these sampling intervals the lists of households were prepared for each survey day, printed and given to the survey teams. Teams revisited individuals or households when were found absent, it was agreed that teams would return to the household or revisit the absent individual up to two times on the same survey day. In case household or individual visited, were found absent were recorded absent and were not replaced. Individuals or households that declined to be interviewed, there decision were respected and were not replaced with another individual or household. Children with disabilities whose physical impairments could not allow some anthropometric measurements to be taken, they were included in the assessment of the other indicators. Sampled households found without eligible children, such households were assessed for the household's questionnaires, women at reproductive age found in those houses were assessed accordingly.

The survey teams visited children who were at the health or nutrition centres receiving care, their measurements and information was recorded. Efforts were made to reach all areas, however, in situations, which proved impossible to visit the centre, such children were issued with specific identity and were listed as absent and were not replaced. The survey team produced a brief note stating that the child was receiving care in the nutrition or health centre when the survey team visited. This recommendation differs from the standard SMART recommendation, which considers nutrition surveys that are usually conducted in large geographic areas and where it is

often not possible to go to the nutrition or health centres for measurement of the children receiving care at health centres.

Sample Size

The sample sizes were calculated using Standardized Monitoring and Assessment of Relief and Transitions (ENA for SMART version July 9th, 2015) software following UNHCR SENS methodology version 2 (2013). The sample sizes were estimated based on the September 2017 UNHCR Pro-Gres data base monthly report. Other parameters for calculating the sample sizes were obtained from the December 2016 nutrition surveys. In South West, Mid-West and West Nile settlements, the December 2016 nutrition survey results, upper limits confidence intervals were used to calculate the sample sizes. The total population, percentage of under-5 and average household size were obtained from the September 2017 UNHCR ProGres demographic data. A non-response rate of 10% was added in all settlements.

Sample Size Calculations for the Cross Sectional Anthropometric Survey – October 2017

Name of Settlement	Total population	Total households	Average household size	Estimated prevalence of malnutrition %	Total Under 5 yrs	± desired precision %	% children under 5 yrs	6-59 months old children / household	% of non-response households	Children to be sampled	Household sample
Adjumani	118,825	21605	5.5	8.0	19,487	3.5	16%	1.6	10	218	306
Arua	129,616	23567	5.5	5.8	22,294	4.8	17%	1.7	10	233	308
Isingiro	165,007	34376	4.8	5.8	29,041	3.3	18%	1.8	10	193	240
Kamwenge	117,103	24916	4.7	7.4	18,971	4.0	16%	1.7	10	165	270
Yumbe	190,338	25378	7.5	13.2	33,880	4.6	18%	1.9	10	208	242
Moyo	74,066	15759	4.7	8.0	11,999	3.5	16%	1.7	10	177	290
Koboko	140,613	20987	6.7	4.7	21,092	3.0	15%	1.2	10	191	235
Kiryandongo	157,275	30838	5.1	8.0	26,422	3.5	17%	1.6	10	177	252
Kyegegwa	130,548	27776	4.7	8.2	22,063	3.0	17%	1.8	10	190	294
Hoima	121,512	28259	4.3	7.3	19,199	3.0	16%	1.7	10	166	280
Lamwo	72163	14727	4.9	8.0	12,123	3.5	17%	1.6	10	196	390

Sample Size Calculations for the Cross-Sectional Mortality Survey – October 2017

Name of Settlement	Total population	Total households	Average household size	Estimated mortality rate/1000/day	± desired precision /1000/day	Recall period	% of non-response HHs	Population to be included	# of HHs to be included
Adjumani	118,825	21605	5.5	0.7	0.6	90	10	830	168
Arua	129,616	23567	5.5	0.7	0.6	90	10	830	168
Isingiro	165,007	34376	4.8	0.7	0.6	90	10	830	192
Kamwenge	117,103	24916	4.7	0.7	0.6	90	10	830	196
Yumbe	190,338	25378	7.5	0.4	0.6	90	10	1601	237
Moyo	74,066	15759	4.7	0.7	0.6	90	10	830	196
Koboko	140,613	20987	6.7	0.8	0.5	90	10	830	196
Kiryandongo	157,275	30838	5.1	0.5	0.5	90	10	854	186
Kyegegwa	130,548	27776	4.7	0.5	0.5	90	10	854	202
Hoima	121,512	28259	4.3	0.5	0.5	90	10	854	221
Lamwo	72163	14727	4.9	0.5	0.5	90	10	854	194

Table 2: Final Sample Size for Districts Hosting Refugees - Households and Individuals, October 2017, Uganda

	Households to be included for Anthropometry and Health module and mortality (ENA for SMART)	Households to be included for children IYCF module (UNHCR SENS guidelines)	Households to be included for MORATLITY module (UNHCR SENS Guidelines)	Households to be included for WASH module (UNHCR SENS Guidelines)	Households to be included for children Anaemia module (UNHCR SENS guidelines)	Households to be included for Food security module (UNHCR SENS Guidelines)	Households to be included for mosquito nets module (UNHCR SENS Guidelines)
Adjumani	*306*	*306*	*306*	*153*	*153*	*153*	*153*
Arua	*308*	*308*	*308*	*154*	*154*	*154*	*154*
Isingiro	*240*	*240*	*240*	*120*	*120*	*120*	*120*
Kamwenge	*270*	*270*	*270*	*135*	*135*	*135*	*135*
Yumbe	*242*	*242*	*242*	*121*	*121*	*121*	*121*
Moyo	*290*	*290*	*290*	*145*	*145*	*145*	*145*
Koboko	*235*	*235*	*235*	*118*	*118*	*118*	*118*
Kiryandongo	*252*	*252*	*252*	*126*	*126*	*126*	*126*
Kyegegwa	*294*	*294*	*294*	*147*	*147*	*147*	*147*
Hoima	*280*	*280*	*280*	*140*	*140*	*140*	*140*
Lamwo	*390*	*390*	*390*	*195*	*195*	*195*	*195*

Questionnaire, Training and Supervision

Questionnaires

The comprehensive questionnaires are included in **APPENDIX 1**. The original questionnaires was obtained from the UNHCR Standardised Expanded Nutrition Survey website (http://sens.unhcr.org/) of which was in English language, other translated versions used included Swahili, Arabic, Somalis and French, in some instances the questionnaires were administered in Dinka and Neur languages via translators particularly in West-Nile where the South Sudanese refugees are hosted. Refugees who speak Dinka and Neur languages were recruited, piloted the translations in the settlements and their translation were comparable. The questionnaires were pre-tested prior commencement of the data collections.

Six module questionnaires as per the UNHCR standardised expanded nutrition survey were designed to allow collection of information on the relevant indicators of the different target groups as indicated in the survey objectives. An additional module on retrospective mortality was added with the view to collate the mortality data reported monthly through the health information system. The six module questionnaires including the additional one (on retrospective mortality) covered the following thematic areas and the following measurements:

Module 1: Children 6-59 months:
This included questions and measures on children aged 6-59 months. Individual measurements and information were collected on children anthropometric status, oedema, and enrolment in selective feeding programmes, immunisation (DPT-3 and measles), vitamin A supplementation and de-worming in last six months. This module also assessed child morbidity from diarrhoea in past two weeks.

Module 2: Anaemia: Children 6-59 months:
All children assessed for anthropometric measurements had their haemoglobin levels measured.
For women at reproductive age (15 – 49 years): Information about their pregnancy status, coverage of iron-folic acid pills, ante-natal and post-natal clinic attendance for pregnant and post-natal women, vitamin A supplementation, and haemoglobin measurement for non-pregnant women were assessed.

Module 3: Infant and Young Child Feeding
This module included questions on infant and young child feeding practices for children aged 0 - 23 months. The SENs module on IYCF was used which is in line with the WHO safe and appropriate infant and young child feeding, by protecting, promoting and supporting exclusive breastfeeding for the first six months of life and continued breastfeeding for two years or beyond, with timely and correct use of adequate complementary foods.

Module 4: Food Security
This module was adapted in close consultations with WFP. The module included questions on negative coping mechanisms used by household members and household dietary diversity. Questions on crop productions, livelihood and self-reliance related opportunities and cash interventions were included.

Module 5: Mosquito net coverage
This assessed the ownership of mosquito nets, determine the utilisation of mosquito nets. The set of questions in this module will be asked at the household level.

Module 6: WASH
This module looked into water, sanitation and hygiene. Questions were framed to understand the coverage of improved and unimproved drinking water sources and improved and unimproved excreta disposal. Upon analysis the core quantitative indicators for monitoring WASH programmes at the household level were presented.

Addition Survey Parameters
Mortality: An individual-level mortality form similar to the SMART sample was used to capture data on deaths that had occurred. Data entry and analysis were done in ENA for SMART with the household-level summary data derived from the form by hand.

Measurement Methods
Household-Level Indicators
Food security: The standard questionnaire from the UNHCR's Standardised Expanded Nutrition Survey Guidelines for Refugee Populations Version 2 (2013) was adopted allowing more questions to be added in the areas of land ownership, crop production, livestock and other self-reliance / livelihood activities.

Water, sanitation and hygiene: The questionnaire used was obtained from the UNHCR's Standardised Expanded Nutrition Survey Guidelines for Refugee Populations Version 2 (2013).
Mosquito net coverage: The questionnaire used was from UNHCR's Standardised Expanded Nutrition Survey Guidelines for Refugee Populations Version 2 (2013).

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 or by comparing the selected child with a sibling whose age was known, and recorded in months on the questionnaire. If the child's age was not absolutely determined by using a local events calendar or by probing, the child's length/height was used as criteria to include the child in the study; children measured between 65 cm and 110 cm had their measurement assessed. Other documents were not used to determine the age of the children including the UNHCR manifest owing to the fact they does not reflect the correct birthdate.

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). Children were weighed nude and only very light underwear were allowed. In some instances, weight was taken inside the houses where the floor was much more levelled and allowed for privacy. The mother-baby option of weighing the young children was applied when young children were unable to stand on their own and unable to follow the instructions.

Height/Length of children 6-59 months
Children's height or length was measured to the closest millimetre using a wooden height board (Shorr Productions). In situations where documents showing the age of the child were not available, height was used to include the child in the survey. 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 in children was assessed by applying gentle thumb pressure on to the tops of both feet of the child for an estimated period of three seconds and thereafter observing for the presence or absence of an indent. All oedema cases reported by the survey teams were verified by the survey supervisors and were referred immediately to the nearest health facility for further management.

MUAC of children 6-59 months
The mid-point of the left upper arm between the elbow and the shoulder was measured to the closest millimetre point using a standard tape (Green, yellow and red taps UNICEF taps). MUAC was recorded in centimetres.

Child enrolment in selective feeding programme for children 6-59 months
Selective feeding programme coverage was assessed for the supplementary feeding programme and therapeutic programme and for the blanket supplementary feeding programme. Caregivers were asked to present the feeding programme enrolment cards or were shown some images of the products given in the programme they referred (for e.g. PlumpyNut, CSB++ sachet). To achieve maximum point coverage, prior to the surveys population were effectively mobilised to remain at home and participate in the survey so that children are gien equal of been randmnly sampled.

Measles vaccination in children 6-59 months
Measles vaccination was assessed by checking for the measles vaccine on the EPI card if available; where EPI cards were not available caregivers were asked to recall if the child had previously received measles shot. Also, the third dose of Diphtheria Toxoid, Tetanus Toxoid and Pertussis containing vaccines (DPT-3) was assessed from the cards. All children aged 6-59 months were assessed for measles and its analysis was limited on children aged 9-59 months. Children 0 to 23 months were assessed for DPT-3 and its analysis was presented accordingly.

Vitamin A supplementation in last 6 months in children 6-59 months
Vitamin A was assessed and recorded from the EPI card where the card was available; in a situation where the card was not available caregivers were subjected into a recall interview. In the process, a vitamin A capsule image was shown by the team to the caregivers to assist with recall.

Deworming
Records on child received a deworming tablet over the past six months were recorded from the EPI card or health card where were available otherwise, the caregivers were asked to recall where cards were not available. Teams showed the deworming tablet-image to the caregiver when asked to recall.

Haemoglobin concentration in children 6-59 months and women 15-49 years
Hb concentration was taken from a capillary blood from the fingertip, recorded to the closest gram per decilitre by using the portable HemoCue Hb 301 Analyser (HemoCue, Sweden). Children found with < 7.0 Hb and women found with < 8.0 Hb reading were referred to the nearest health facility for further managements as such cases are considered suffering from severe anaemia.

Diarrhoea in last 2 weeks in children 6-59 months
For the purposes of this study, an episode of diarrhoea was defined as three loose stools or more in 24 hours. Caregivers were asked if their child had suffered episodes of diarrhoea in the past two weeks.

ANC enrolment, iron and folic acid pills coverage
Pregnant women found during the survey were assessed whether were enrolled in the ANC programme and were asked if had received iron-folic acid pills. To assist respondents to remember and respond appropriately, an iron-folic acid pill image were shown to them when asked to recall.

Infant and young child feeding practices in children 0-23 months
Infant and young child feeding practices were assessed based on UNHCR Standardised Expanded Nutrition Survey Guidelines for Refugee Populations (2013)

Referrals
Children aged 6-59 months were referred to the nearest health facilities for further management when MUAC was found < 12.5 cm, when oedema was found present, or when haemoglobin was < 7.0 g/dl. Women of reproductive age were also referred to the nearest health facility when haemoglobin was < 8.0 g/dl.

Case Definitions and Calculations
Mortality
The crude death rate (CDR) and the U5 death rate (U5DR) is expressed as the number of deaths per 10,000 people per day. The formula below was applied:
Crude Death Rate (CDR) = 10,000/a*f/ (b+f/2-e/2+d/2-c/2)
Where;

a = Number of recall days
b = Number of current household residents
c = Number of people who joined household during recall period
d = Number of people who left household during recall period
e = Number of births during recall period
f = Number of deaths during recall period

Malnutrition in children 6-59 months
Acute malnutrition is 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 3: Definitions of Acute Malnutrition Using Weight-For-Height And/Or Oedema in Children 6–59 Months

Categories of acute malnutrition	Z-scores (NCHS Growth Reference 1977 and 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 is defined using height-for-age index values and is classified as severe or moderate based on the cut-offs shown below. Main results are reported according to the WHO Growth Standards 2006.

Table 4: Definitions of Stunting Using Height-For-Age in Children 6–59 Months

Categories of stunting	Z-scores (WHO Growth Standards 2006 and NCHS Growth Reference 1977)
Stunting	<-2 z-scores
Moderate stunting	<-2 z-score and >=-3 z-score
Severe stunting	<-3 z-scores

Underweight is 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 5: Definitions of Underweight Using Weight-For-Age in Children 6–59 Months

Categories of underweight	Z-scores (WHO Growth Standards 2006 and NCHS Growth Reference 1977)
Underweight	<-2 z-scores
Moderate underweight	<-2 z-scores and >=-3 z-scores
Severe underweight	<-3 z-scores

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

Table 6: Low MUAC Values Cut-Offs In Children 6-59 Months

Categories of low MUAC values
<12.5 cm
≥ 11.5 cm and <12.5 cm
< 11.5 cm

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 (%)

$$= 100X \frac{No.of\ surveyed\ children\ with\ MAM\ according\ to\ SFP\ criteria\ who\ reported\ being\ registered\ in\ SFP}{No.of\ surveyed\ children\ with\ MAM\ according\ to\ SFP\ admission\ criteria}$$

Coverage of TFP programme (%)

$$= 100X \frac{No.of\ surveyed\ children\ with\ SAM\ according\ to\ OTP\ criteria\ who\ reported\ being\ registered\ in\ OTP}{No.of\ surveyed\ children\ with\ SAM\ according\ to\ OTP\ admission\ criteria}$$

Infant and young child feeding practices in children 0-23 months

Infant and young child feeding practices were assessed as follows based on the UNHCR SENS IYCF module (Version 2 (2013)) that are 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

$$= \frac{Children\ 0-23\ months\ who\ were\ put\ to\ the\ breast\ within\ one\ hour\ of\ birth}{Children\ 0-23\ months\ of\ age}$$

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)

$$= \frac{Infants\ 0-5\ months\ of\ age\ who\ received\ only\ breast\ milk\ during\ the\ previous\ day}{Infants\ 0-5\ months\ of\ age}$$

Continued breastfeeding at 1 year

Proportion of children 12–15 months of age who are fed breast milk

$$= \frac{Children\ 12-15\ months\ of\ age\ who\ received\ breast\ milk\ during\ the\ previous\ day}{Children\ 12-15\ months\ of\ age}$$

Introduction of solid, semi-solid or soft foods

Proportion of infants 6–8 months of age who receive solid, semi-solid or soft foods

$$= \frac{Infants\ 6-8\ months\ of\ age\ who\ received\ solid, semi-solid\ or\ soft\ foods\ during\ the\ previous\ day}{Infants\ 6-8\ months\ of\ age}$$

Children ever breastfed

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

$$= \frac{Children\ born\ in\ the\ last\ 24\ months\ who\ were\ ever\ breastfed}{Children\ born\ in\ the\ last\ 24\ months}$$

Continued breastfeeding at 2 years

Proportion of children 20–23 months of age who are fed breast milk

$$= \frac{Children\ 20-23\ months\ of\ age\ who\ received\ breast\ milk\ during\ the\ previous\ day}{Children\ 20-23\ months\ of\ age}$$

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.

$$= \frac{Children\ 6-23\ months\ of\ age\ who\ received\ an\ iron-rich\ food\ or\ a\ food\ that\ was\ specially\ designed\ for\ infants\ and\ young\ children\ and\ was\ fortified\ with\ iron, or\ a\ food\ that\ was\ fortified\ in\ the\ home\ with\ a\ product\ that\ included\ iron\ during\ the\ previous\ day}{Children\ 6-23\ months\ of\ age}$$

Bottle feeding

Proportion of children 0-23 months of age who are fed with a bottle

$$= \frac{Children\ 0-23\ months\ of\ age\ who\ were\ fed\ with\ a\ bottle\ during\ the\ previous\ day}{Children\ 0-23\ months\ of\ age}$$

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 7: 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

Classification of public health problems and targets

Mortality: The following thresholds are used for mortality.

Table 8: Mortality Benchmarks for Defining Crisis Situations (NICS, 2010)

Emergency threshold
CDR > 1/10,000 / day: 'very serious' CDR > 2 /10,000 /day: 'out of control' CDR > 5 /10,000 /day: 'major catastrophe' (double for U5MR thresholds)

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 9: Classification of Public Health Significance for Children Under 5 Years of Age

Prevalence %	Critical	Serious	Poor	Acceptable
Low weight-for-height	≥20	15-19	10-14	<10
Low height-for-age	≥40	30-39	20-29	<20
Low weight-for-age	≥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 performance indicators for malnutrition treatment programmes according to UNHCR Strategic Plan for Nutrition and Food Security 2008-2012 (same as Sphere Standards).

Table 10: Performance Indicators for Selective Feeding Programme (UNHCR Strategic Plan for Nutrition and Food Security 2008-2012) *

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

* Also meet SPHERE standards for performance

Measles and third dose of Diphtheria Toxoid, Tetanus Toxoid and Pertussis vaccination coverage MoH recommends target coverage of 95% for measles as recommended by Sphere Standards. Also, it recommends ≥ 97% for routine immunization indicator coverage for the third dose of Diphtheria Toxoid, Tetanus Toxoid and Pertussis Containing Vaccines (DPT-3).

Vitamin A Supplementation Coverage in Children

MoH Strategic Plan for Health (2016) 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

MoH target on reducing anaemia among children and women aged 15-49 years (2016); 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 low i.e. <50% and 30% respectively. The severity of the public health situation should be classified according to WHO criteria as shown in the table below.

Table 11: Classification of Public Health Significance (WHO 2000)

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

Survey Teams, Training and Supervisions

At Kampala level, the Ministry of Health in collaboration with UNHCR, UNWFP and UNICEF coordinated the survey. In the field the OPM, MOH, District Health Offices and UNHCR led the process where the technical staff supervised and monitored the entire process and offered technical support to the teams where required. UNHCR implementing partners and other operational partners implementing health and nutrition projects interventions in the settlements fully participated in the data collection processes. Training was organized at the MoH headquarters in Kampala for survey team supervisors and members. The MoH, UNHCR and WFP led and facilitated the training. The training session has lasted for five days. The training covered the survey objectives; anthropometrical measurements. It included age assessment and use of local calendar. The survey assessed the health status of the child (illness), immunization, IYCF and mortality data; hemoglobin measurement, use of a blood analyzer machine (HemoCue); standardization exercise for anthropometric and hemoglobin measurements; assessment for food security, mosquito nets and WASH; data collection and interview techniques, procedures and data recording procedure and precautions ethical considerations of assessment and sampling procedures.

A total of 130 enumerators and supervisors participated in the data collection in the 12 assessment settlements including Kampala urban refugee programme. Each settlement had its team of 15 enumerators and 2 supervisors. The supervisors were the team leaders, and were responsible for taking measurements and recording the measurements, they assisted by 2 two measurers who were taking weight and height and haemoglobin. The translator(s), village health teams served as community mobilisers for each village or block. In addition, the Ministry of Health senior managers and UNHCR in all locations conducted supervision visits on a daily. Some of the techniques the teams employed in the field included age determination, reading of health cards for the vaccinations, vitamin A and de-worming.

Data Analysis

Open Data Kit (ODK) electronic platform using smart phones was used to collect quantitative data. The electronic tool permitted use of data checks and skip patterns to minimize spurious entries by data collectors. Key variables that are prone to error like age were carefully assessed based on child health cards. In the absence of cards, care was taken to discuss with the mother/caregiver using a calendar of local events developed for the assessment. Anthropometric data for children 6-59 months and mortality were entered in ENA for SMART software for conversion into z-scores and analysis. Later, data were aggregated into EPIINFO hybrid and STATA, cleaned and analysed. Plausibility reports were generated for each settlement in order to check the quality of the anthropometric data through ENA for SMART. A summary of the key quality criteria are annexed to the report.

The standardised Food Security and Nutrition Assessment questionnaires was programmed and were uploaded in the smartphones with an Android platform to be compatible with the Open Data Kit which were used to capture the data during the surveys. On a daily basis, data from the phones were transferred through a secure network to a UNHCR server. Active mobile network connection was required to collect and save data. The data were then exported to excel readable format compatible with ENA for SMART, EPIINFO hybrid analysis software.

Ethical Consideration and Community Consent

Due to the comprehensive nature of the survey and taking of peripheral blood, consent was sought prior start of interviews from the parents of the child or adult woman or guardian. During community mobilisation, the population and the community leaders were informed of the different

procedures the survey envisaged to undertake. All concerned population members were informed about the reason for taking blood and measurement of haemoglobin. The team informed the HHs members that their children would not be at risk of harm while being measured and the information were kept confidentially. The participants/ HHs were informed that they could withdraw from the assessment at any time from the very beginning of the interview without giving reason.

LIMITATIONS

a. **Poor quality of age data for 6 – 59 months old children:** Across the districts hosting refugees approximately, 8% of the children did not have the child health cards that would have assisted the survey team to determine their birthdate or age. The survey teams to estimate the age in months of the children used age calendar. However, due to incurrancy in estimating age the height for age calculation of the z-scores for height-for-age (HFA) might have affected this indicator. Henceforth, stunting results (HFA) are to be interpreted **with caution.**

b. **Survey fatigue:** due to the sizes of the areas, teams had to walk long distances in search of the next household each time after finishing one interview. Teams estimated 10 to 15 minutes of walking from one house to another. The areas are very large; teams took a lot time to collect data, a minimum of 5 days were spent in one district to collect data. However, additional logistics support was provided transport was always not enough to meet the survey demands.

c. **Volume of the questionnaire:** Although the FSNA questionnaire allows adaptations of the modules, particularly to this survey as previously reported the food security part of the questionnaire remain very long. This might have affected the quality of the data collected due long discussions and exhaustion between teams and respondents. Concerned partners should agree on objectives, review the questionnaire and agree on specific questions. On average it took 35-40 minutes to complete one household.

d. **Survey Expectations:** Some heads of households or respondents did not consent for some modules to be assessed to their family members i.e. on hemoglobin measurements. Reglious reasons were mentioned. Households were assured that the shared information would be kept confidential and would remain only with the survey teams.

e. **Recall bias:** This is an important consideration in any retrospective survey of mortality and the one-month recall period on food security related questions. The recall period of 3 months was used with the hope that this would minimize the potential recall bias the probable days death had occured.

f. The infant and young child module resulted with smaller number of children or infants that were included in the analysis. Indicators such as "introduction of complementary food at age 6-8 months", and "continued breastfeeding at 1 year" and the "continued breastfeeding at 2 years" .

RESULTS

Demographic information

The demographic information indicates that 75.3% of the households interviewed were headed by males, while only 24.7% were heaaded by females. 67.7% of the male respondents were married while 69.6% of the women were married. 14.6% and 13.6% of the respondents were males and female widows respectively. Majority of the heads of households aged were aged between 20-39 years (63.5% males) snd (52.0% females); the second largest age group was 40-59 years age band where 32.3% were males and 42.4% were females. The family sizes of the households based on the number of people eating together was such that 18% of the males and 14.8% of the females were from the family size 3 households; 17.7% of the males and 16.4% of the females were from the family size 4 households. The data on education was assessed based on the number of years respondents have completed in schools, colleges or universities. 20.2% males and 25.2% females of the respondents had gone through non-formal education. 58.9% males and 58.0% females from the respondents had completed primary education. 14.6% males and 8.8% females from the responsdent had completed secondary education.

Table 12: Demographic Information for Host Community, Uganda, October 2017

Gender of Household Head	**Male**	**Female**
	75.3%	24.7%
Marital Status of Household Head	**Male**	**Female**
Married	67.7%	69.6%
Single	4.9%	6.4%
Widowed	14.6%	13.6%
Separated/Divorced	12.9%	10.4%
Age (Years) of Household Head	**Male**	**Female**
14-19	0.4%	0.8%
20-39	63.5%	52.0%
40-59	32.3%	42.4%
60-79	3.8%	3.6%
80 and Above	0.0%	1.2%
Education (Completed Years of Education)	**Male**	**Female**
No Formal Education	20.2%	25.2%
Primary Education	58.9%	58.0%
Secondary Education	14.6%	8.8%
Advanced Secondary Education	3.3%	6.0%
Diploma	1.1%	2.0%
University	2.0%	0.0%
Family Size of HH (Number of People Eating Together)	**Male**	**Female**
1	3.3%	2.8%
2	8.5%	9.2%
3	18.0%	14.8%
4	17.7%	16.4%
5	15.5%	12.0%
6	10.5%	13.6%
7	10.4%	8.4%
8	7.0%	7.6%
9+	9.1%	15.2%

The total household surveyed was 2,788 across the districts hosting refugees, this corresponded to about 9,666 population that was interviewed. The children under 5 years that the survey reached was 3,405 and average family size for all districts was 5.3 people in each household interviewed. Yumbe district had the highest family size (7.8) as compared to the rest of the districts. From the actual surveyed population, the average proportion of under 5 years across the surveyed districts

was 35.2%. Koboko (6.9) had the second highest family size that was followed by Moyo (6.7).

Table 13: Demographic Characteristics of The Study Population, Host Community, Uganda, October 2017

Host Community	Total House hold Surveyed	Total Population Surveyed	Total Under 5 Surveyed	Average House hold size	% of U5
Isingiro	479	1699	326	4.3	53.4%
Kyegegwa	319	984	318	4.7	32.3%
Hoima	284	733	338	5.0	46.1%
Kamwenge	287	1211	323	4.3	26.7%
Kiryandongo	215	708	307	4.6	43.4%
Arua	252	855	304	6.1	35.6%
Adjumani	311	1530	337	5.5	22.0%
Koboko	90	370	260	6.9	70.3%
Lamwo	211	1021	282	5.0	27.6%
Moyo	79	505	271	6.7	53.7%
Yumbe	261	1139	339	7.8	29.8%
Total	2788	9,666	3405	5.3	35.2%

Children 6-59 Months

The survey aimed to reach 3,478 eligible children aged 6–59 months for anthropometric measurements ahd health related individual questions. The survey teams were able to assess and take measurements to 3,262, achieving approximately 93.7 percent of the targeted children. In some location teams attained slightly higher sample sizes; Hoima (103.4%), Yumbe (103%), Kiryandongo (101.8%) and Kamwenge (100.3%). The lowest achieved target was in Isingiro (82.0%) and Moyo (87.7%).

Table 14: Sample Sizes, Host Community, Uganda, October 2017

Host Community	Target (No.) Households	Total Households Surveyed (No.)	% of the Target
Isingiro	240	482	201%
Kyegegwa	294	285	97%
Hoima	280	306	109%
Kamwenge	270	287	106%
Kiryandongo	252	281	112%
Arua	308	278	90%
Adjumani	306	296	97%
Koboko	235	221	94%
Lamwo	390	268	69%
Moyo	290	249	86%
Yumbe	242	309	128%

Of the 3262 children, aged 6 to 59 months surveyed about 50.7% and 49.2% were boys and girls respectively. The younger children, aged 6-17 months old were 26.3% of the total sampled children. The second majority were children aged 18-29 months whereby 375 (48.4%) were boys and 400 (51.6%) were girls. In total there were 775 children in this age group, representing 23.8%

of the total sample. Age 30 to 41 months and 42 to 53 months old children were almost equal with 715 children and 703 children, which represented 21.9% and 21.6% respectively. The elder children, aged 54-59 months children were only 211, which was equal to 6.5% of the total sampled children.

Table 15: Children 6-59 Months - Distribution of Age and Sex of Sample, Host Community, Uganda, October 2017

	Boys		Girls		Total		Ratio
AGE (mo)	**No.**	**%**	**No.**	**%**	**No.**	**%**	**Boy:Girl**
6-17	444	51.7%	412	48.0%	858	26.3%	1.1
18-29	375	48.4%	400	51.6%	775	23.8%	0.5
30-41	360	50.3%	355	49.7%	715	21.9%	0.5
42-53	366	52.1%	337	47.9%	703	21.6%	0.5
54-59	109	51.7%	102	48.3%	211	6.5%	0.5
Total	1,654	50.7%	1606	49.2%	3,262	100.0%	0.5

Weight-for-height defines the recent acute nutritional deficiency of a given child aged 6-59 months in this study. Children who are less than -2 SD from the reference median for weight-for-height / length are described as wasted (thin to his/her height), which is a condition that reflects acute or recent nutritional deficits. The highest global acute malnutrition was found in Arua (10.8%) and Lamwo (10.1%), classified as "poor" according to WHO cut off points. The global acute malnutrition was relatively high in Yumbe (9.7%), Kyegegwa (8.5%), Isingiro (8.2%) and Moyo (8.0%). Adjumani (5.7%), Kiryandongo (5.3%) and Kamwenge (6.6%) depicted the lower globala cute malnutrition rates.

Table 16: Prevalence of Acute Malnutrition Based on Weight-For-Height Z-Scores, Host Community, Uganda, October 2017

Host Community	Global Malnutrition (<-2 z-score and/or oedema)	Moderate Malnutrition (<-2 z-score and >=-3 z-score, no oedema)	Severe Malnutrition (<-3 z-score and/or oedema)
Isingiro(n=478)	(39) 8.2 %(6.0 - 11.0)	(37) 7.7 %(5.7 - 10.5)	(2) 0.4 %(0.1 - 1.5)
Kyegegwa(n=282)	(24) 8.5 %(5.8 - 12.4)	(22) 7.8 %(5.2 - 11.5)	(2) 0.7 %(0.2 - 2.5)
Hoima(n=305)	(22) 7.2 %(4.8 - 10.7)	(20) 6.6 %(4.3 - 9.9)	(2) 0.7 %(0.2 - 2.4)
Kamwenge(287)	(19) 6.6 %(4.3 - 10.1	(17) 5.9 %(3.7 - 9.3	(2) 0.7 %(0.2 - 2.5)
Kiryandongo(n=281)	(15) 5.3 %(3.3 - 8.6)	(15) 5.3 %(3.3 - 8.6)	(0) 0.0 %(0.0 - 1.3)
Arua(n=278)	(30) 10.8 %(7.7 - 15.0)	(28) 10.1 %(7.1 - 14.2)	(2) 0.7 %(0.2 - 2.6)
Adjumani(n=296)	(17) 5.7 %(3.6-9.0)	(16) 5.4 %(3.4 - 8.6)	(1) 0.3 %(0.1 - 1.9)
Koboko(n=221)	(16) 7.2 %(4.5 - 11.4)	(15) 6.8 %(4.2 - 10.9	(1) 0.5 %(0.1 - 2.5
Moyo(n=249)	(20) 8.0 %(5.3 - 12.1)	(18) 7.2 %(4.6 - 11.1)	(2) 0.8 %(0.2 - 2.9)
Lamwo(n=268)	(27) 10.1 %(7.0 - 14.3)	(25) 9.3 %(6.4 - 13.4)	(2) 0.7 %(0.2 - 2.7)
Yumbe(n=309)	(30) 9.7 %(6.9 - 13.5)	(28) 9.1 %(6.3 - 12.8)	(2) 0.6 %(0.2 - 2.3)

Table 17: Prevalence of Acute Malnutrition by Age, Based on Weight-For-Height Z-Scores And/Or Oedema, Host Community, Uganda, October 2017

		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	851	3	0.4	74	8.7	774	91.0	0	0.0
18-29	773	3	0.4	50	6.5	719	93.0	1	0.1
30-41	718	5	0.7	55	7.7	658	91.6	0	0.0
42-53	703	5	0.7	44	6.3	654	93.0	0	0.0
54-59	209	2	1.0	19	9.1	188	90.0	0	0.0
Total	3254	18	0.6	242	7.4	2993	92.0	1	0.0

Table 18: Prevalence of Acute Malnutrition based on MUAC in Children, Host Community, Uganda, October 2017

Host Community	Global Malnutrition (< 125 mm and/or oedema)	Moderate Malnutrition (< 125 mm and >= 115 mm, no oedema)	Severe Malnutrition (< 115 mm and/or oedema)
Arua(n=278)	5.4%(3.3-8.8)	5.0%(3.0-8.3)	0.4%(0.1-2.5)
Kamwenge(n=287)	3.1%(1.6-5.9)	3.1%(1.6-5.9)	0%(0-0)
Adjumani(n=296)	7.4%(4.9-11.0)	6.8%(4.4-10.2)	0.7%(0.2-2.7)
Isingiro(n=250)	6.6%(4.7-9.2)	5.4%(3.7-7.8)	1.2%(0.6-2.7)
Kiryandongo(n=281)	8.2%(5.5-12.0)	7.8%(5.2-11.6)	0.4%(0.0-2.4)
Kyegegwa(n=285)	5.3%(3.2-8.6)	3.5%(1.9-6.4)	1.8%(0.7-4.2)
Moyo(n=249)	5.6%(3.4-9.3)	5.2%(3.1-8.8)	0.4%(0.1-2.8)
Lamwo(n=268)	5.2%(3.1-8.6)	4.5(2.6-7.7)	0.7%(0.2-2.9)
Yumbe(n=309)	4.9%(2.9-7.9)	4.9%(2.9-7.9)	0%(0-0)
Hoima(n=306)	9.2%(6.4-12.9)	8.5%(5.8-12.2)	0.7%(0.2-2.6)
Koboko(n=221)	2.7%(1.2-5.9)	2.7%(1.2-5.9)	0%(0-0)
Arua(n=278)	5.4%(3.3-8.8)	5.0%(3.0-8.3)	0.4%(0.1-2.5)
Kamwenge(n=287)	3.1%(1.6-5.9)	3.1%(1.6-5.9)	0%(0-0)

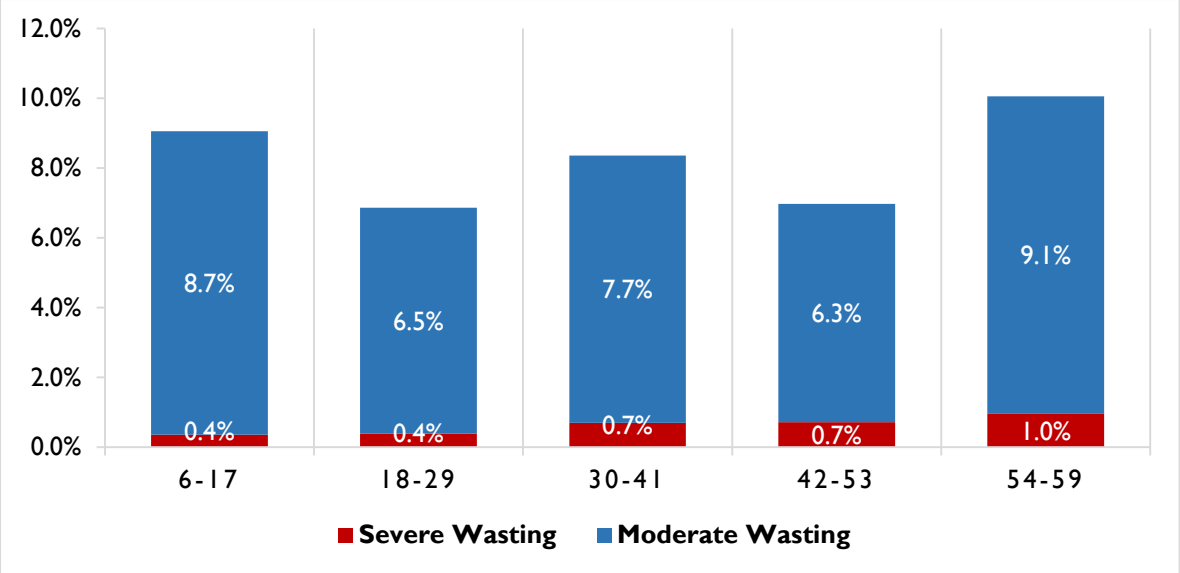

Figure 1: Distribution of Wasting by WFH z-score by Age and Sex for Children 6-59 Months, Host Community, Uganda, October 2017

Table 19: Prevalence of Acute Malnutrition by Malnutrition Based MUAC And/Or Oedema, Host Community, Uganda, October 2017

		MUAC < 115 mm		MUAC >= 115 mm and < 125 mm		MUAC > = 125 mm		Oedema	
Age (mo)	**Total no.**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
6-17	858	7	0.8%	74	8.6%	777	90.6%	0	0.0%
18-29	775	7	0.9%	36	4.6%	732	94.5%	1	0.1%
30-41	715	2	0.3%	27	3.8%	686	95.9%	0	0.0%
42-53	703	2	0.3%	29	4.1%	672	95.6%	0	0.0%
54-59	211	2	0.9%	7	3.3%	202	95.7%	0	0.0%
Total	3,262	20	0.6%	173	5.3%	3,069	94.1%	1	0.0%

Underweight is is due to either wasting or stunting or both. Based on this survey, Kyegegwa (15.5%) had the highest prevalence of underweight; Hoima (12.7%) and Yumbe (12.1%) followed. Based on the WHO classification of public health significance for children under 5 years of age, these levels are classified as "poor". The following districts had an "acceptable" levels of underweight (<10%); Koboko (9%), Kamwenge (8.4%), Kiryandongo (6.4%) and Adjumani (6.1%).

Table 20: Prevalence of Underweight Based on Weight-For-Age Z-Scores, Host Community, Uganda, October 2017

Host Community	Prevalence of Underweight (<-2 z-score)	Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)
Isingiro(n=476)	(51) 10.7 %(8.2-13.8)	(48) 10.1 %(7.7-13.1)	(3) 0.6 %(0.2-1.8)
Kyegegwa (n=284)	(44) 15.5 %(11.7-20.2	(41) 14.4 %(10.8-19.0)	(3) 1.1 %(0.4-3.1)
Hoima (n=306)	(39) 12.7 %(9.5-16.9)	(35) 11.4 %(8.3-15.5)	(4) 1.3 %(0.5-3.3)
Kamwenge(n=287)	(24) 8.4 %(5.7-12.1)	(24) 8.4 %(5.7-12.1)	(0) 0.0 %(0.0 - 1.3)
Kiryandongo(n=281)	(18) 6.4 %(4.1-9.9)	(17) 6.0 %(3.8-9.5)	(1) 0.4 %(0.1-2.0)
Arua(n=278)	(35) 12.6 %(9.2-17.0)	(35) 12.6 %(9.2-17.0)	(0) 0.0 %(0.0-1.4)
Adjumani(n=296)	(18) 6.1 %(3.9-9.4	(15) 5.1 %(3.1-8.2	(3) 1.0 %(0.3-2.9)
Koboko (n=221)	(20) 9.0 %(5.9-13.6	(20) 9.0 %(5.9-13.6)	(0) 0.0 %(0.0-1.7)
Moyo(n=246)	(25) 10.2 %(7.0-14.6)	(25) 10.2 %(7.0-14.6)	(0) 0.0 %(0.0-1.5)
Lamwo(n=268)	(27) 10.1 %(7.0-14.3	(25) 9.3 %(6.4-13.4	(2) 0.7 %(0.2-2.7)
Yumbe(n=307)	(37) 12.1 %(8.9-16.2	(32) 10.4 %(7.5- 14.3	(5) 1.6 %(0.7-3.8)

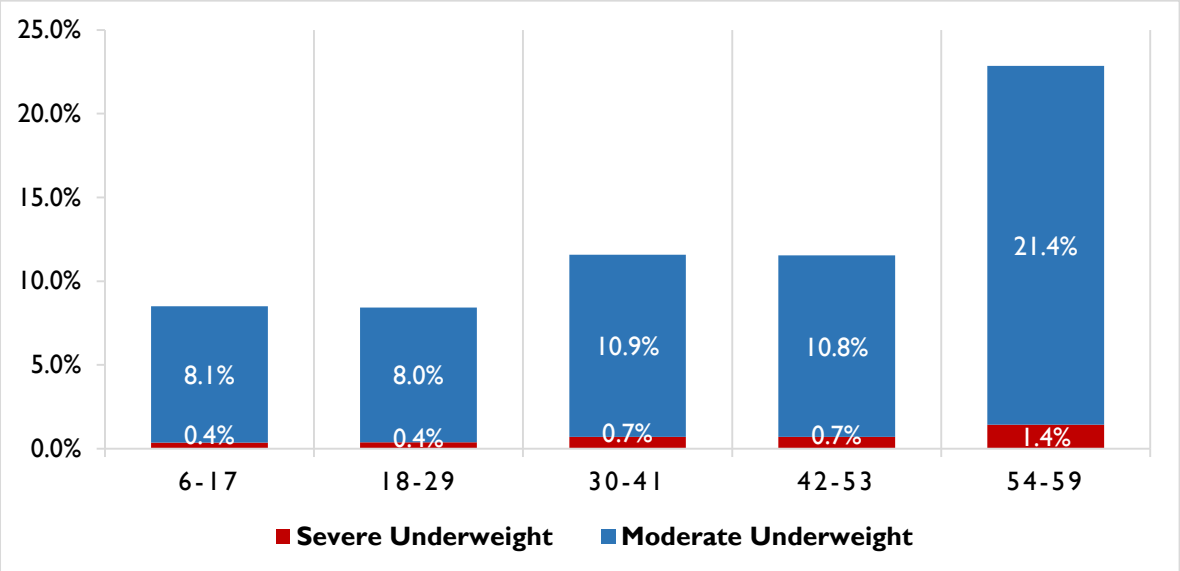

Figure 2: Distribution of Underweight by Age and Sex for Children 6-59 Months, Host Community, Uganda, October 2017

Stunting develops over a long period because of inadequate diet or frequent infections or both was assessed in this survey. Stunting was found high in three districts with following rates; Kyegegwa (36.3%), Hoima (34.5%), Isingiro (30.3%), such rates are classified as "critical" based on the WHO public health significance for children under 5 years of age. Lamwo (18.3%) and Yumbe (19.7%) had an "acceptable" rate of stunting of less 20% as per the WHO cut off points.

Table 21: Prevalence of Stunting Based on Height-For-Age Z-Scores, Host Community, Uganda, October 2017

Host Community	Prevalence of stunting (<-2 z-score)	Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	Prevalence of severe stunting (<-3 z-score)
Isingiro(n=468)	(142) 30.3 %(26.4-34.7	(114) 24.4 %(20.7 - 28.4)	(28) 6.0 %(4.2 - 8.5)
Kyegegwa(n=281)	(102) 36.3 %(30.9-42.1)	(90) 32.0 %(26.8 - 37.7)	(12) 4.3 %(2.5 - 7.3)
Hoima (n=304)	(105) 34.5 %(29.4-40.0)	(89) 29.3 %(24.4 - 34.6)	(16) 5.3 %(3.3 - 8.4)
Kamwenge (n=285)	(81) 28.4 %(23.5-33.9)	(70) 24.6 %(19.9 - 29.9 95)	(11) 3.9 %(2.2 - 6.8)
Kiryandongo(n=277)	(72) 26.0 %(21.2 - 31.5)	(63) 22.7 %(18.2 - 28.0)	(9) 3.2 %(1.7 - 6.1)
Arua(n=278)	(67) 24.1 %(19.4 - 29.5)	(61) 21.9 %(17.5 - 27.2)	(6) 2.2 %(1.0 - 4.6)
Adjumani (n=296)	(67) 22.6 %(18.2 - 27.7)	(62) 20.9 %(16.7 - 25.9)	(5) 1.7 %(0.7 - 3.9)
Koboko (n=221)	(48) 21.7 %(16.8 - 27.6)	(43) 19.5 %(14.8 - 25.2)	(5) 2.3 %(1.0 - 5.2)
Moyo(n=237)	(64) 27.0 %(21.8 - 33.0	(48) 20.3 %(15.6 - 25.8)	(16) 6.8 %(4.2 - 10.7
Lamwo(n=268)	(49) 18.3 %(14.1 - 23.3)	(46) 17.2 %(13.1 - 22.1)	(3) 1.1 %(0.4 - 3.2)
Yumbe(n=304)	(60) 19.7 %(15.7 - 24.6)	(52) 17.1 %(13.3 - 21.7)	(8) 2.6 %(1.3 - 5.1)

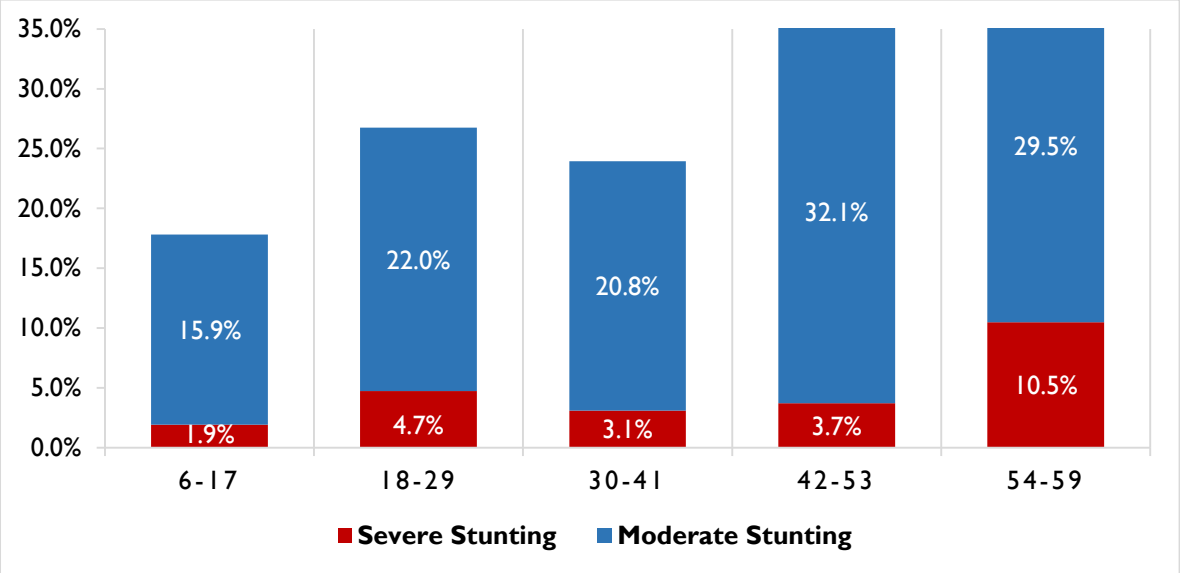

Figure 3: Distribution of Stunting by Age and Sex for Children 6-59 Months, Host Community, Uganda, October 2017

Table 22: Prevalence of Stunting by Age Based on Height-For-Age Z-Scores, Host Community, Uganda, December 2017

		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	837	16	1.9	133	15.9	688	82.2
18-29	759	36	4.7	167	22.0	556	73.3
30-41	710	22	3.1	148	20.8	540	76.1
42-53	701	26	3.7	225	32.1	450	64.2
54-59	210	22	10.5	62	29.5	126	60.0
Total	3217	122	3.8	735	22.8	2360	73.4

Measles Vaccination Coverage

Immunization protects children from risks of preventable diseases. Children who are not immunized against measles are more likely to suffer from measles. Timely and complete immunization for children is critical. Confirmation of measles vaccination by card and recall was highest in Kamwenge district (95.1%), this was followed by; Moyo district at 93.1%, Isingiro (93.0%), Yumbe (92.9%), and Kyegegwa (91.8%).

Table 23: Measles Vaccination Coverage for Children Aged 9-59 Months, Host Community, Uganda, October 2017

Host Community	Measles (with cards)	Measles (with card or confirmation from mother)
Isingiro(n=455)	73.8%(69.6-77.7)	93.0%(90.2-95.0)
Kyegegwa (n=268)	74.3%(68.7-79.1)	91.8%(87.8-94.5)
Hoima (n=282)	69.6%(64.0-74.7)	85.5%(80.9-89.2)
Kamwenge (n=263)	71.2%(65.4-76.4)	95.1%(91.7-97.1)
Kiryandongo (n=254)	76.3%(70.7-81.1)	89.1%(84.7-92.4)
Arua (n=263)	65.0%(59.0-70.6)	89.4%(85.0-92.6)
Adjumani (n=280)	76.1%(70.7-80.7)	89.3%(85.1-92.4)
Koboko (n=206)	65.0%(58.3-71.3)	88.3%(83.2-92.1)
Moyo(n=231)	78.4(72.6-83.2)	93.1%(89.0-95.7)
Lamwo(n=258)	71.8%(66.0-77.0)	88.8%(84.3-92.1)
Yumbe(n=292)	68.7%(63.2-73.8)	92.9%(89.3-95.3)

Vitamin A Supplementation Coverage

All eleven districts hosting refugees were assessed for vitamin A supplementation coverage. The MoH leads efforts of ensuring that 6-59 months children are fully protected with preventive vitamin A supplements in the last 6 months, and especially when given twice annually. Vitamin A supplementation coverage which is the proportion of 6-59 months children received at least one high-dose vitamin A supplement in the past six months was found highest in Kamwenge (97.9%), this was followed by, Lamwo (95.9%), Kyegegwa (94.4%); Yumbe (93.9%), Moyo (92.0%), Adjumani (91.9%), Koboko (91.0%) and Kiryandongo (90.7%).

Table 24: Vitamin A Supplementation for Children Aged 6-59 Months Within Past 6 Months, Host Community, Uganda, October 2017

Host Community	Vitamin A (with cards)	Vitamin A (with card or confirmation from mother)
Isingiro(n=482)	68.3%(64.0-72.3)	86.9%(83.6-89.7)
Kyegegwa (n=285)	76.5%(71.2-81.1)	94.4%(91.0-96.5)
Hoima (n=306)	69.3%(63.9-74.2)	81.7%(77.0-85.6)
Kamwenge (n=287)	74.2%(68.8-79.0)	97.9%(95.4-99.1)
Kiryandongo (n=281)	78.3%(73.1-82.7)	90.7%(86.7-93.6)
Arua (n=278)	66.9%(61.1-72.2)	93.2%(89.5-95.6)
Adjumani (n=296)	78.7%(73.7-83.0)	91.9%(88.2-94.5)
Koboko (n=221)	65.2%(58.6-71.2)	91.0%(86.4-94.1)
Moyo(n=249)	76.3%(70.6-81.2)	92.0%(87.9-94.8)
Lamwo(n=268)	77.6%(72.2-82.2)	95.9%(92.7-97.7)
Yumbe(n=309)	68.6%(63.2-73.5)	93.9%(90.6-96.0)

Diarrhea is among the top ten leading cause of childhood morbidity and mortality in Uganda. Mothers or guradins of the children were asked if the children have had at least three loose motions within 24 hours that suprceeded the survey. Lamwo (18.3%) district had the highest prevalence of diarrhoea diseases among children 6-59 months. Kiryandongo (16.4%), Kyegegwa (15.8%) and Arua (15.8%), Isingiro (12.7%) and Adjumani (12.5%) followed this.

Table 25: Period Prevalence of Diarrhoea, Host Community, Uganda, October 2017

Host Community	Number/total	% (95% CI
Isingiro	61/482	12.7%(10.0-15.9)
Kyegegwa	45/285	15.8%(12.0-20.5)
Hoima	35/306	11.4%(8.3-15.5)
Kamwenge	21/287	7.3%(4.8-11.0)
Kiryandongo	46/281	16.4%(12.5-21.2)
Arua	44/278	15.8%(12.0-20.6)
Adjumani	37/296	12.5%(9.2-16.8)
Koboko	18/221	8.1%(5.2-12.6)
Moyo	26/249	10.4%(7.2-14.9)
Lamwo	49/268	18.3%(14.1-23.4)
Yumbe	30/309	9.7%(6.9-13.6)

DPT3 which is the measure for « fully vaccinated » children was assessed. The survey teams assessed the vaccination status of the children based on vaccination cards or mother's verbal reports using a pre-tested semi-structured interviewer administered questionnaire through house-to-house visits. With an exception of Hoima and Yumbe the rest of the districts registered impressive coverage above 90% acros the settlements, with the highest coverage in Kamwenge (98.6%) followed by Moyo (96.0%) and Kyegegwa (95.8%).

Table 26: DPT3 with Card, Host Community, Uganda, October 2017

Host Community	DPT3 (with cards)	DPT3 (with card or confirmation from mother)
Isingiro(n=482)	73.7%(69.5-77.4)	92.3%(89.6-94.4)
Kyegegwa(n=285)	77.9%(72.7-82.3)	95.8%(92.7-97.6)
Hoima(n=306)	70.3%(64.9-75.1)	76.5%(71.4-80.9)
Kamwenge(n=287)	74.9%(69.6-79.6)	98.6%(96.3-99.5)
Kiryandongo(n=281)	79.7%(74.6-84.0)	92.5%(88.8-95.1)
Arua(n=278)	67.6%(61.9-72.9)	93.5%(89.9-95.9)
Adjumani(n=296)	81.4%(76.6-85.5)	93.9%(90.5-96.1)
Koboko(n=221)	68.3%(61.9-74.1)	92.3%(88.0-95.2)
Moyo(n=249)	79.5%(74.0-84.1)	96.0%(92.7-97.8)
Lamwo(n=268)	76.1%(70.6-80.9)	94.0%(90.5-96.3)
Yumbe(n=309)	70.9%(65.6-75.7)	83.5%(78.9-87.2)

Infections due to soil-transmitted helminths including schistosomiasis compete for nutrient intake with the host and can result into malnutrition, anemia, poor physical growth and impaired mental developmen. Children aged 6 to 59 months were assessed if had received deworming tablets within 6 months before the survey. The highest coverage of deworming program among children was recorded in Yumbe (91.9%), Kyegegwa (90.9%) and Kamwenge (90.6%). The lowest coverage was recorded in Kiryandongo (79.7%).

Table 27: Deworming with Card, Host Community, Uganda, October 2017

Host Community	Deworming (with cards)	Deworming (with card or confirmation from mother)
Isingiro(n=482)	64.3%(59.9-68.5)	82.4%(78.7-85.5)
Kyegegwa(n=285)	24.9%(20.2-30.3)	90.9%(86.9-93.7)
Hoima(n=306)	69.6%(64.2-74.5)	84.0%(79.4-87.7)
Kamwenge(n=287)	66.9%(61.2-72.1)	90.6%(86.6-93.5)
Kiryandongo(n=281)	67.6%(61.9-72.8)	79.7%(74.6-84.0)
Arua(n=278)	63.7%(57.8-69.1)	88.8%(84.6-92.1)
Adjumani(n=296)	69.6%(64.1-74.6)	83.4%(78.8-87.3)
Koboko(n=221)	60.6%(54.0-66.9)	84.6%(79.2-88.8)
Moyo(n=249)	59.0%(52.8-65.0)	85.1%(80.1-89.0)
Lamwo(n=268)	68.7%(62.8-73.9)	86.9%(82.3-90.5)
Yumbe(n=309)	66.3%(60.9-71.4)	91.9%(88.3-94.5)

Anaemia

Anaemia is prevalent among children below 5 years in developing societies including Africa. Anaemia has a serious negative health effects to children that includes; poor school performance, impaired cognitive, affects physical growth and development, if not, treated it can lead to death. The main causes of anaemia include; diarrhoea, malaria, and worm infestations. Other factors include poor access to safe and adequate water, poor sanitation and hygiene.

More than 60% of the districts hosting refugees have higher 40% cut off points of the WHO classification of anaemia as a severe public health problem. These districts include Kiryandongo (49.8%), Lamwo (49.6%), Arua (47.5%), Koboko (44.3%), Adjumani (43.9%), Moyo (41.8%) and Yumbe (40.5%). Kyegegwa and Hoima had the lower anaemia prevalence classified as "Medium"

according to WHO cut off points.

Table 28: Prevalence of Total Anaemia, Anaemia Categories, And Mean Haemoglobin Concentration in Children 6-59 Months of Age and By Age Group, Host Community, Uganda, October 2017

Host Community	Total (Hb<11.0 g/dL)	Mild (Hb 10.0-10.9 g/dL)	Moderate (7.0-9.9 g/dL)	Severe (<7.0 g/dL)
Arua(n=278)	47.5%(41.7-53.4)	22.7%(18.1-28.0)	22.3%(17.8-27.6)	2.5%(1.2-5.2)
Kamwenge(n=287)	38.0%(32.5-43.7)	17.8%(13.8-22.6)	19.2%(15.0-24.1)	1.0%(0.3-3.2)
Adjumani(n=296)	43.9%(38.4-49.6)	23.6%(19.1-28.8)	16.9%(13.0-21.6)	3.4%(1.8-6.2)
Isingiro(n=482)	39.8%(35.5-44.3)	27.0(23.2-31.1)	10.0%(7.6-13.0)	2.9%(1.7-4.8)
Kiryandongo(n=281)	49.8%(44.0-55.7)	29.9%(24.8-35.5)	18.5%(14.4-23.5)	1.4%(0.5-3.7)
Kyegegwa(n=285)	32.6%(27.4-38.3)	17.9%(13.9-22.8)	13.0%(9.5-17.4)	1.6%(0.7-4.2)
Moyo(n=249)	41.8%(35.8-48.0)	18.5%(14.1-23.8)	21.7%(17.0-27.3)	1.6%(0.6-4.2)
Lamwo(n=268)	49.6%(43.7-55.6)	25%(20.2-30.5)	22.4%(17.8-27.8)	2.2%(1.0-4.9)
Yumbe(n=309)	40.5%(35.1-46.0)	24.9%(20.4-30.1)	13.6%(10.2-17.9)	1.9%(0.9-4.3)
Hoima(n=306)	31.0%(26.1-36.5)	17.3%(13.5-22.0)	12.4%(9.2-16.6)	1.3%(0.5-3.4)
Koboko(n=221)	44.3%(37.9-51.0)	29.4%(23.8-35.8)	13.1%(9.3-18.3)	1.8%(0.7-4.7)

Mean blood haemoglobin concentrations among districts hosting refugees did not vary substantially, it ranged from 11.1 g/dL in Lamwo and Kiryandongo to 12.0 g/dL in Hoima district. These ranges indicate that on average, children aged 6-59 months old were above the WHO cut off points for mild anaemia category (11.0 g/dL). Hoima district had the lowest anaemia prevalence among children at 31%. The district with the lowest blood haemoglobin levels (Kiryandongo (11.1 g/dL), and Lamwo (11.1g/dL) had also the highest prevalence of anaemia (Kiryandongo (49.8%), and Lamwo (49.6%).

Table 29: Mean Haemoglobin Concentration in Children 6-59 Months of Age And By Age Group, Host Community, Uganda, October 2017

Host Community	Mean Hb (g/dL) (SD / 95% CI) [range]
Isingiro(n=482)	11.8 g/dL (2.1 SD), [6.1 min, 15.9 max]
Kyegegwa (n=285)	11.5 g/dL (1.7 SD), [6.1 min, 15.9 max]
Hoima (n=306)	12.0 g/dL (2.1 SD), [6.2 min, 15.9 max]
Kamwenge (n=287)	11.3 g/dL (1.8 SD), [6.4 min, 15.6 max]
Kiryandongo (n=281)	11.1 g/dL (1.7 SD), [6.2 min, 15.9 max]
Arua (n=278)	11.3 g/dL (2.1 SD), [6.4 min, 15.9 max]
Adjumani (n=296)	11.4 g/dL (2.2 SD), [6.2 min, 15.9 max]
Koboko (n=221)	11.6 g/dL (2.2 SD), [6.6 min, 15.9 max]
Moyo(n=249)	11.6 g/dL (2.4 SD), [6.1 min, 15.9 max]
Lamwo(n=268)	11.1 g/dL (2.1 SD), [6.1 min, 15.9 max]
Yumbe(n=309)	11.3 g/dL (1.7 SD), [6.1 min, 15.9 max]

Lamwo district had also the highest prevalence of combined moderate and severe anaemia for children 6-59 months Lamwo (24.6%). Arua ahd the highest prevalence of severe anaemia among children aged 24-59 months while Lamwo district had the highest prevalence of anaemia among

younger children, 6-23 months with 33.0%.

Table 30: Prevalence of Moderate and Severe Anaemia in Children 6-59 Months Of Age And By Age Group, Host Community, Uganda, October 2017

Host Communitys	Moderate and Severe Anaemia (Hb<10.0 g/dL)		
	6-59 months	6-23 months	24-59 months
Arua(n=278)	24.8%(20.1-30.2)	28.9%(20.7-38.7)	22.7%(17.1-29.3)
Kamwenge(n=287)	20.2%(15.9-25.3)	27.6%(19.9-37.0)	15.9%(11.3-22.0)
Adjumani(n=296)	20.3%(16.1-25.2)	24.2%(17.3-32.7)	17.6%(12.7-24.0)
Isingiro(n=482)	12.9%(10.2-16.2)	29.7%(23.2-37.1)	4.1%(2.4-6.9)
Kiryandongo(n=281)	19.9%(15.7-25.0)	31.6%(23.7-40.7)	12.0%(7.8-17.9)
Kyegegwa(n=285)	14.7%(11.1-19.4)	11.7%(6.6-20.0)	16.2%(11.6-22.2)
Moyo(n=249)	23.3%(18.4-29.0)	28.2%(19.6-38.8)	20.7%(15.2-27.6)
Lamwo(n=268)	24.6%(19.8-30.2)	33.0%(24.1-43.3)	20.3%(15.0-26.9)
Yumbe(n=309)	15.5%(11.9-20.0)	15.2%(9.3-23.7)	15.7%(11.4-21.3)
Hoima(n=306)	13.7(10.3-18.1)	11.9%(7.1-19.1)	14.9%(10.5-20.7)
Koboko(n=221)	14.9%(10.8-20.3)	21.0%(13.4-31.3)	11.4%(7.1-17.9)

Children 0-23 Months

Prevalence of Infant and Young Child Feeding Practices

Timely initiation of breastfeeding within one hour after birth and exclusive breastfeeding is recommended for the first six months of infant life along with continuation of breastfeeding up two years. Timely initiation of breastfeeding where infants receive the colostrum has the potential to prevent neonatal deaths. Mothers or caregivers were asked about timely initiation of breastfeeding, practices of exclusive breastfeeding and use of infant formula and other forms of prelacteal feeding to their infants less than six months of age. Questions on prelacteal were asked to women if gave prelacteal their children prior starting breastfeeding.

Timely initiation of breastfeeding among children aged 0-23 months was found highest in Adjumani (97.6%), Moyo (90.3%), Isigniro (89.7%) and Hoima (89.1%). The lowest timely initiation of breastfeeding was recorded in Yumbe (66.1%), followed by Koboko (70.4%). At the health facility health workers are expected to give advice and encourage mothers to avoid traditional prelactal feeding practice.

Exclusive breastfeeding among 0-5 months was found highest in Adjumani (97.6%), Arua (96.2%) and Hoima (90.6%). Koboko district had the lowest exclusive breastfeeding rate which was recorded at 72.7%. Exclusive breastfeeding reduces the risk of childhood illnesses, such as diarrhoea, gastrointestinal and respiratory infections. Breastfeeding is a natural method of family planning and also promotes sensory and cognitive development. Infants should be exclusively breastfed for 6 months to achieve optimal growth and development. Continued breastfeeding at 1 year was highest in Kyegegwa (94.1%) while continued breastfeeding at 2 years was the highest in Koboko (90%).

Introduction of solid, semi-solid or soft foods at age 6-8 months was Koboko (77.1%) and Isingiro (65.2%). The consumption of Iron-rich or Iron-fortified foods was found high in Koboko (77.8%), Isingiro (65.2%) and Kyegegwa (63.2%).

Table 31: Prevalence of Infant and Young Child Feeding Practices Indicators, Host Community, Uganda, October 2017

Indicator	Timely Initiation of Breastfeeding	Exclusive Breastfeeding Under 6 Months	Continued Breastfeeding At 1 Year	Continued Breastfeeding At 2 Years	Introduction of Solid, Semi-Solid or Soft Foods	Consumption of Iron-Rich or Iron-Fortified Foods	Bottle Feeding
Months	**0-23**	**0-5**	**12-15**	**20-23**	**6-8**	**6-23**	**0-23**
Isingiro	89.7%	77.6%	72.5%	73.9%	65.2%	98.8%	26.1%
Kyegegwa	80.8%	81.8%	94.1%	76.9%	63.2%	95.7%	11.8%
Hoima	89.1%	90.6%	81.0%	83.3%	52.2%	94.1%	18.0%
Kamwenge	75.0%	75.0%	84.0%	75.0%	62.1%	94.3%	20.6%
Kiryandongo	86.7%	76.9%	78.9%	83.3%	62.5%	96.5%	23.6%
Arua	96.2%	96.2%	73.7%	78.3%	50.0%	91.8%	15.5%
Adjumani	97.6%	97.6%	88.9%	83.3%	56.0%	88.3%	18.1%
Koboko	70.4%	72.7%	80.0%	90.0%	77.8%	95.1%	19.6%
Moyo	90.3%	77.3%	80.0%	77.8%	38.1%	95.3%	18.7%
Lamwo	85.9%	75.0%	83.3%	60.0%	28.6%	91.2%	14.6%
Yumbe	66.1%	87.5%	100.0%	80.0%	34.6%	92.9%	6.9%

Infant Formula

Mothers and caregivers were asked about giving their children infant formulas; the proportions of Infant Formula Intake in children aged 0-23 months varied from one district to another. Moyo (21.5%), Lamwo (21.4%), Kiryandongo (17.9%), Koboko (17.4%) and Isingiro (15.4%) had higher proportions of infants fed on infant formula. There is no free distribution of commercial infant formula in the districts hosting refugees in the country. The mothers and or caregivers who are giving infant formula to their infants buy it from the market. Health and nutrition actors are reminded to pass consistent and accurate information about breastfeeding and encourage family members to avoid separation of breastfeeding women and children.

Table 32 Infant Formula Intake in Children Aged 0-23 Months, Host Community, Uganda, October 2017

Host Community	Number/total	% (95% CI
Isingiro	37/241	15.4%(11.3-20.5)
Kyegegwa	6/127	4.7%(2.1-10.2)
Hoima	9/150	6%(3.1-11.2)
Kamwenge	6/141	4.3%(1.9-9.2)
Kiryandongo	25/140	17.9%(12.3-25.1)
Arua	18/123	14.6%(9.4-22.1)
Adjumani	12/161	7.1%(4.3-12.7)
Koboko	16/92	17.4%(10.9-26.6)
Moyo	23/107	21.5%(14.7-30.3)
Lamwo	22/103	21.4%(14.5-30.4)
Yumbe	4/131	3.1%(1.1-7.9)

Fortified Corn Soy Blended Foods

Corn Soy Blended Foods are mix of pre-cooked, dried and milled cereals, (soya or beans) and pulses fortified with vitamins and minerals. Enhanced formulations for specific nutrition purposes may contain vegetable oil or milk powder. Corn soya blend (CSB) is the main blended food distributed by WFP in different locations Majority of the children aged 6-23 months are enrolled in the Blanket Supplementary Feeding Programme where receive corn soya blended super cereal (CSB++). In Isingiro (90.3%), Kamwenge (82.9%), Kyegegwa (80.9%) and Koboko (77.8%) districts, a large majority of the children receive a blend food of cereal, pulses and micronutrient (vitamins and minerals).

Table 33: FBF and FBF++ Intake in Children Aged 6-23 Months, Host Community, Uganda, October 2017

Host Community	FBF intake in children aged 6-23 months (95% CI)	FBF++ intake in children aged 6-23 months (95% CI)
Isingiro (165)	22.4%(16.7-29.4)	90.3%(84.7-94.0)
Kyegegwa (94)	19.1%(12.4-28.4)	80.9%(71.6-87.6)
Hoima (118)	11.0%(6.5-18.1)	66.9%(57.9-74.9)
Kamwenge (105)	17.1%(11.0-25.6)	82.9%(74.4-89.0)
Kiryandongo (114)	18.4%(12.3-26.7)	67.5%(58.4-75.5)
Arua (97)	30.9%(22.5-40.8)	69.1%(59.2-77.5)
Adjumani (120)	15.8%(10.3-23.5)	71.7%(62.9-79.0)
Koboko (81)	16.0%(9.5-25.8)	77.8%(67.4-85.6)
Moyo (85)	23.5%(15.7-33.8)	67.1%(56.3-76.2)
Lamwo (91)	15.4%(9.3-24.4)	58.2%(47.8-68.0)
Yumbe (99)	25.3%(17.6-34.8)	65.7%(55.7-74.4)

Special Nutritional Products

Both Lipid Nutrient Supplement and Micro Nutrient Powder are not widely given applied in the districts hosting refugees. The intake in children aged 6-23 months of Micro Nutrient Powder ranged from 0% in Kyegegwa to 9.1% in Yumbe districts. Other districts that had at least noticeable intake of MNP among children 6-23 months were Kiryandongo (6.1%), Moyo (5.9%), Isingiro (4.8%), Kamwenge (4.8%) and Arua (4.1%). The Lipid Nutrient Supplement intake in

children aged 6-23 months ranged from 0.8% in Adjumani to 16.4% in Isingiro district. Relative higher itake of LNS was reported also in Yumbe (15.2%), Lamwo (12.1%), Moyo (11.8%), Kamwenge (11.4%) and Loboko (9.9%).

Table 34: MNP and LNS Intake in Children Aged 6-23 Months, Host Community, Uganda, October 2017

Host Community	MNP intake in children aged 6-23 months (C.I. 95%)	LNS intake in children aged 6-23 months (% (95% CI)
Arua (97)	4.1%(1.5-10.5)	8.2%(4.2-15.7)
Kamwenge (105)	4.8%(2.0-11.0)	11.4%(6.6-19.1)
Adjumani (120)	2.5%(0.8-7.5)	0.8%(0.1-5.7)
Isingiro (165)	4.8%(2.4-9.4)	16.4%(11.5-22.8)
Kiryandongo (114)	6.1%(2.9-12.4)	6.1%(2.9-12.4)
Kyegegwa (94)	0%(0-0)	4.3%(1.6-10.9)
Moyo (85)	5.9%(2.5-13.4)	11.8%(6.4-20.6)
Lamwo (91)	3.3%(1.1-9.8)	12.1%(6.8-20.6)
Yumbe (99)	9.1%(4.8-16.6)	15.2%(9.3-23.7)
Hoima (118)	3.4%(1.3-8.7)	4.2%(1.8-9.8)
Koboko (81)	3.7%(1.2-10.9)	9.9%(5.0-18.6)

Women 15-49 years

Malnutrition based on MUAC measurement was found higher in Kiryandongo (10.3%), Moyo (9.6%), Hoima (6.7%), Isingiro (6.0%) and Arua (5%). Mild and moderate acute malnutrition based on MUAC measurement was noticeable in Kiryandongo and Moyo districts though within acceptable rates.

Table 35: Prevalence of Malnutrition by Based on MUAC in Women, Host Community, Uganda, October 2017

	Total Malnutrition	Mild malnutrition (< 22 cm and >= 21.5 cm)	Moderate malnutrition (< 21.5 cm and >= 21 cm)	Severe malnutrition (< 21 cm)
Arua(n=318)	5.0%(3.1-8.1)	2.8%(1.5-5.4)	1.6%(0.7-3.7)	0.6%(0.2-2.5)
Kamwenge(n=289)	3.8%(2.1-6.7)	2.8%(1.4-5.4)	1.0%(0.3-3.2)	0%(0-0)
Adjumani(n=317)	4.7%(2.9-7.7)	2.5%(1.3-5.0)	2.2%(1.1-4.6)	0%(0-0)
Isingiro(n=581)	6.0%(4.4-8.3)	3.8%(2.5-5.7)	1.9%(1.1-3.4)	0.3%(0.1-1.4)
Kiryandongo(n=233)	10.3%(7.0-14.9)	6.0%(3.6-9.9)	4.3%(2.3-7.8)	0%(0-0)
Kyegegwa(n=308)	3.2%(1.8-5.9)	1.9%(0.9-4.3)	1.3%(0.5-3.4)	0%(0-0)
Moyo(n=251)	9.6%(6.5-13.9)	6.0%(3.6-9.7)	3.2%(1.6-6.3)	0.4%(0.1-2.8)
Lamwo(n=249)	1.2%(0.4-3.7)	0%(0-0)	1.2%(0.4-3.7)	0%(0-0)
Yumbe(n=302)	3.0%(1.6-5.6)	1.7%(0.7-3.9)	1.0%(0.3-3.0)	0.3%(0.0-2.3)
Hoima(n=312)	6.7%(4.4-10.1)	3.5%(2.0-6.3)	3.2%(1.7-5.9)	0%(0-0)
Koboko(n=244)	2.9%(1.4-5.9)	2.0%(0.9-4.8)	0.8%(0.2-3.2)	0%(0-0)

As expected majority of the women at reproductive age participated in the survey were not pregnant. The proportions of pregnant women at reproductive age ranged from 63.3% in Moyo to 89.6% in Adjumani. The proportion of women who were pregnant at reproductive age ranged from 10.4% in Adjumani to 39.9% Kiryandongo district.

Table 36: Women Physiological Status and Age, Host Community, Uganda, October 2017

Host Community	Non-Pregnant		Pregnant	
	Number/Total	%	Number/Total	%
Isingiro	475/581	81.8%	107/581	18.4%
Kyegegwa	227/308	73.7%	81/308	26.3%
Hoima	208/312	66.7%	104/312	33.3%
Kamwenge	246/289	85.1%	43/289	14.9%
Kiryandongo	140/233	60.1%	93/233	39.9%
Arua	259/318	81.4%	59/318	18.6%
Adjumani	284/317	89.6%	33/317	10.4%
Koboko	193/244	79.1%	51/244	20.9%
Moyo	159/251	63.3%	92/251	36.7%
Lamwo	209/249	83.9%	40/249	16.1%
Yumbe	247/302	81.8%	55/302	18.2%

The mean age of the women participated in the assessment ranged from 27.1 years in Koboko to 31.2 years in Kiryandongo district. With an expcetion of Arua and Lamwo districts the rest of the women participated in the assessments in each district had their age ranging from 15 to 49 years.

Table 37: Women Physiological Status and Age, Host Community, Uganda, October 2017

Host Community	Mean Age (Range)
Isingiro	28.3 Years, (15 Min-49Max)
Kyegegwa	28.1 Years, (15 Min-49Max)
Hoima	28.3 Years, (15 Min-49Max)
Kamwenge	28.1 Years, (15 Min-49Max)
Kiryandongo	31.2 Years, (15 Min-49Max)
Arua	28.8 Years, (15 Min-48Max)
Adjumani	28.1 Years, (15 Min-49Max)
Koboko	27.1 Years, (15 Min-49Max)
Moyo	30.4 Years, (15 Min-49Max)
Lamwo	27.6 Years, (15 Min-48Max)
Yumbe	28.6 Years, (15 Min-49Max)

Analysis of anaemia severity categories in non-pregnant women of reproductive age revealed that total anaemia was higher than 40% (WHO-classification of public health significance) in Kiryandongo (41.4%), this was followed by Lamwo (34.9%), Adjumani (33.1%) and Yumbe (30%). Total anaemia continued to improve in Kamwenge (20.7%), Hoima (23.6%), Kyegegwa (24.2%) and Isingiro (25.0%). Classifiying anaemia by categories, mild anaemia was higher in Lamwo (20.1%) and Arua (23.6%) and moderate anaemia was relatively higher in Kiryandongo (20.7%). Severe anaemia was higher in Adjumani (8.1%) and Arua (4.6%) and Isingiro (3.8%) when compared with other districts.

Table 38: Prevalence of Anaemia in Non-Pregnant Women of Reproductive Age (15-49 Years), Host Community, Uganda, October 2017

Host Community	Total Anaemia (<12.0 g/dL)	Mild Anaemia (11.0-11.9 g/dL)	Moderate Anaemia (8.0-10.9 g/dL)	Severe Anaemia (<8.0 g/dL)
Isingiro (n=474)	25.1% (21.4-29.2)	12.4% (9.8-15.7)	9.3% (7.0-12.3)	3.4% (2.1-5.4)
Kyegegwa (n=227)	24.2% (19.1-30.2)	14.1% (10.1-19.3)	8.4% (5.4-12.8)	1.8% (0.7-4.6)
Hoima (n=208)	23.6% (18.3-29.8)	14.9% (10.7-20.4)	7.2% (4.4-11.6)	1.4% (0.5-4.4)
Kamwenge (n=246)	20.7% (16.1-26.3)	11.8% (8.3-16.5)	6.5% (4.0-10.4)	2.4% (1.1-5.3)
Kiryandongo (n=140)	41.4% (33.5-49.8)	17.9% (12.3-25.1)	20.7% (14.8-28.3)	2.9% (1.1-7.4)
Arua (n=259)	32.0% (26.6-38.0)	23.6% (18.8-29.1)	3.9% (2.1-7.0)	4.6% (2.6-8.0)
Adjumani (n=284)	33.1% (27.9-38.8)	14.4% (10.8-19.03)	10.6% (7.5-14.7)	8.1% (5.4-11.9)
Koboko (n=193)	29.0% (23.0-35.8)	17.1% (12.4-23.1)	9.3% (5.9-14.3)	2.6% (1.1-6.1)
Moyo(n=159)	28.9% (22.4-36.5)	12.6% (8.2-18.7)	14.5% (9.8-20.9)	1.9% (0.6-5.7)
Lamwo(n=209)	34.9% (28.8-41.7)	20.1% (15.2-26.1)	12.9% (9.0-18.2)	1.9% (0.7-5.0)
Yumbe(n=247)	30.0% (24.6-36.0)	18.2% (13.9-23.5)	10.1% (6.9-14.6)	1.6% (0.6-4.2)
Isingiro (n=209)	27.8% (22.1-34.2)	14.4% (10.2-19.8)	9.6% (6.2-14.4)	3.8% (1.9-7.5)

The haemoglobin concentration in non-pregnant women of reproductive age (15-49 years), ranged from 12.5g/dL in Lamwo district to 13.3 g/dL in Isingiro and Koboko districts. Lamwo district had the lowest standard deviation of 1.5 SD while Arua had 2.6 SD. The minimum level of haemoglobin concentration was 7.1 g/dL while the highest was around 16.9 g/dL this was widely distributed in the districts with an exception of Kyegegwa, Koboko, Hoima and Moyo districts where the minimum was different comared to the maximum value.

Table 39: Haemoglobin Concentration in Non-Pregnant Women of Reproductive Age (15-49 Years), Host Community, Uganda, October 2017

Host Community	Mean Hb (g/dL) (SD / 95% CI) [range]
Isingiro (n=581)	13.3 g/dL (2.3 SD) [7.1 min, 16.9 max]
Kyegegwa (n=308)	13.1 g/ dL (1.6 SD) [10.1 min, 16.9 max]
Hoima (n=312)	13.1 g/ dL (1.7 SD) [7.2 min, 16.9 max]
Kamwenge(n=289)	13.1 g/ dL (2.2 SD) [7.1 min, 16.9 max]
Kiryandongo(n=233)	13.0 g/ dL (2.1 SD) [7.1 min, 16.9 max]
Arua (n=318)	12.7 g/ dL (2.6 SD) [7.1 min, 16.9 max]
Adjumani (n=317)	12.6 g/ dL (2.7 SD) [7.1 min, 16.9 max]
Koboko (n=244)	13.3 g/ dL (2.1 SD) [10.1 min, 16.9 max]
Moyo(n=251)	13.1 g/ dL (2.1 SD) [7.2 min, 16.9 max]
Lamwo(n=249)	12.5 g/ dL (1.5 SD) [7.1 min, 16.9 max]
Yumbe(n=302)	12.9 g/ dL (1.7 SD) [7.1 min, 16.9 max]

The study found that currently enrolled in ANC programme was highest in Kamwenge at (95.3%) and lowest in Yumbe (56.4%). Relatively better enrollement rates among women attending ANC were registered in Adjumani (84.8%), Lamwo (77.5%) and Kyegegwa (76.5%). Of the women enrolled in the ANC programme, the proportion of the pregnant women who received Iron-Folic Acid pills was highest in Kamwenge (81.4%), followed by Adjumani (75.6%) and Lamwo (75.0%).

Table 40: ANC Enrolment and Iron-Folic Acid Pills Coverage Among Pregnant Women (15-49 Years), Host Community, Uganda, October 2017

Host Community	Currently enrolled in ANC programme		Currently Receiving Iron-Folic Acid Pills	
	Number/ Total	% (95% CI	Number/ Total	% (95% CI
Isingiro	65/107	60.7%(51.2-70.0)	44/65	67.7%(55.3-77.9)
Kyegegwa	62/81	76.5%(66.0-84.6)	56/62	90.3%(79.9-95.6)
Hoima	72/104	69.2%(59.7-77.4)	48/72	66.7%(54.9-76.6)
Kamwenge	41/43	95.3%(82.9-98.9)	35/41	85.4%(70.8-93.4)
Kiryandongo	54/93	58.1%(47.8-67.7)	23/54	42.6%(30.1-56.2)
Arua	34/59	57.6%(44.7-69.6)	21/34	61.8%(44.4-76.6)
Adjumani	28/33	84.8%(68.0-93.6)	25/28	89.3%(71.0-96.6)
Koboko	34/51	66.7%(52.6-78.4)	27/34	79.4%(62.3-89.9)
Moyo	53/92	57.6%(47.3-67.3)	22/53	41.5%(28.9-5.2)
Lamwo	31/40	77.5%(61.9-88.0)	30/31	96.8%(79.8-99.6)
Yumbe	31/55	56.4%(43.0-68.9)	23/31	74.2%(55.9-86.7)

Food Security

Table 41: Food Security Sampling Information, Host Community, Uganda, October 2017

Host Community	Planned sample size	Actual sample size reached	% of Target
Isingiro	294	479	162.9%
Kyegegwa	142	319	224.6%
Hoima	148	284	191.9%
Kamwenge	143	287	200.7%
Kiryandongo	138	215	155.8%
Arua	154	252	163.6%
Adjumani	151	311	206%
Koboko	90	90	100%
Moyo	79	79	100%
Lamwo	141	211	149.6%
Yumbe	149	261	175.2%

Shocks and Coping

Reduced Coping Strategies Index

Reduced coping strategies among host communities under study were assessed in the last 7 days prior to the assessment day. The study found that in Isingiro (76.6%) and Lamwo (78.7%) of the households relied on less preferred and less expensive food. The proportions of households that borrowed food or relied on help from friends or relatives was high in Lamwo (42.2%) and Isingiro (41.1%), and Kyegegwa recorded 33.5%. Households also reduced the number of meals eaten per day in order to cope with food shortages at household level whereby Isingiro (58.9%) had the highest followed by Lamwo (46.9%). Reduced portion size of meals was highest in Isingiro (62.8%) again and was followed by Lamwo (47.4%). Reduction in the quantities consumed by adults/mothers for young children was highest in Isingiro (49.1%), followed by Kyegegwa (28.2%) and Kiryandongo (27.9%). Overall Isingiro and Lamwo districts applied the most of all negative coping mechanism 7 days prior the assessment.

Table 42: Proportion of Households That Used Each of The Coping Mechanisms in The Last 7 Days Prior To The Survey Date, Host Communities, Uganda, October 2017

Host Community	Relied on less preferred, less expensive food	Borrowed food or relied on help from friends or relatives	Reduced the number of meals eaten per day	Reduced portion size of meals	Reduced quantities consumed by adults/mothers for young children
Isingiro(n=479)	76.6% (72.6-80.2)	41.1% (36.8-45.6)	58.9% (54.4-63.2)	62.8% (58.4-67.1)	49.1% (44.6-53.5)
Kyegegwa(n=319)	45.1% (39.7-50.6)	33.5% (28.6-38.9)	35.1% (30.1-40.5)	33.2% (28.3-38.6)	28.2% (23.5-33.4)
Hoima(n=284)	31.7% (26.5-37.3)	14.4% (10.8-19.0)	21.1% (16.8-26.3)	15.8% (12.0-20.6)	10.5% (7.4-14.7)
Kamwenge(n=287)	50.9% (45.1-56.6)	18.1% (14.0-23.0)	33.4% (28.2-39.1)	27.5% (22.7-33.0)	23.7% (19.1-29.0)
Kiryandongo(n=215)	34.0% (27.9-40.6)	30.2% (24.5-36.7)	29.3% (23.6-35.7)	29.3% (23.5-35.7)	27.9% (22.3-34.3)
Arua(n=252)	34.5% (28.9-40.6)	19.8% (15.4-25.2)	34.9% (29.3-41.0)	32.1% (26.7-38.2)	22.6% (17.9-28.2)
Adjumani(n=311)	32.5% (27.5-37.9)	23.2% (18.8-28.2)	28.0% (23.3-33.2)	23.5% (19.1-28.5)	11.6% (8.5-15.6)
Koboko(n=90)	36.7% (27.3-47.1)	20% (12.9-29.6)	23.3% (15.7-33.2)	34.4% (25.3-44.9)	20% (12.9-29.6)
Moyo(n=79)	35.4% (25.7-46.6)	8.9% (4.3-17.5)	31.6% (22.3-42.7)	15.2% (8.8-25.0)	6.3% (2.6-14.4)
Lamwo(n=211)	78.7% (72.6-83.7)	42.2% (35.7-49.0)	46.9% (40.3-53.7)	47.4% (40.7-54.2)	24.6% (19.3-30.9)
Yumbe(n=261)	29.5% (24.3-35.3)	10.7% (7.5-15.1)	17.2% (13.1-22.3)	14.9% (11.1-19.8)	9.6% (6.5-13.8)

Proportion of households reporting using none of the coping strategies over the past 7 days of above discussed 5 negative coping mechanisms was highest in Hoima (64.8%), followed by Kiryandongo (62.8%), Yumbe (62.1%) and Arua 58.3%. The lowest proportion of households reporting using none of the coping strategies over the past 7 days was recorded in Lamwo (15.2%). Isingiro (19.0%) district had also the second lower rate of households reporting not using any of the negative coping mechanism discussed.

Table 43: Proportion of Households That Used None of The Reduced Coping Mechanisms in The Last 7 Days Prior To The Survey Dates, Host Community, Uganda, October 2017

Host Community	Proportion of households reporting using none of the reduced coping strategies over the past 7 days
Isingiro(n=479)	19.0% (15.7-22.8)
Kyegegwa(n=319)	52.0%(46.5-57.5)
Hoima(n=284)	64.8%(59.0-70.1)
Kamwenge(n=287)	47.0%(41.3-52.8)
Kiryandongo(n=215)	62.8%(56.1-69.0)
Arua(n=252)	58.3%(52.1-64.3)
Adjumani(n=311)	55.6%(50.0-61.1)
Koboko(n=90)	56.7%(46.2-66.5)
Moyo(n=79)	49.4%(38.5-60.3)
Lamwo(n=211)	15.2%(10.9-20.7)
Yumbe(n=261)	62.1%(56.0-67.8)

Negative Coping Strategies Used over the Past Month

The assessment also looked into negative coping strategies used by households over the past one month prior to the assessment. Of the studied negative coping strategies, borrowed cash, food or other items with or without interest was highest in Lamwo (52.6%), Isingiro (50.1%), Kyegegwa (30.4%), and Hoima (22.5%). Begging was the second most important negative coping strategy which households overall used; about 34.1% of households interviewed in Lamwo reported begging as one of the essential coping strategy; in Kyegegwa about 27.6% of the households used begging. Begging was only used by 1.7% of the households interviewed in Kamwenge, the lowest rate on this coping strategy. The proportion of household that sold any assets that would not have normally sold (furniture, seed stocks, tools, other NFI, livestock etc.) as a coping strategy was not very much used by households, only Lamwo had about 10% of the households used this strategy a month before the study. Households engaged in potentially risky or harmful activities were generally low across the districts; only 1.6% used this coping stragey in Kyegegwa.

The proportion of households reporting using none of the negative coping strategies over the past month was highest in in Kiryandongo (80.5%), Yumbe (76.2%), Moyo (75.9%) and Kamwenge (73.5%).

Table 44: Negative Coping Strategies Used by the Surveyed Population Over The Past Month, Host Community, Uganda, October 2017

Host Community	Borrowed cash, food or other items *with or without interest*	Sold any assets that would not have normally sold (furniture, seed stocks, tools, other NFI, livestock etc.)	Begged	Engaged in potentially risky or harmful activities
Isingiro(n=479)	50.1%(45.6-54.6)	4.0%(2.5-6.1)	13.4%(10.6-16.7)	0.2%(0.0-1.5)
Kyegegwa(n=319)	30.4%(25.6-35.7)	1.3%(0.5-3.3)	27.6%(23.0-32.8)	1.6%(0.7-3.7)
Hoima(n=284)	22.5%(18.0-27.8)	1.1%(0.3-3.2)	14.4%(10.8-19.0)	0.4%(0.0-2.5)
Kamwenge(n=287)	17.4%(13.5-22.3)	1.0%(0.3-3.2)	1.7%(0.7-4.1)	0%(0-0)
Kiryandongo(n=215)	12.6%(8.7-17.7)	1.9%(0.7-4.9)	7.9%(5.0-12.4)	0%(0-0)
Arua(n=252)	18.3%(13.9-23.5)	0.8%(0.2-3.1)	4.4%(2.4-7.7)	0.4%(0.1-2.8)
Adjumani(n=311)	19.6%(15.6-24.4)	0.6%(0.2-2.5)	9.0%(6.3-12.7)	0%(0-0)
Koboko(n=90)	21.1%(13.9-30.8)	2.2%(0.6-8.5)	3.3%(1.1-9.9)	0%(0-0)
Moyo(n=79)	12.7%(6.9-22.0)	0%(0-0)	7.6%(3.4-16.0)	0%(0-0)
Lamwo(n=211)	52.6%(45.8-59.3)	10.4%(7.0-15.3)	34.1%(28.0-40.8)	0.5%(0.1-3.3)
Yumbe(n=261)	13.0% (9.4-17.6)	0%(0-0)	5.0%(2.9-8.4)	0%(0-0)

Futher negative coping strategies used by the surveyed population over the past month included selling of more animals (non-productive than usual) where in Lamwo (26.5%) of the households reported using this coping strategy. Spending on savings was more important in Isingiro (38.6%) and in Lamwo about 8.1% of the households reported to have sold productive assets or means of transport. Reduced essential non-food expenditures such as education, health etc was more important in Isingiro with 22.5% of households reporting to have used this coping mechanim. Consuming of seed stock held for next season was high in Isingiro where 43.2% of the households reported to have used this strategy.

Table 45: Negative Coping Strategies Used by the Surveyed Population Over The Past Month, Host Community, Uganda, October 2017

Host Community	Sold more animals (non-productive than usual)	Spent savings	Sold productive assets or means of transport	Reduced essential non-food expenditures such as education, health etc	Consume seed stock held for next season	Sold house or land
Isingiro(n=479)	9.6% (7.3-12.6)	38.6% (34.4-43.1)	7.3% (5.3-10.0)	22.5% (19.0-26.5)	43.2% (38.8-47.7)	1.5% (0.7-3.0)
Kyegegwa(n=319)	10.0% (7.2-13.9)	17.6% (13.8-22.1)	4.1% (2.4-6.9)	16.6% (12.9-21.1)	27.0% (22.4-32.1)	1.6% (0.7-3.7)
Hoima(n=284)	1.4% (0.5-3.7)	23.9% (19.3-29.3)	5.6% (3.5-9.0)	6.0% (3.7-9.4)	14.1% (10.5-18.6)	0.4% (0.0-2.5)
Kamwenge(n=287)	5.6% (3.4-8.9)	9.1% (6.2-13.0)	2.4% (1.2-5.0)	1.0% (0.3-3.2)	6.6% (4.3-10.2)	0.7% (0.2-2.8)
Kiryandongo(n=215)	5.6% (3.2-9.6)	4.7% (2.5-8.4)	2.8% (1.3-6.1)	8.4% (5.3-12.9)	4.7% (2.5-8.4)	1.4% (0.4-4.2)
Arua(n=252)	13.1% (9.5-17.9)	10.7% (7.4-15.2)	7.1% (4.5-11.1)	9.9% (6.8-14.3)	13.1% (9.5-17.9)	0% (0-0)
Adjumani(n=311)	5.1% (3.2-8.2)	12.2% (9.0-16.4)	1.0% (0.3-3.0)	2.3% (1.1-4.7)	5.8% (3.7-9.0)	0% (0-0)
Koboko(n=90)	17.8% (11.2-27.1)	13.3% (7.7-22.1)	5.6% (2.3-12.7)	6.7% (3.0-14.1)	23.3% (15.7-33.2)	1.1% (0.2-7.5)
Moyo(n=79)	7.6% (3.4-16.0)	10.1% (5.1-19.0)	0% (0-0)	1.3% (0.2-8.5)	10.1% (5.1-19.0)	0% (0-0)
Lamwo(n=211)	26.5% (21.0-32.9)	36.0% (29.8-42.7)	8.1% (5.1-12.6)	20.9% (15.9-26.9)	23.2% (18.0-29.4)	3.8% (1.9-7.4)
Yumbe(n=261)	5.7% (3.5-9.3)	4.2% (2.3-7.5)	1.1% (0.4-3.5)	4.6% (2.6-7.9)	9.2% (6.2-13.4)	0% (0-0)

* The total will be over 100% as households may use several negative coping strategies.

Overall, proportion of households reporting using a stress coping mechanism (sold of animals, sold household goods i.e. radio, furniture, spent savings, or borrowed money) was highest in Lamwo (70.6%), this was followed by Isingiro (63.7%) and Kyegegwa (38.6%). Kiryandongo (17.7%) and Yumbe (18.4%) districts had relatively low households that used stress coping mehanims. The use of crisis coping mechanisms (sold productive asserts, or means of gransport, reduced expenditure on non-food items, consumed seed stocks) was higher in Isingiro (50.3%), followed by Lamwo (39.8%) and Kyegegwa (29.2%). Kamwenge and Adjumani districts had the lowest proportion of household that used crisis coping mechanism, only 8% reported using these strategies. The proportion of households reporting using an emergency (sold land, houses, illegal income, prostitution and begging) coping mechanism was highest in Lamwo (35.5%), Kyegegwa (27.9%), Hoima (15.1%) and Isingiro (14.4%). Kamwenge (2.4%) district had fewer households that used emergency coping mechanisms; Koboko (4.4%), Arua (4.8%), and Yumbe (5%) followed this.

Table 46: Coping Strategies Used by the Surveyed Population Over The Past Month, Host Community, Uganda, October 2017

Host Community	Proportion of households reporting using a stress coping mechanism (1-4)	Proportion of households reporting using a crisis coping mechanism (5-7)	Proportion of households reporting using an emergency coping mechanism (8-10)
Isingiro(n=479)	63.7%(59.3-67.9)	50.3%(45.8-54.8)	14.4%(11.5-17.8)
Kyegegwa(n=319)	38.6%(33.4-44.0)	29.2%(24.4-34.4)	27.9%(23.2-33.1)
Hoima(n=284)	33.8%(28.5-39.5)	21.1%(16.8-26.3)	15.1%(11.4-19.8)
Kamwenge(n=287)	23.3%(18.8-28.6)	8.0%(5.4-11.8)	2.4%(1.2-5.0)
Kiryandongo(n=215)	17.7%(13.1-23.4)	12.6%(8.7-17.7)	8.4%(5.3-12.9)
Arua(n=252)	22.2%(17.5-27.8)	19.8%(15.4-25.2)	4.8%(2.7-8.2)
Adjumani(n=311)	26.7%(22.1-31.9)	8.0%(5.5-11.6)	9.0%(6.3-12.7)
Koboko(n=90)	35.6%(26.3-46.0)	25.6%(17.6-35.6)	4.4%(1.7-11.3)
Moyo(n=79)	20.3%(12.8-30.6)	11.4%(6.0-20.5)	7.6%(3.4-16.0)
Lamwo(n=211)	70.6%(64.1-76.4)	39.8%(33.4-46.6)	35.5%(29.4-42.3)
Yumbe(n=261)	18.4%(14.1-23.6)	11.5%(8.1-16.0)	5.0%(2.9-8.4)

The proportion of households reporting using none of the negative coping strategies over the past month ranged from 21.3% in Lamwo to 80.5% in Kiryandongo among the host community. Other locations with high proportion of households reporting using none of the negative coping strategies over the past one month were; Yumbe (76.2%), Moyo (75.9%), Kamwenge (73.5%) and Arua (73.0%).

Table 47: Proportion of Households Reporting Using None of the Negative Coping Strategies Over The Past Month, Host Community, Uganda, October 2017

Host Community	Proportion of households reporting using none of the negative coping strategies over the past month
Isingiro(n=479)	25.7%(22.0-29.8)
Oruchinga(n=149)	28.9%(22.1-36.7)
Kyegegwa(n=319)	53.3%(47.8-58.7)
Hoima(n=284)	57.0%(51.2-62.7)
Kamwenge(n=287)	73.5%(68.1-78.3)
Kiryandongo(n=215)	80.5%(74.6-85.2)
Arua(n=252)	73.0%(67.2-78.1)
Adjumani(n=311)	68.5%(63.1-73.4)
Koboko(n=90)	56.7%(46.2-66.5)
Moyo(n=79)	75.9%(65.3-84.1)
Lamwo(n=211)	21.3%(16.3-27.4)
Yumbe(n=261)	76.2%(70.7-81.0)

The Household Dietary Diversity Score[4] is the number of food groups consumed by any member of the household within 24 hours; it reflects the intake of food groups at the household level and is used as a proxy for dietary intake and household food access. In this particular assessment, HDDS is used to identify food access and consumption problems at the population level. The higher the applications of various forms of coping mechanisms (stress, crisis and emergency) tend

[4] Note: Additional data collection and analysis on the Food Consumption Score is on-going and will be shared as an addendum to this full report in the first quarter of 2018

to lower the household dietrary diversity. Districts, which had higher use of coping mechanism, had lower HDDS (Isingiro, Lamwo and Adjumani). Arua had the highest mean HDDS reported at 5.8, this implies that households in this district had higher diertary diversity when compared with other districts. The second district with higher HDDS was Hoima with 5.7 HDDS; and others were; Koboko 5.5 HDDS, Kyegegwa 5.3 HDDS and Kamwenge 5.2 HDDS.

Table 48: Average HDDS, Host Community, Uganda, October 2017

Host Community	Mean
Isingiro	Mean 4.5 CI (4.3 - 4.6), 1.7 SD
Kyegwegwa	Mean 5.3 CI (5.0 - 5.6), 2.0 SD
Hoima	Mean 5.7 CI (5.3 - 6.0), 2.2 SD
Kamwenge	Mean 5.2 CI (5.0 - 5.4), 2.0 SD
Kiryandongo	Mean 4.8 CI (4.4 - 5.2), 2.2 SD
Arua	Mean 5.8 CI (5.5 - 6.2), 2.2 SD
Adjumani	Mean 3.6 CI (3.4 - 3.8), 1.6 SD
Koboko	Mean 5.5 CI (4.9 - 6.1), 2.2 SD
Moyo	Mean 5.1 CI (3.7 - 4.2), 2.0 SD
Lamwo	Mean 3.9 CI (3.7 - 4.2), 1.8 SD
Yumbe	Mean 4.9 CI (4.6 - 5.2), 1.9 SD

* Maximum HDDS is 12.

The main sources of food to households in the districts hosting refugees varied from one district to another. On average in each district, market (purchase with cash) was the main source of food acquisitions reported by households. Yumbe reported 100% of the households would purchase their food from a market with cash while in Kamwenge 99.2 percentage of the household would pucrahse their food with cash from a market. Own food production was the second most important food sources among households whereby 90.1% of the households in Moyo district would obtain their food through own productions.

Table 49: Main Food Source, Host Community, Uganda, October 2017

	Own Production	Fishing/ Hunting	Gathering	Borrowed	Market (Purcahse with Cash)	Market (Purcahse with Credit)	Beg for Food	Exchange Labour	Gift from Family	Food Aid/ NGOs
Arua	85.8%	14.9%	5.7%	75.9%	94.3%	14.9%	0.7%	4.3%	8.5%	1.4%
Kamwenge	58.2%	56.4%	9.8%	81.2%	99.0%	9.8%	1.0%	1.4%	4.5%	1.0%
Adjumani	88.1%	10.3%	27.2%	67.1%	96.7%	0.4%	0.0%	0.8%	2.1%	0.4%
Isingiro	52.5%	40.4%	7.9%	55.2%	96.4%	7.7%	2.5%	8.2%	3.3%	2.3%
Kiryandongo	57.1%	21.0%	6.7%	86.6%	99.2%	2.5%	0.8%	5.0%	2.5%	0.8%
Kyegwegwa	81.0%	21.8%	6.6%	80.6%	97.2%	6.2%	2.8%	3.8%	2.4%	1.4%
Moyo	90.1%	9.9%	0.0%	57.7%	97.2%	2.8%	0.0%	0.0%	0.0%	0.0%
Lamwo	82.4%	11.0%	7.6%	50.5%	91.9%	2.9%	5.7%	12.4%	10.0%	1.9%
Yumbe	88.7%	4.0%	1.3%	88.0%	100.0%	2.0%	0.0%	2.7%	4.7%	1.3%

Hoima	80.0%	50.0%	21.4%	82.9%	95.7%	5.0%	0.7%	2.1%	1.4%	0.0%
Koboko	92.3%	15.4%	7.7%	78.8%	98.1%	13.5%	0.0%	7.7%	5.8%	0.0%

The consumption of micronutrient rich foods by households was more vivid in districts that had better mean HDDS. For example, the proportion of households consuming either a plant or animal source of vitamin A was high in Kamwenge district (84.0%), it is important to note that in Kamwenge majority of the households obtained their food by purchasing food from the market with cash.

The proportion of households not consuming any vegetables, fruits, and meat, eggs, fish/seafood, and milk/milk products was computed. The highest proportion was recorded in Hoima (55.2%), followed by Hoima (53.5%) and Kiryandongo (52.6%).

Table 50: Consumption of Micronutrient Rich Foods by Households, Host Community, Uganda, October 2017

Host Community	Proportion of households *not consuming any* vegetables, fruits, meat, eggs, fish/seafood, and milk/milk products	Proportion of households consuming either a plant or animal source of vitamin A	Proportion of households consuming organ meat/flesh meat, or fish/seafood (food sources of haem iron)
Isingiro(n=479)	18.2%(15.0-21.9)	70.1%(65.9-74.1)	16.9%(13.8-20.5)
Kyegwegwa(n=319)	41.7%(36.4-47.2)	53.9%(48.4-59.3)	11.6%(8.5-15.6)
Hoima(n=284)	53.5%(47.7-59.3)	38.7%(33.2-44.5)	21.5%(17.1-26.6)
Kamwenge(n=287)	7.7%(5.1-11.4)	84.0%(79.3-87.8)	21.3%(16.9-26.4)
Kiryandongo(n=215)	52.6%(45.9-59.2)	38.1%(31.9-44.8)	19.5%(14.8-25.4)
Arua(n=252)	45.6%(39.6-51.8)	50.8%(44.6-56.9)	20.2%(15.7-25.7)
Adjumani(n=311)	48.9%(43.3-54.4)	37.6%(32.4-43.1)	13.2%(9.8-17.4)
Koboko(n=90)	48.9%(38.7-59.2)	48.9%(38.7-59.2)	20%(12.9-29.6)
Moyo(n=79)	36.7%(26.8-47.9)	58.2%(47.1-68.6)	20.3%(12.8-30.6)
Lamwo(n=211)	19.0%(14.2-24.8)	69.7%(63.1-75.5)	17.1%(12.6-22.8)
Yumbe(n=261)	55.2%(49.1-61.1)	36.8%(31.1-42.8)	7.7%(5.0-11.6)

Main Income Source

Approximately 56.7% of the households among host district households had at least 1 income earner at the time of the assessment. Kamwenge (93.7%) and Isingiro (90.0%) had the highest proportions of households reporting to have at least one income earner. The two districts also had the highest proportions of 1 to 4 income earners with 93.0% and 89.8% for Kamwenge and Isingiro districts. At least in each district there were households that reported to have no income earner; Kiryandongo (73.0%), Moyo (58.2%), Yumbe (39.8%), Arua (39.7%) and Adjumani (39.5%).

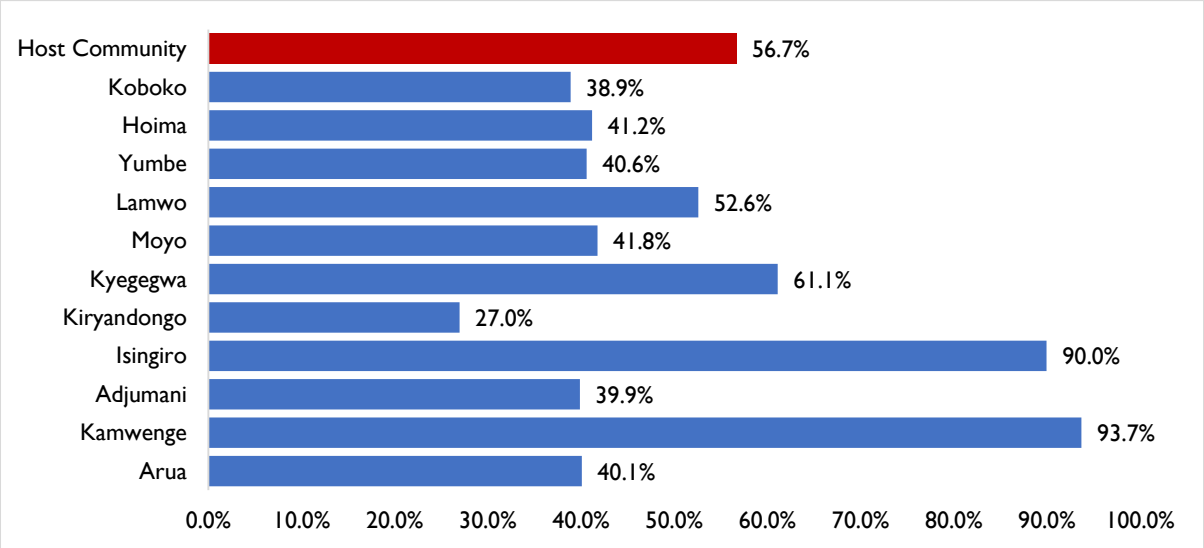

Figure 4: At least one-income earners at household level, October 2017, Uganda

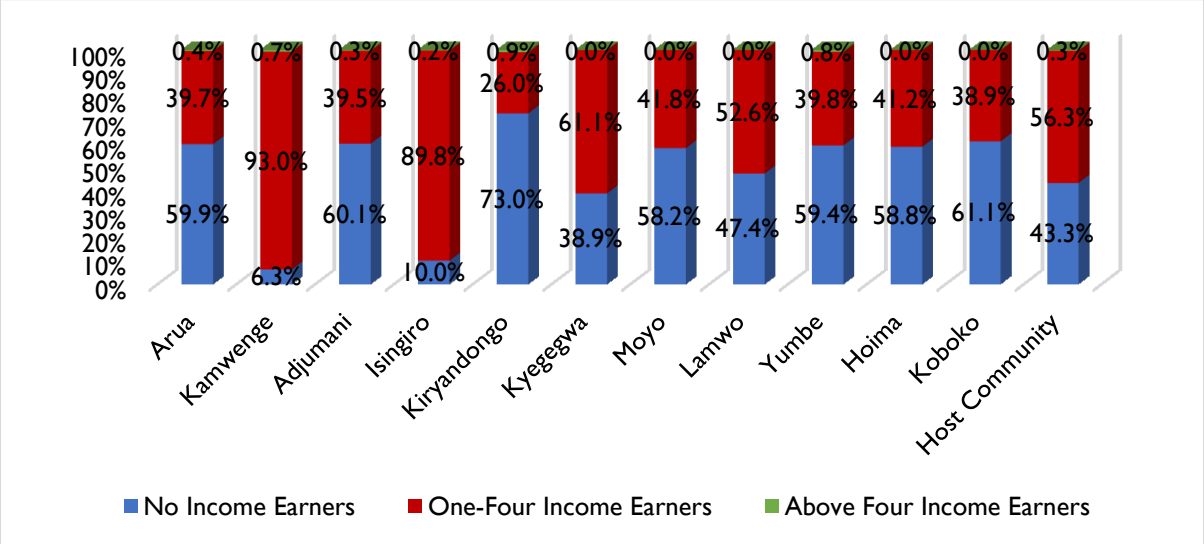

Figure 5: More than 1 income earners at household levels, October 2017, Uganda

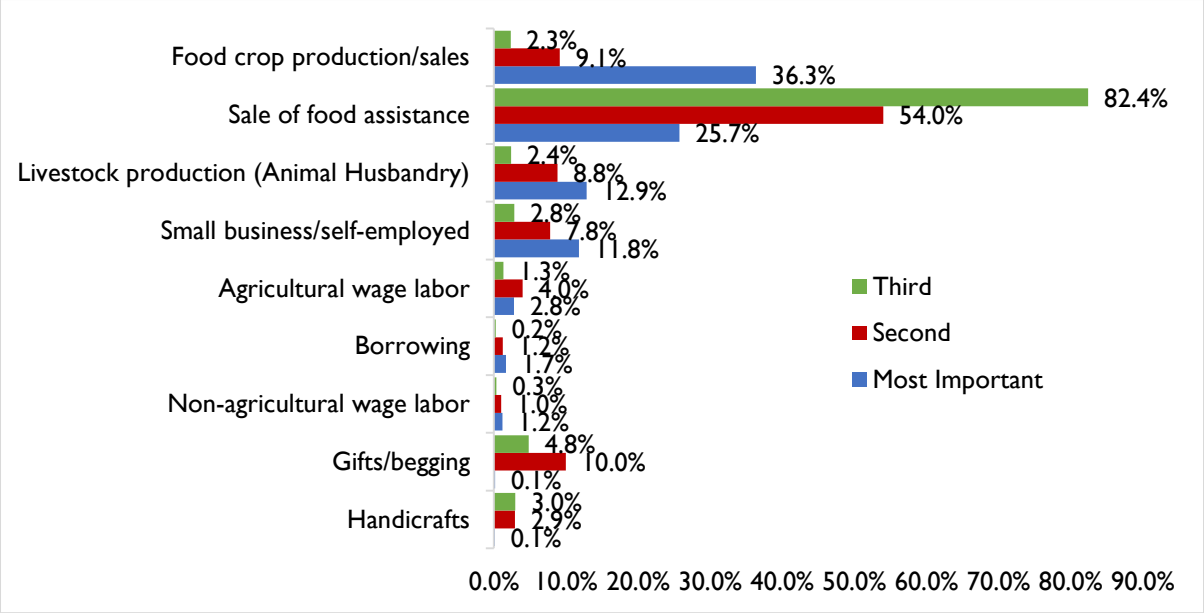

Figure 6: Livelihood income sources, Host Community, October 2017, Uganda

Food crop production (36.3%) was the main source of income among host community, the second most livelihood income source was sale of food and some livestock products. The third most important source of income was sale of food products.

Expenditures and Debt

On average 30.8% of the households interviewed had a debt to repay across the districts. The proportions of households with debt to repay was highest in Kamwenge (61.7%), followed by Isingiro (47.2%), Lamwo district (44.5%) and Adjumani (31.5%). The lowest proportions were recorded in Hoima (10.7%), Kiryandongo (10.7%), and Yumbe (10.7%). Debts may be beneficial to the households'livelihoods.

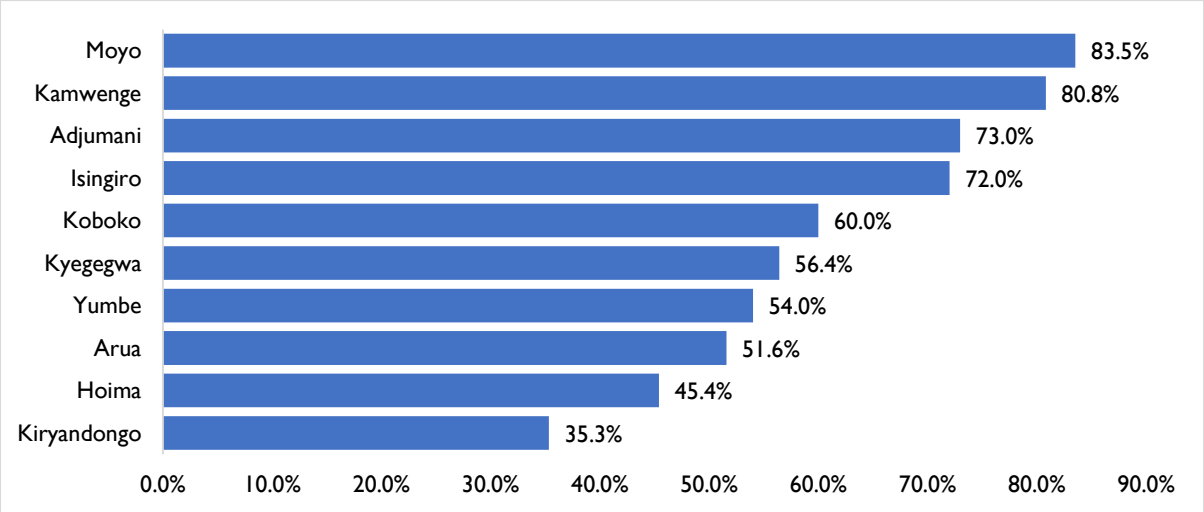

Figure 7: The proportions of households with debt repay, October 2017, Uganda

Overall a small proportion of households in host community had a debt less than 30,000.00 UGx (5.8%). The highest proportions of households with debt to repay less than 30,000.00 UGx was Lamwo district., Kamwenge was second with 11.5%. This implies that most households had higher debts than 30,000.00 UGx to repay.

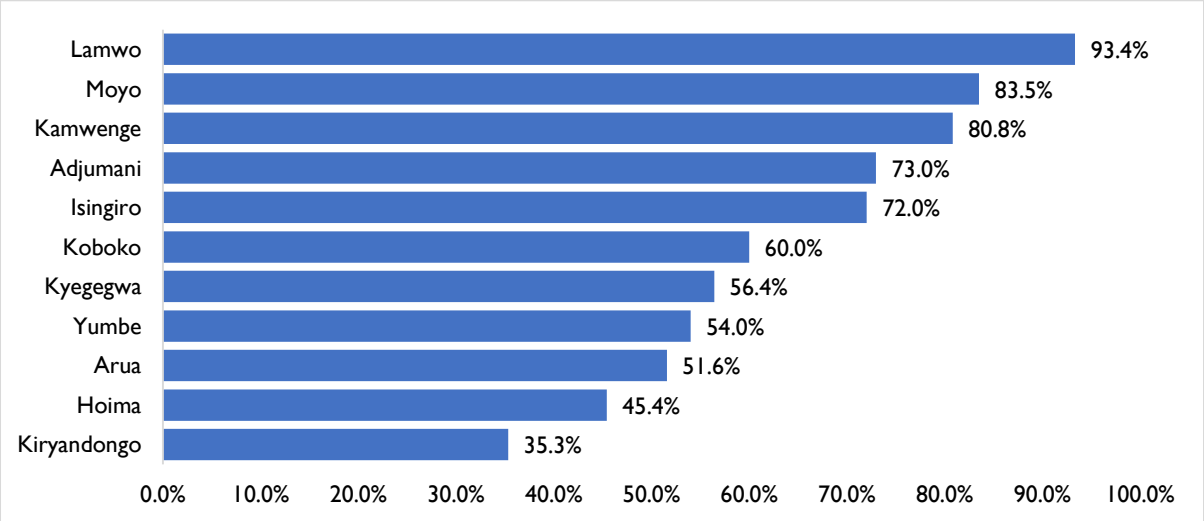

Figure 8: The proportion of households with debt less than 30,000.00 UGx, October 2017, Uganda

Financial institutions (banks, lending and credit institutions, microfinance (43.7%) were reported the main source of credit for most of the debts and loans households obtained. The second most important source of credit was getting money from the "relatives" this accounted for 25.8%. 15.7% of the households interviewed said that obtained credit from traders and shop keepers.

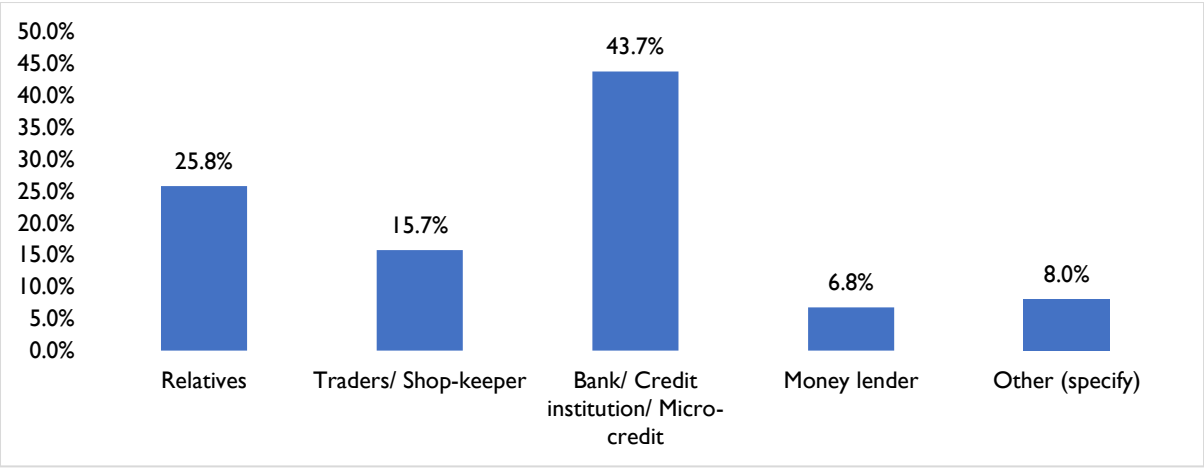

Figure 9: Main source of credit for all debts and loans, October 2017, Uganda

The interviewed households explained to the assessment teams that their main reasons for obtaining a debts or credits was to pay for school or education costs (27.4%). The second most important reason was to buy food (25.6%) and the third reason was to cover for health expenses (15.0%). 7.6 percents of the households mentioned buying agricultural inputs (seeds and farming tools) was their main reason for obtaining debts.

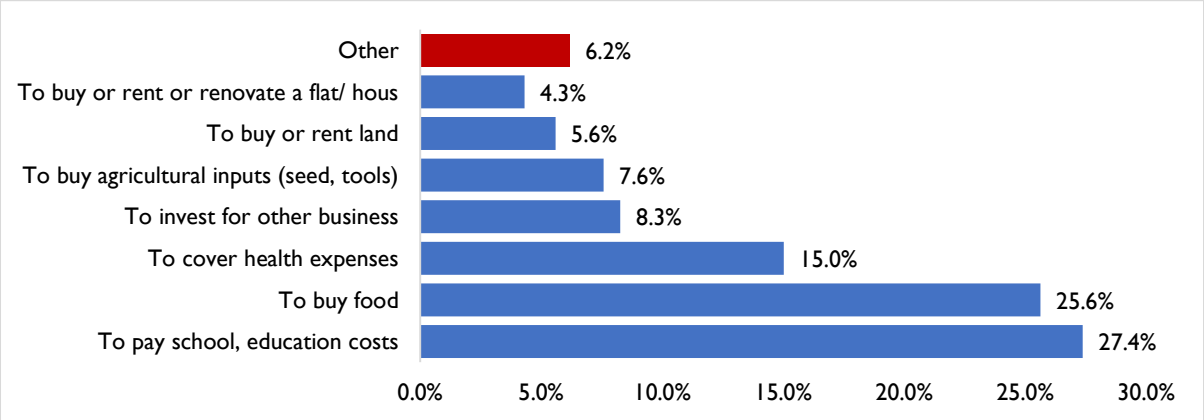

Figure 10: Showing the Main Reasons for Obtaining Debts Or Credit In Host Community, October 2017, Uganda

Livestock Production

Majority of the households owned poultry (68.1%), goats (64.4%) and cattle (33.1%). Pressure on pastures, water and ladn tenure systems could some reasons that determine the challenges livestock keepers are experiencing.

Table 51: Livestock Ownership by Type, Host Community, October 2017, Uganda

	Cattle	Sheep	Goat	Pig	Poultry	Donkey
Arua	38.6%	27.2%	87.7%	34.2%	66.7%	0.0%
Kamwenge	28.1%	10.1%	47.5%	24.5%	68.3%	5.8%
Adjumani	46.1%	4.8%	78.8%	32.7%	66.7%	0.0%
Isingiro	19.0%	8.0%	61.5%	9.2%	58.6%	0.0%
Kiryandongo	9.4%	0.0%	45.3%	14.1%	54.7%	0.0%
Kyegwegwa	16.3%	4.7%	44.2%	37.2%	68.6%	0.0%
Moyo	38.2%	10.9%	70.9%	21.8%	60.0%	0.0%
Lamwo	52.8%	7.1%	55.9%	8.7%	70.1%	0.0%
Yumbe	40.6%	32.8%	82.8%	0.0%	77.3%	0.0%
Hoima	16.1%	4.6%	46.0%	43.7%	83.9%	0.0%
Koboko	57.4%	38.3%	80.9%	0.0%	78.7%	0.0%
All Host Community	33.1%	12.6%	64.4%	20.7%	68.1%	0.7%

34.0 percent of households that owned poultry had one to three birds; while 27.8% of the households had four to six birds and 19.2%had more than 10 birds. Pig: 81.6% of the households interviewed had at least one to three pigs; 12.7% households had four to six pigs.
45.2% of the households that owned goats had one to three goats; 33.9% of the households had four to six goats, and 13.9% had seven to ten goats.

52.2% of the households had one to three cattles, 24.7% had four to six cattles and 9.9% of the households owned seven to ten cattles and 13.2% of the households had more than 10 cattles.

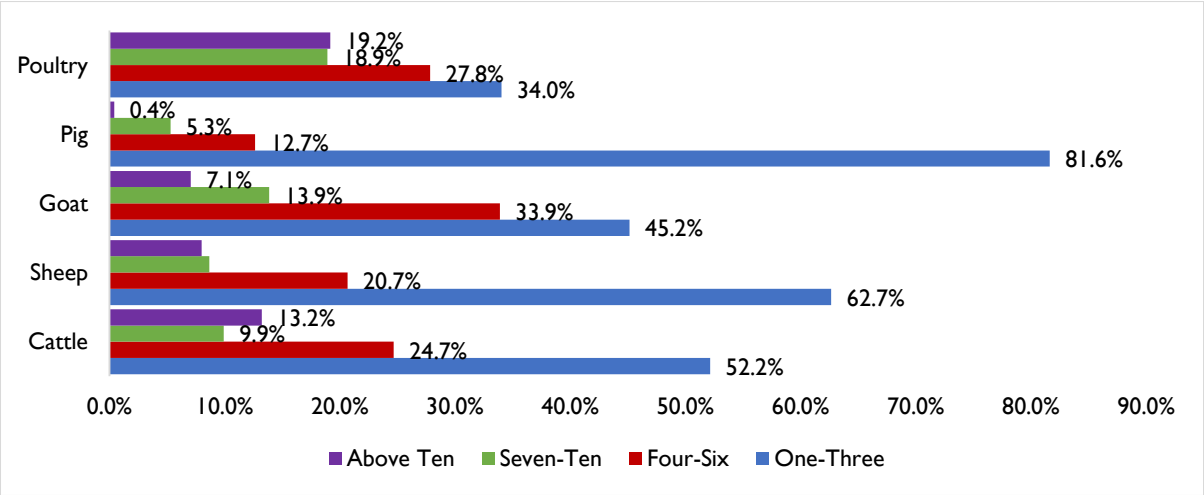

Figure 11: Showing the Proportions of Households Owning Livestock and Poultry, Host Communitys, October 2017, Uganda

Food Availability

Overall 63.7% of the households among host communities had access to arable land for cultivation across the districts. Majority of the households in Lamwo (93.4%) had access to land for agricultural purposes. The second highest host community to have access to agricultural land was Moyo (83.5%), the third location was Kamwenge (80.8%), other districts with relatively higher access to arable land were Adjumani (73.0%) and Isingiro (72.0%).

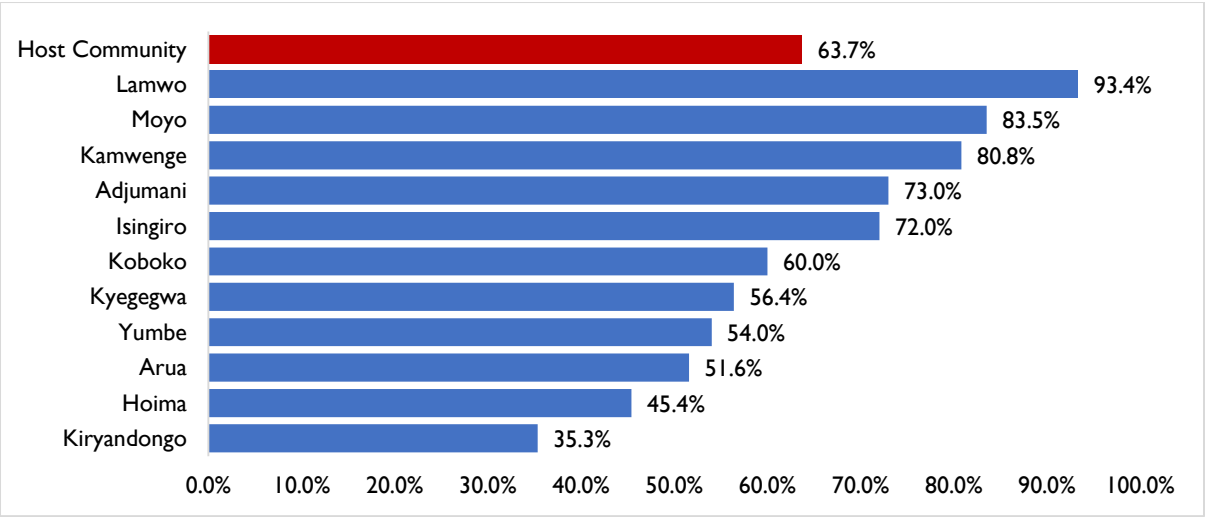

Figure 12: Households Access to Arable Land for Cultivation, Host Community, October 2017, Uganda

The type of land that households had the highest access for cultivations reasons was flat land; access to flat land ranged from 37.2% in Hoima to 93.9% in Moyo. The second highest access to flat land was 92.1% in Kiryandongo.

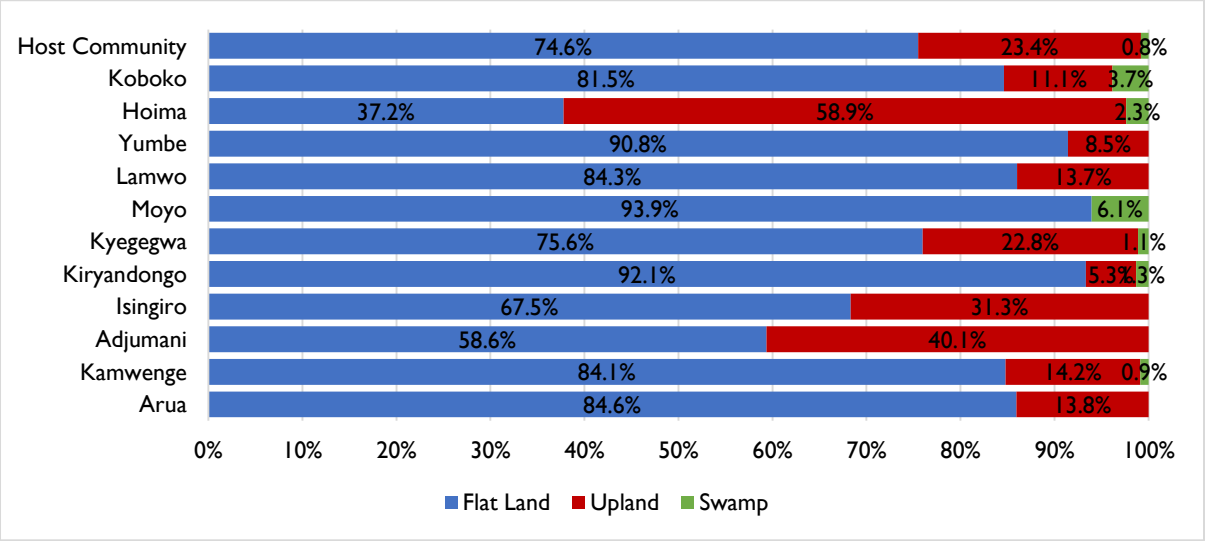

Figure 13: Type of Land Accessed by Host Households Across Host Communitys, October 2017, Uganda

Table 52: Average Land Size in Access Per Household in Acreages, Host Community, October 2017, Uganda

	Flatland for Small Garden	Upland for Cultivation	Swamp
Isingiro	2.2	2.8	0.0
Kyegwegwa	1.4	1.5	1.0
Hoima	2.0	1.3	1.3
Kamwenge	3.1	1.7	3.5
Kiryandongo	2.4	2.4	2.0
Arua	2.9	2.0	0.0
Adjumani	2.6	5.4	0.0
Koboko	2.1	1.5	6.0
Moyo	3.4	3.6	1.6
Lamwo	7.2	7.0	0.0
Yumbe	2.9	1.7	0.0
Host Community	3.1	3.1	2.4

Food Availability

77.5% of the households farmed maize, 42.3% farmed cassava, 40.5% farmed potatoes and 18.9% banana the three crops are some of the main food staples in the districts. Millet (6.6%) and sorghum (24.7%) though not very much reported are part of the main food staple in the districts hosting refugees. Though most of the food staples occupied more than 50% of acreage, sorghum occupied only 46.2%.

Household Food Production

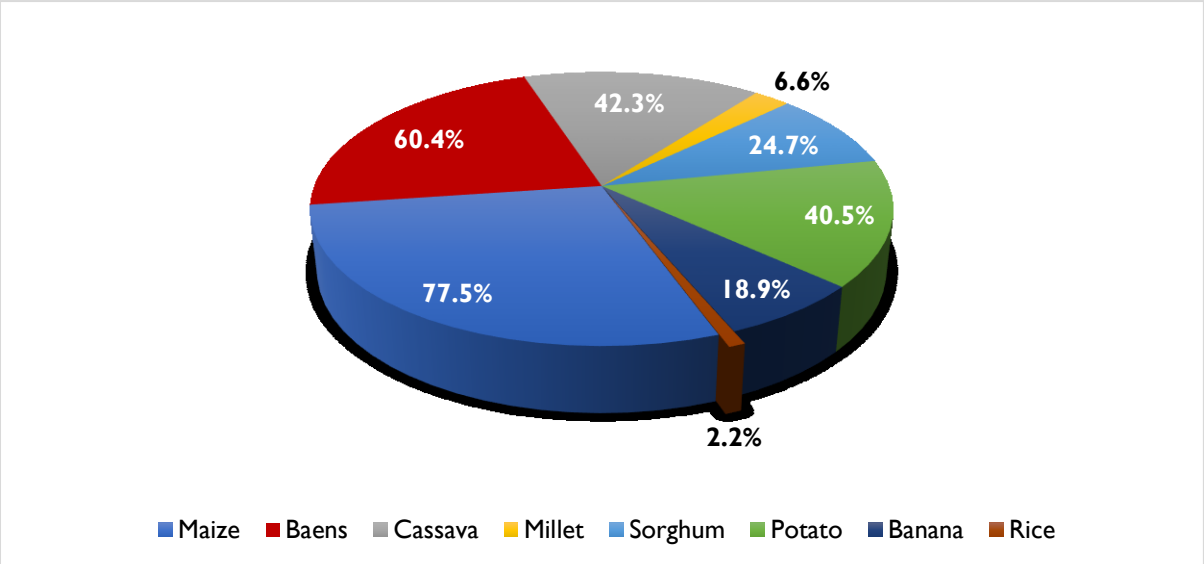

Figure 14: Showing Average Type of Crops Cultivated Last Season in Host Community, October 2017, Uganda

Land Occupied by Cultivated Crops

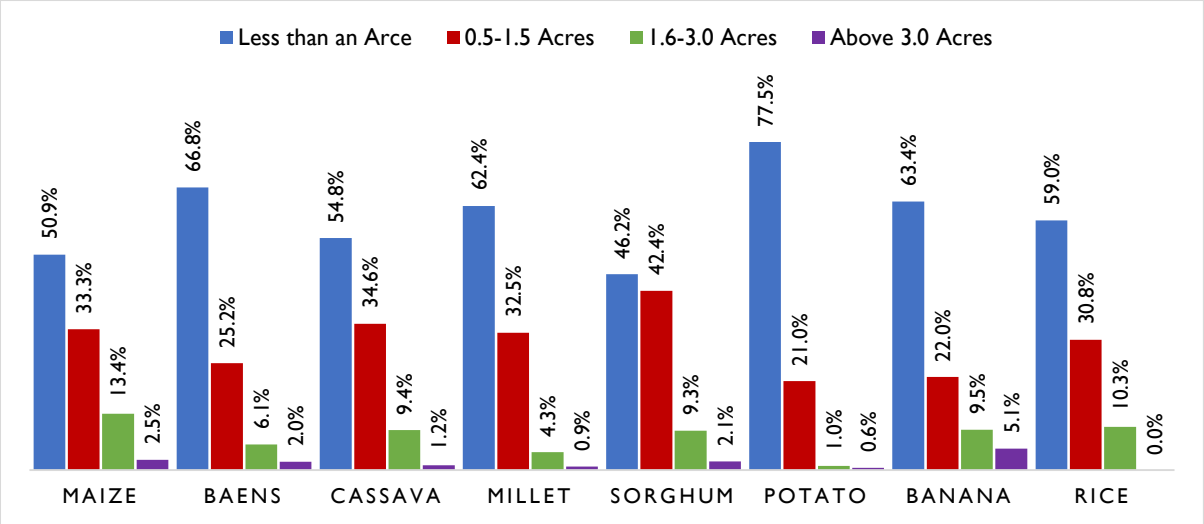

Figure 15: Showing the Land Sizes in Acreage Occupied by Crops the Previous Farming Season, Host Community, October 2017, Uganda

The study looked into household's food productions in the 2016/2017 famring seasons, and households were asked to relatively estimate or compare the food produced in the two seasons. In Moyo (48.5%), Hoima (28.7%), Arua (21.1%) and Koboko (20.4%) of the households reported to have produced "somewhat greater than" the previous season. Households reported to have produced "somewhat less than" the previous season in Isingiro (23.0%), Lamwo (22.4%), Koboko (20.4%) and Kiryandongo (14.7%). 57.4% of the households in Kamwenge had not harvested so could not estimate the produces.

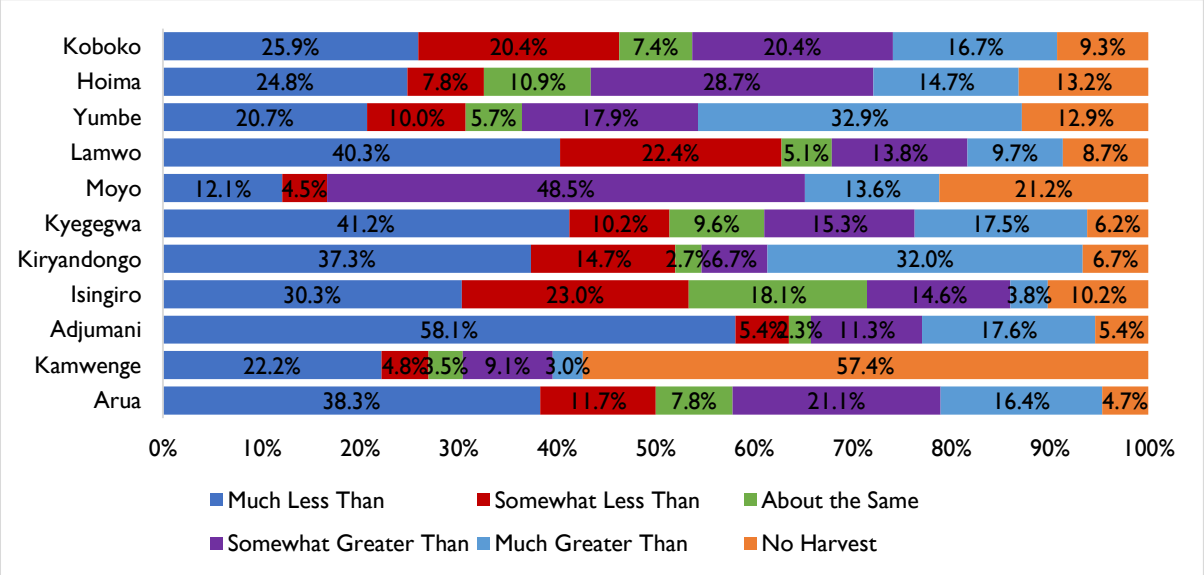

Figure 16: Households Compared Amount of Food Produced in the 2016/2017 Farming Seasons, Host Community, October 2017, Uganda

Much less, harvests were reported in Kyegegwa (34%), Lamwo (32%), Kiryandongo (29%), and Arua (19%), households that reported to have harversted some greater than the previous season where higher in Lamwo (20%), Isingiro (17%), Kiryandongo (15%), and Hoima (13%), Adjumani (18%) and Isingiro (18%). In Yumbe (74%), Adjumani (70%) Kamwenge (68%) and Koboko (59%) had not harvested yet at the time of the survey.

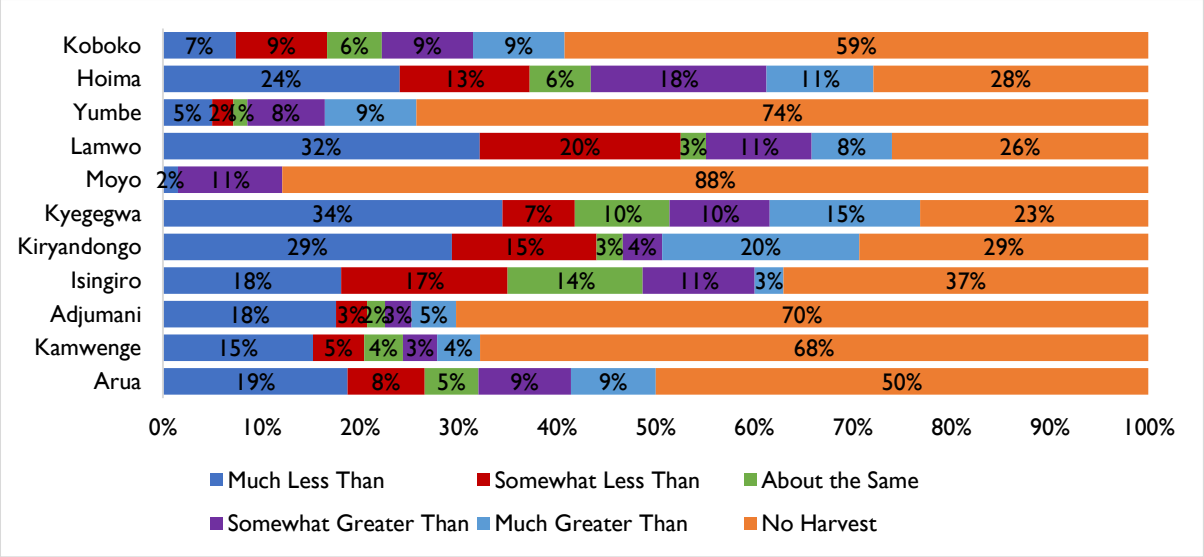

Figure 17: Households Comparing Amount of Food Sold from The Harvests of The Two Seasons, Host Community, October 2017

The main constraint to agriculture in the last 6 months household members mentioned in the districts hosting refugees varied to most of them. In Isingiro anad Moyo the most important constraint was drought and low rainfall (92.7%) and (78.8%) respectively. Pests and diseases attacking crops was the most important constraint in Lamwo (24.0%) while small land sizes were most important constraint in Adjumani (28.8%). In Yumbe (24.3%), inadequate labour to farm at household level was the main constraint mentioned by household members. Land infertility (28.2%) was more important in Kyegegwa. Land conflicts (10.1%) were the most important constraint in Hoima.

Table 53: Main Constraints to Agriculture in the Past 6 Months, Host Community, October 2017, Uganda

	Host Community											Host Community
	Arua	Kamwenge	Adjumani	Isingiro	Kiryandongo	Kyegwegwa	Moyo	Lamwo	Yumbe	Hoima	Koboko	
Insecurity	0.0%	0.0%	0.5%	0.0%	4.0%	7.3%	3.0%	0.5%	0.7%	1.6%	1.9%	1.4%
I have been prohibited by the clan/my husband	0.0%	1.7%	0.0%	0.0%	0.0%	1.1%	0.0%	1.0%	0.0%	0.0%	0.0%	0.5%
The land is infertile	3.9%	7.0%	8.6%	2.3%	13.3%	28.2%	3.0%	3.6%	7.9%	7.0%	14.8%	8.2%
I have been prohibited by the government	1.6%	1.7%	0.0%	0.8%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%
Sickness or physically inability	6.3%	3.5%	3.6%	1.4%	6.7%	7.3%	0.0%	13.8%	1.4%	2.3%	7.4%	4.6%
I did not have adequate seeds and tools	3.1%	0.4%	3.6%	1.8%	1.3%	0.6%	3.0%	12.2%	7.9%	3.9%	1.9%	3.6%
I do not have sufficient family/ household labour	7.8%	0.0%	24.3%	0.0%	1.3%	4.0%	1.5%	11.7%	12.1%	3.9%	1.9%	6.8%
Land conflicts	0.8%	0.9%	2.7%	3.1%	0.0%	2.3%	0.0%	4.1%	1.4%	10.1%	3.7%	2.6%
Drought/Low rainfall	49.2%	73.5%	8.1%	92.7%	46.7%	38.4%	78.8%	23.0%	49.3%	65.1%	40.7%	53.5%
Lack of household storage facilities	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	1.5%	0.0%	0.7%	0.8%	0.0%	0.2%
Pests and Diseases	11.7%	7.8%	14.4%	0.8%	4.0%	8.5%	6.1%	24.0%	7.1%	3.9%	5.6%	8.8%
Small land	13.3%	3.0%	28.8%	0.0%	22.7%	1.1%	0.0%	5.1%	10.7%	1.6%	13.0%	8.0%
Too Much Rain/Floods	1.6%	0.4%	4.1%	0.0%	0.0%	0.0%	1.5%	0.5%	0.7%	0.0%	3.7%	1.0%
Other (Specify)	0.8%	0.0%	0.9%	0.0%	0.0%	0.6%	1.5%	0.5%	0.0%	0.0%	5.6%	0.5%

Water, Sanitation and Hygiene

The survey teams were able to collect much more samples exceeding the targeted sample. The survey teams were unable to collect adequate samples in Koboko and Moyo districts as it was expected. The relatively spatial distribution of households coupled with the farming season whereby majority of the heads of households were involved with farming activities.
The Household Questionnaire also collected information on the source of water, type of water containers used for storing drinking water and type of toilet facilities.

Table 54: WASH Sampling Information, Host Community, Uganda, October 2017

Host Community	Planned sample sizes	Actual sample sizes reached	% of Target
Isingiro	294	479	162.9%
Kyegwegwa	142	319	224.6%
Hoima	148	284	191.9%
Kamwenge	143	287	200.7%
Kiryandongo	138	215	155.8%
Arua	154	252	163.6%
Adjumani	151	311	206%
Koboko	137	90	130%
Moyo	142	79	111%
Lamwo	141	211	149.6%
Yumbe	149	261	175.2%

The proportion of households using an improved drinking water source was 100% both in Adjumani and Moyo districts, quite impressive; and it was 99.5% in Lamwo district. However, the proportion of households using an improved drinking water source it was lowest in Isingiro (34.7%), Kyegegwa (50.5%), and Hoima (53.5%). The District Local Government Authorities in the refugee hosting communities promote hygienic water handling practices, as poor hygiene is likely to undermine efforts to prevent and control water born diseases. Households were asked about water containers used to store their drinking water. The study found that; the proportion of households that use a covered or narrow necked container for storing their drinking water was highest in Lamwo (63.0%), Arua (47.2%) and Kamwnge (45.3%) and Yumbe (44.1%).

Districts with the lowest proportions of households that use a covered or narrow necked container for storing their drinking water was recorded in Hoima (21.8%), Kyegegwa (24.1%) and Kiryandongo (29.8%). Although efforts are in place to ensure that populations are using safe and clean water fro drinking at household level, this study advices that water quality interventions must be followed by formative research, findings accompanied by health and hygiene promotion so that appropriate products, interventions, messages for the community can be selected and sustainable behaviour change can be achieved.

Table 55: Water Quality, Host Community, Uganda, October 2017

Host Community	Proportion of households using an improved drinking water source	Proportion of households that use a covered or narrow necked container for storing their drinking water
Isingiro(n=479)	34.7%(30.5-39.0)	42.4%(38.0-46.9)
Kyegegwa(n=319)	50.5%(45.0-55.9)	24.1%(19.7-29.1)
Hoima(n=284)	53.5%(47.7-59.3)	21.8%(17.4-27.0)
Kamwenge(n=287)	70.0%(64.5-75.1)	45.3%(39.6-51.1)
Kiryandongo(n=215)	73.5%(67.2-79.0)	29.8%(24.0-36.2)
Arua(n=252)	75.8%(70.1-80.7)	47.2%(41.1-53.4)
Adjumani(n=311)	100%	41.5%(36.1-47.0)
Koboko(n=90)	74.4%(64.4-82.4)	45.6%(35.5-55.9)
Moyo(n=79)	100%	39.2%(29.1-50.4)
Lamwo(n=211)	99.5%(96.7-100.0)	63.0%(56.3-69.3)
Yumbe(n=261)	70.5%(64.7-75.7)	44.1%(38.1-50.2)

The highest proportion of households that use; ≥ 20 litres of water per capita per day was recorded highest in Lmwo (69.7%), followed by; Adjmani (57.2%), Kamwenge (41.5%), Moyo (39.2%) and Kiryandongo (38.1%). The lowest proportions of households that use ≥ 20 litres of water per capita per day were in Kyegegwa (17.6%) and Koboko (26.7%). Across the districts under study, the proportions of housholds that uses 15-<20 liters of water per capita per day was highest in Moyo (17.7%), followed by Lamwo (16.6%) and Kamwenge (13.9%). The proportions of households that uses <15 litres of water per capita per day was highest in Kyegegwa (73.0%), Koboko (61.1%), Hoima (58.8%), Arua (57.9%) and Yumbe (57.9%). The districts with the lowest proportions of households that use <15 litres of water per capita were Lamow (13.7%) and Adjumani (29.3%).

Table 56: Water Quantity, Amount of Litres of Water Used Per Person Per Day, Host Community, Uganda, October 2017

Proportion of households that use:			
Host Community	**≥ 20 lpppd**	**15 – <20 lpppd**	**<15 lpppd**
Isingiro(n=479)	37.6%(33.3-42.0)	12.7%(10.0-16.0)	49.7%(45.2-54.2)
Kyegegwa(n=319)	17.6%(13.8-22.1)	9.4%(6.6-13.1)	73.0%(67.9-77.6)
Hoima(n=284)	31.3%(26.2-37.0)	9.9%(6.9-13.9)	58.8%(53.0-64.4)
Kamwenge(n=287)	41.5%(35.9-47.3)	13.9%(10.4-18.5)	44.6%(38.9-50.4)
Kiryandongo(n=215)	38.1%(31.9-44.8)	11.6%(8.0-16.7)	50.2%(43.6-56.9)
Arua(n=252)	34.9%(29.3-41.0)	7.1%(4.5-11.1)	57.9%(51.7-63.9)
Adjumani(n=311)	57.2%(51.7-62.6)	13.5%(10.1-17.8)	29.3%(24.5-34.6)
Koboko(n=90)	26.7%(18.5-36.8)	12.2%(6.9-20.8)	61.1%(50.6-70.6)
Moyo(n=79)	39.2%(29.1-50.4)	17.7%(10.7-27.8)	43.0%(32.5-54.2)
Lamwo(n=211)	69.7%(63.1-75.5)	16.6%(12.1-22.2)	13.7%(9.7-19.1)
Yumbe(n=261)	31.0%(25.7-36.9)	11.1%(7.8-15.5)	57.9%1(51.8-63.7)

The proportion of households that say they were satisfied with the drinking water supply ranged from 25.1% in Kiryandongo to 93.7% in Moyo district. The second highest proportion was recorded in Adjumani (84.2%), followed by Lamwo (76.8%). The lowest proportions of households that say they were satisfied with the drinking water supply was recorded in

Kiryandongo (25.1%), followed by Hoima (25.7%), Kyegegwa (34.5%), and Yumbe (37. 5%).Six of the 11 studied districts had less than 50% of their households reporting satisfied with water supplies. Water shortage could be related to decrease in rainfall in the districts and could also result in poor hygiene and increase occurrence of intestinal parasitic infestation that could contribute to an increase in the prevalence of anaemia.

Table 57: Satisfaction with Water Supply, Host Community, Uganda, October 2017

Host Community	Proportion of households that say they are satisfied with the drinking water supply
Isingiro(n=479)	40.5%(36.2-45.0)
Kyegegwa(n=319)	34.5%(29.5-39.9)
Hoima(n=284)	25.7%(20.9-31.1)
Kamwenge(n=287)	55.4%(49.6-61.1)
Kiryandongo(n=215)	25.1%(19.8-31.4)
Arua(n=252)	44.0%(38.0-50.3)
Adjumani(n=311)	84.2%(79.8-87.9)
Koboko(n=90)	63.3%(52.9-72.7)
Moyo(n=79)	93.7%(85.6-97.4)
Lamwo(n=211)	76.8%(70.6-82.0)
Yumbe(n=261)	37.5%(31.9-43.6)

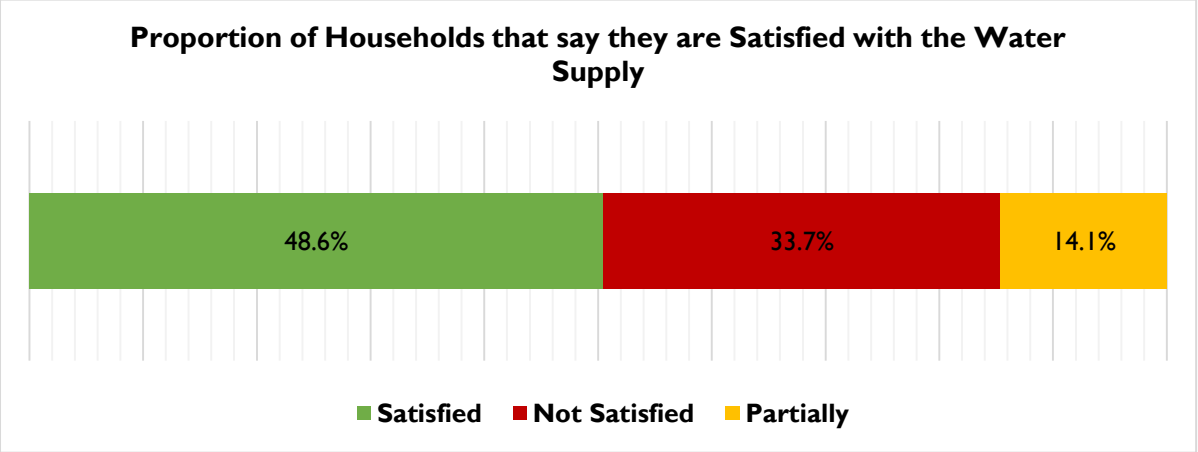

Figure 18: Proportion of Households that Say they Are Satisfied With The Water Supply, Host Community, October 2017, Uganda.

The main reasons for not satisfied were bad quality (42.9%), followed by long distances (19%) and bad taste (12.4%).

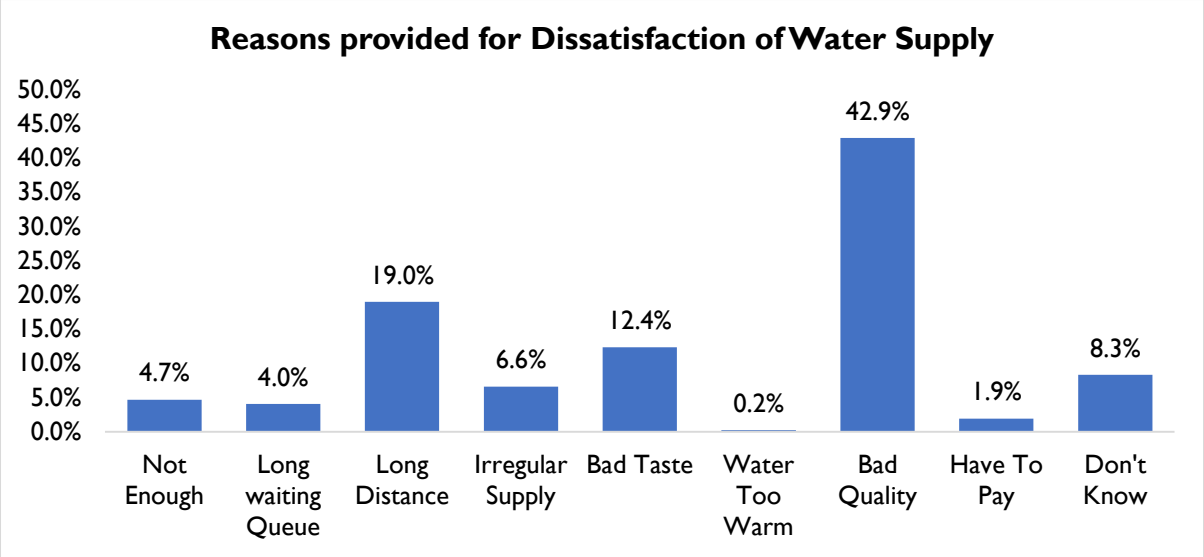

Figure 19: Reasons provided for Dissatisfaction of Water Supply, Host Community, October 2017, Uganda.

The districts with the highest proportions of households that use improved toilet facility which is used only by 1 household was recorded highest in Adjumani (66.6%), followed by Isingiro (44.9%), Kamwenge (39.4%) and Koboko (36.7%). Hoima (6.7%) and Kyegegwa (9.1%) had the lowest coverage of households that use improved toilet used only by 1 household, not shared by another household. The proportion of households that is sharing one toilet with another household was generally lower when compared with the first category, improved toilet not share by any household. Improved toilet facility, 2 households sharing, was relatively high in Kooko (14.4%) and Moyo (11.4%). The use of communal improved toilet facility, 3 households or more sharing this toilet was more important in Arua (7.9%) and Lamwo (12.3%). Majority of the households in (Hoima (93.3%), Kyegegwa (87.5%) and Yumbe (85.4%) were much more likely to use an unimproved toilet or public toilet.

Table 58: Safe Excreta Disposal, Host Community, Uganda, October 2017

Proportion of Households That Use				
Host Community	**Improved toilet facility, 1 household**	**Improved toilet facility, 2 households**	**Communal improved toilet facility, 3 households or more**	**An unimproved toilet or Public toilet**
Isingiro(n=479)	44.9%(40.5-49.4)	1.0%(0.4-2.5)	0.6%(0.2-1.9)	53.4%(49.0-57.9)
Kyegegwa(n=319)	9.1%(6.4-12.8)	2.2%(1.0-4.5)	1.3%(0.5-3.3)	87.5%(83.3-90.7)
Hoima(n=284)	6.7%(4.3-10.3)	0%(0-0)	0%(0-0)	93.3%(89.7-95.7)
Kamwenge(n=287)	39.4%(33.9-45.2)	4.2%(2.4-7.2)	2.8%(1.4-5.5)	53.7%(47.9-59.4)
Kiryandongo(n=215)	27.0%(21.5-33.3)	2.8%(1.3-6.1)	4.2%(2.3-7.9)	66.0%(59.4-72.1)
Arua(n=252)	32.1%(26.7-38.2)	8.3%(5.5-12.5)	7.9%(5.2-12.05)	51.6%(45.4-57.7)
Adjumani(n=311)	66.6%(61.1-71.6)	4.5%(2.7-7.5)	1.9%(0.9-4.2)	27.0%(22.4-32.2)
Koboko(n=90)	36.7%(27.3-47.1)	14.4%(8.5-23.4)	5.6%(2.3-12.7)	43.3%(33.5-53.8)
Moyo(n=79)	34.2%(24.5-45.3)	11.4%(6.0-20.5)	1.3%(0.2-8.5)	53.2%(42.1-63.9)
Lamwo(n=211)	31.3%(25.4-37.9)	7.6%(4.7-12.0)	12.3%(8.5-17.5)	48.8%(42.1-55.6)
Yumbe(n=261)	12.6%(9.1-17.3)	1.9%(0.8-4.5)	0%(0-0)	85.4%(80.6-89.2)

The proportion of households with children under three years old that dispose of faeces safely, among host community was 100% in Koboko and Moyo district. Kiryandongo and Isingiro had second highest proportions of households that dispose faeces of children below 3 years appropriate at 99% in the two districts. Arua (97.7%) and Adjumani (96.7%) followed this.

Table 59: Proportion of Households with Children Under Three Years Old That Dispose Off Faeces Safely, Host Community, Uganda, October 2017

Host Community	% 95 C.I.
Isingiro(n=479)	99.1%(96.5-99.8)
Kyegwegwa(n=319)	93.2%(87.8-96.3)
Hoima(n=284)	92.9%(83.9-97.0)
Kamwenge(n=287)	90.2%(84.9-93.7)
Kiryandongo(n=215)	99.0%(93.3-99.9)
Arua(n=252)	97.7%(91.3-99.4)
Adjumani(n=311)	96.7%(93.4-98.3)
Koboko(n=90)	100%
Moyo(n=79)	100%
Lamwo(n=211)	93.0%(86.7-96.5)
Yumbe(n=261)	92.2%(85.7-95.9)

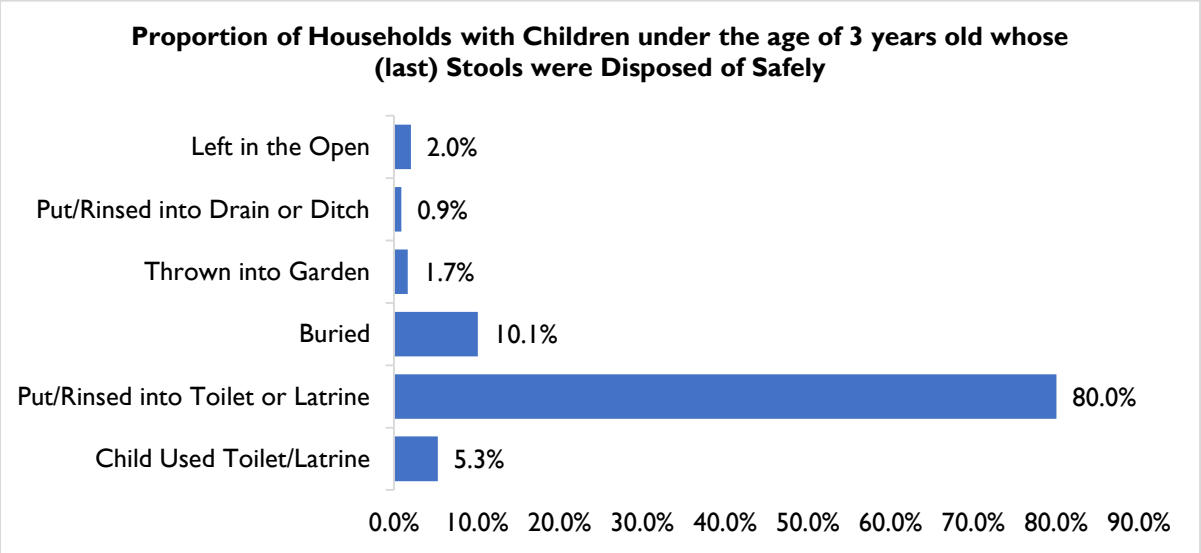

Figure 20: Proportion ff Households With Children Under the Age of 3 Years Old Whose (Last) Stools Were Disposed Of Safely, Host Community, October 2017, Uganda.

Mosquito Net Coverage

Data on the ownership and utilisation of mosquito nets, with particular focus on Long Lasting Insecticidal Net (LLINs), were collected since LLINs are one of the malaria control strategy. Malaria is endemic in most of the districts hosting refugees and experience high transmission of malaria.

Table 60: Mosquito Net Coverage Sampling Information, Host Community, Uganda, October 2017

Total Households Surveyed for Mosquito Net Coverage			
Host Community	**Planned**	**Actual**	**% of Target**
Isingiro	294	479	162.9%
Kyegwegwa	142	319	224.6%
Hoima	148	284	191.9%
Kamwenge	143	287	200.7%
Kiryandongo	138	215	155.8%
Arua	154	252	163.6%
Adjumani	151	311	206%
Koboko	137	90	130%
Moyo	142	79	111%
Lamwo	141	211	149.6%
Yumbe	149	261	175.2%

The proportion of total households owning at least one mosquito net of any type was found highest in Lamwo (96.2%) and Kamwenge (95.5%) whereas the lowest proportion was found in Hoima (39.1%), Kiryandongo (44.2%) and Kyegegwa (53.3%). The proportion of total households owning at least one LLINT was reported highest in Kamwenge (90.9%) and followed by Lamwo (89.6%), however, it was lowest in Hoima (33.8%), Kiryandongo (40.9%) and Kyegegwa (44.5%).

Table 61: Household Mosquito Net Ownership, Host Community, Uganda, October 2017

Host Community	Proportion of total households owning at least one mosquito net of any type	Proportion of total households owning at least one LLINT
Isingiro(n=479)	88.1%(84.9-90.7)	86.6%(83.3-89.4)
Kyegwegwa(n=319)	53.3%(47.8-58.7)	44.5%(39.1-50.0)
Hoima(n=284)	39.1%(33.6-44.9)	33.8%(28.5-39.5)
Kamwenge(n=287)	95.5%(92.3-97.4)	90.9%(87.0-93.8)
Kiryandongo(n=215)	44.2%(37.7-50.9)	40.9%(34.5-47.6)
Arua(n=252)	54.0%(47.8-60.0)	52.0(45.8-58.1)
Adjumani(n=311)	88.1%(84.0-91.3)	79.7%(74.9-83.9)
Koboko(n=90)	57.8%(47.3-67.6)	53.3%(43.0-63.4)
Moyo(n=79)	81.0%(70.8-88.3)	77.2%(66.6-85.2)
Lamwo(n=211)	96.2%(92.6-98.1)	89.6%(84.7-93.0)
Yumbe(n=261)	55.9%(49.8-61.9)	46.0%(40.0-52.1)

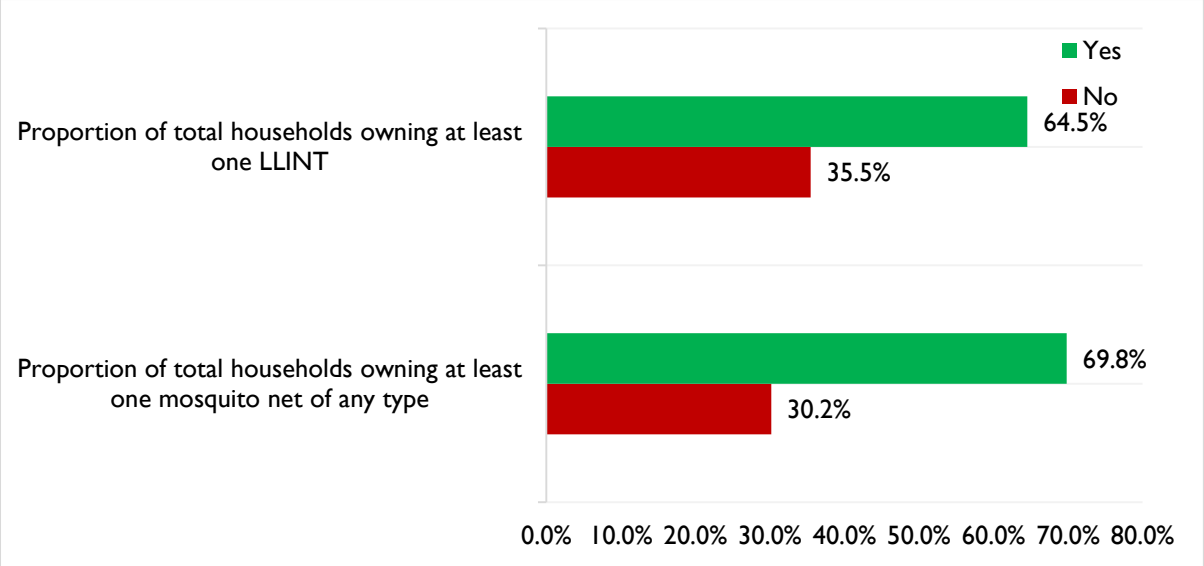

Figure 21: Showing Households Owning At Least One LLINT and Mosquito Net Of Any Type, Refugee Settlements, October 2017

The proportion of the households with at least one LLINT for each household ranged from 2.1 in Kyegegwa to 3.8 in Yumbe. On average, there were at least 1 person per LLINT in Kyegegwa and 1.1 persons in Yumbe per LLINT.

The findings indicate that households had adequate number of LLINT sufficing the number of people who spend a night at household level the night superceeded the survey. The average number of LLINT per household in Koboko was 2.7, this matched properly with the average number of persons per LLINT, which was 2.2.

Table 62: Number of Nets, Host Community, Uganda, October 2017

Host Community	Average number of LLINTs per household	Average number of persons per LLINT
Isingiro	2.3	2.0
Kyegwegwa	2.1	0.9
Hoima	2.5	0.7
Kamwenge	2.2	0.7
Kiryandongo	2.2	1.6
Arua	2.8	1.4
Adjumani	2.4	0.8
Koboko	2.7	2.2
Moyo	3.5	1.5
Lamwo	2.2	1.2
Yumbe	3.8	1.1

The proportion of the population that slept under net of any type, among the host community was highest in Adjumani (93.5%), Yumbe (91.7%), Lamwo (90.3%) and Kamwenge (89.5%). The highest proportion of 0-59 months that slept under mosquito net of any type was reported in Lamwo (94.9%) and Yumbe (94.1%). The lowest proportion of 0-59 months that slept under mosquito net of any type recorded in Kiryandongo (61.7%) and Hoima (73.9%). The proportion of pregnant women that slept under mosquito net of type was 100% in Adjumani and Moyo. Other districts with high proportion of pregnant women that slept under mosquito net of type were Arua (95.7%) and Lamwo (95.0%). The lowest proportion of pregnant women that slept under

mosquito net of any type was in Kiryandongo (68.4%) and Koboko (81.8%).

Table 63: Slept Under Net of Any Type, Host Community, Uganda, October 2017

Host Community	Proportion of total population (all ages)		Proportion of 0-59 months		Proportion of pregnant women	
	Total No	%	Total No	%	Total No	%
Isingiro	1753	85.3%	328	88.4%	65	89.0%
Kyegegwa	984	74.3%	253	79.1%	51	86.3%
Hoima	733	66.3%	146	73.9%	24	87.5%
Kamwenge	1211	89.5%	289	89.3%	42	88.1%
Kiryandongo	708	52.8%	175	61.7%	19	68.4%
Arua	855	79.4%	147	82.9%	23	95.7%
Adjumani	1530	93.5%	357	98.3%	31	100%
Koboko	307	82.9%	70	92.9%	11	81.8%
Moyo	505	80.8%	102	87.3%	7	100%
Lamwo	1,021	90.3%	178	94.9%	20	95.0%
Yumbe	1,139	91.7%	222	94.1%	29	89.7%

Slept Under Long Lasting Insecticide Treated Mosquito Nets

The proportion of total population (all ages) slept under an LLINT the night superceeded the survey was highest in Kamwenge (86.6%), followed by Lamwo (85.0%), Adjumani (84.6%) and Isingiro (82.6%). The lowest proportion of total population (all ages) slept under an LLINT the night before the survey was in Kiryandongo (49.0%), Hoima (58.0%) and Kyegegwa (61.3%).

90.4% and 87.7% of the children 0-59 months in Lamwo and Adjumani respectively slept under LLINT the night superceeded the assessment. The lowest percent was recorded in Kiryandongo (49.0%), Hoima (58.0%) and Kyegegwa (61.3%). The proportion of pregnant women slept under LLINT was 100% in Moyo district; it was 95% in Lamwo and 93.5% in Adjumani and 91.3% in Arua. The lowest proportions of pregnant women that slept under LLINT was recorded in Kiryandongo (63.2%) and Koboko (63.6%).

Table 64: Slept Under LLINT, Host Community, Uganda, October 2017

Host Community	Proportion of total population (all ages)		Proportion of 0-59 months		Proportion of pregnant women	
	Total No	%	Total No	%	Total No	%
Isingiro	1699	82.6%	320	86.3%	64	87.7%
Kyegegwa	603	61.3%	158	62.5%	41	80.4%
Hoima	425	58.0%	96	65.8%	18	75.0%
Kamwenge	1049	86.6%	250	86.5%	37	88.1%
Kiryandongo	347	49.0%	99	56.6%	12	63.2%
Arua	662	77.4%	119	80.9%	21	91.3%
Adjumani	1294	84.6%	313	87.7%	29	93.5%
Koboko	276	74.7%	57	81.4%	7	63.6%
Moyo	379	75.0%	84	82.4%	7	100%
Lamwo	868	85.0%	161	90.4%	19	95.0%
Yumbe	843	74.0%	169	76.1%	25	86.2%

Retrospective Mortality Assessment

Table 65: Mortality Assessment in the Past 90 Days, Host Community, Uganda, October 2017

	Current HH embers – total	Current HH members - < 5	Current HH members who arrived during recall (exclude births)	Current HH members who arrived during recall - <5	Past HH members who left during recall (exclude deaths)	Past HH members who left during recall - < 5	Births during recall	Total deaths	Deaths < 5	CMR [Death/10,000 people/day]	U5MR [death in under five children/10,000 /day]
Arua	1733	301	153	43	249	21	18	26	20	1.6 (1.1-2.4)	7.5 (5.0-11.5)
Kamwenge	1348	330	85	14	55	2	1	0	0	0.0 (0.0-0.3)	0.0 (0.0-1.3)
Adjumani	1729	387	4	19	44	18	11	5	9	0.3 (0.1-0.7)	2.6 (1.4-4.9)
Isingiro	2105	380	23	11	40	1	8	12	3	0.6 (0.4-1.1)	0.9 (0.3-2.6)
Kiryandongo	1177	292	42	7	52	9	49	7	6	0.7 (0.3-1.4)	2.5 (1.1-5.3)
Kyegwegwa	1497	381	188	50	145	29	15	7	7	0.5 (0.3-1.1)	2.1 (1.0-4.3)
Moyo	557	114	5	0	2	0	5	2	0	0.4 (0.1-1.5)	0.0 (0.0-3.7)
Lamwo	1156	220	23	14	26	0	2	2	4	0.2 (0.1-0.7)	2.1 (0.8-5.2)
Yumbe	2093	425	126	34	123	16	9	7	3	0.4 (0.2-0.8)	0.8 (0.3-2.4)
Hoima	1472	311	103	34	88	29	1	22	4	1.7 (1.1-2.5)	1.4 (0.6-3.6)
Koboko	628	118	35	18	102	27	4	10	16	1.7 (0.9-3.1)	13.8 (8.7-21.4)

The households were asked about their understanding on deaths that had occurred in the last 90 days prior to the survey in their locations. The intention was to retrospectively estimate the crude mortality rate and under 5 years' mortality rate in host communities. The target for the program is to maintain crude death rates below 1.0 deaths/ 10000 population/day. The study found that under 5 years mortality rates was highest in Koboko at 13.8 deaths (8.7-21.4), this was followed by Arua at 7.5 deaths (5.0-11.5)/ 10000 population/day and Adjumani 2.6 deaths (1.4-4.9)/10000 population/day. These under 5 reported rates are higher than the target programme and calls for further death audits in the specified locations with results hihgher than the programme targets for both crude death and under 5 years death rates

CONCLUSION AND RECOMMENDATIONS

The survey findings show that acute malnutrition, stunting and anaemia among children and women at reproductive age continue to be the nutritional problems of public health importance in the districts hosting refugees in Uganda. The younger children up to the age of two years are the most at risk groups. They deserve special attention from the stakeholders providing public health, food, nutrition and livelihood services.

The prevalence of global acute malnutrition is still high and classified as "poor" according to WHO cut off points. Stunting was found high in three districts; Kyegegwa (36.3%), Hoima (34.5%), Isingiro (30.3%), where it is classified as "critical" based on the WHO cut off points
Confirmation of measles vaccination by card and recall was highest in Kamwenge district (95.1%), this was followed by; Moyo district at 93.1%, Isingiro (93.0%), Yumbe (92.9%), and Kyegegwa (91.8%). High anaemia prevalence exceeding 40% WHO cut off point's classification was found in the districts hosting refugees.

The population mentioned that market (purchase with cash) was the main source of food acquisitions reported by households. Yumbe reported 100% of the households would purchase their food from a market with cash while in Kamwenge 99.2 percentage of the household would purchase their food with cash from a market. Own food production was the second most important food sources among households whereby 90.1% of the households in Moyo district would obtain their food through own productions.

Anthropometrics, anaemia and health

a. MoH to take the lead in designing nutrition interventions to address all forms of malnutrition based on informed evidence; all health and nutrition stakeholders participate in the planning, resource mobilization and implementations of quality services of integrated management of acute malnutrition.

b. From the study, findings suggest that children experience frequent attack of some communicable diseases i.e. diarrhoea which is supported by health management information systems' data, where repeated infections (malaria and worm infestations) among children perpertuated the risk of anaemia. Districts hosting refugees are situated in remote and are in the dry belt, and households are less likely to acquire adequate and diversified meals. In these locations, households are likely not to seek anaemia treatment timely. It is therefore recommended that deliberate efforts to combat climate change should be put in place to avoid long dry spells that affect water availability and food production. Food production should be accompanied by provision of agriculture extension to support production of dark green vegetables, rich in iron, and vitamin A rich foods.

c. The causes of anaemia are multi-factorial, and our study could have benefitted from a more thorough laboratory analysis of the causes of anaemia including malaria testing, stool examination for intestinal helminthes, testing for blood disorders, and testing for micronutrient deficiencies. Unfortunately, the scope of this study only measured some of the main risk factors of anaemia, such as nutritional status assessed using anthropometry, diagnosed malaria status, and socioeconomic variables. In this study children and women at reproductive age were not assessed on iron status by measuring serum ferritin, and intestinal parasitic load were not assessed. Therefore, in order to have current information on the potential causes of anaemia, determine the levels of iron deficiency anaemia among the children, and be able to design anaemia interventions based on informed eveidence, it is recommended that future anaemia

and malaria prevention studies in districts hosting refugees should include assessing on potential causes of anaemia.

Infant and young child feeding programme

a. In emergency response, IYCF interventions frequently are not prioritized interms of resource allocations, from preparedness, policy and planning aspects to the actual execution of activities. It is recommended that through MoH guidances, partners should adequately protect, promote and support IYCF interventions in the districts hosting refugees in ordre to reduce the current levels of under 5 years morbidity and mortality.

b. In coordination with the health and nutrition stakeholders, MoH should endervour to conduct an inventory of the IYCF related activities currently implemented in the districts hosting refugees. Mapping of the ongoing IYCF interventions at the district level will assist partners to understand the key bottlenecks and gaps and this will inform the government the IYCF needs, which in turn support the national IYCF-E capacity development plan.

Maternal child health

a. Provide knowledge about maternal health services among women at reproductive age to improve up take and use ANC of services. Encouraging eligible women to enrol and utilise ANC services; Reinforce women enrolled in MCH to complete their four ANC visits.

b. Provide health and nutrition education to pregnant women, emphasize on the recommended schedule for ANC visits through pregnancy up to 6 months of postnatal period. Provide prenatal key messages including; timely initiation of breastfeeding (giving colostrum), exclusive breastfeeding from birth up to 6 months (avoid other liquids and food, including water). Focusing on good attachment and positioning and place baby skin-to-skin with mother

c. Pomote and support breastfeeding on demand– up to 12 times day and night and the essence of mother needs to eat extra meals and drink fluids to be healthy. Support attendance pregnant and lactating women at mother-to-mother support groups.

Livelihood, Food security, and coping mechanisms

a. Work close with the Ministry of Agriculture and Livestock, FAO and developmenent partners supporting livelihood activities that includes; vegetable and fruits productions, that will improve production of vitamin A rich vegetables, dark green leafy vegetables, fruits and tubers.

b. Support and improve rearing of small ruminant animals and poultry keeping in order increasing supply and availability of animal protein (eggs and meat) and micronutrients (vitamins and minerals) in the community.

Distribution, retention and utilization of LLITN

a. Malaria parasites attacks, destroy and reduces the number of red blood cells, children below 5 years, pregnant and non-pregnant women frequent attacked malaria are likely to have anaemia. The study recommends that the National Malaria Control Programme should implement a combination of malaria preventive interventions that includes:

b. Promote early health seeking behaviour especially in rural areas, equip health facilities with adequate malaria diagnostic tools and supplies, and technical human resources,

and adequate medications to treat fever of malaria origin

c. Distribution of long lasting insecticide treated mosquito nets. Social marketing on the retention and frequent use of long lasting insecticide treated mosquito nets, prior distribution coordinate hang up campaign in the community and future plans on indoor residual spray should include districts hosting refugees as have high malaria prevalence as well.

d. Intensify implementation of intermittent preventive treatment of malaria in pregnancy immediately from the second trimester. Monitor and report the implementation of the national malaria in pregnancy policy, guidelines, job aids and behaviroual communication change materials that supports uptake of intermittent preventive treatment of malaria in pregnancy.

e. Ensure that 100% of pregnant women enrolled in the ANC receive and take the Iron-Follic Acid tablets daily as prescribed by clinicians. Ensure that pregnant women attending ANC receive LLINT and regulalrly sleep under LLINT to prevent malaria in pregnancy.

Water, sanitation and hygiene

a. In collaboration with water, sector stakeholders provide adequate, safe and celan water supply meeting daily demands of the populations. Adequate provisions of safe and clean water will reduce water born related diseases in the community.

b. Promote environmental health activities in the communities and at household level, emphasizing on hnad washing practices with soap and proper disposal of human faecal matters including children faecal matters.

APPENDIX 1: Plausibility Checks

ADJUMANI Host Community

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 (0.0 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	4 (p=0.048)
Age ratio(6-29 vs 30-59)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	4 (p=0.005)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (7)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (6)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (31)
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 (1.01)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	3 (-0.49)
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	21 %

The overall score of this survey is 21 %, this is acceptable.

KIRYANDONGO Host Community

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 (0.0 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.371)
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=0.155)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	4 (16)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (12)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (35)
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 (1.01)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.20)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (0.00)
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	17 %

The overall score of this survey is 17 %, this is acceptable.

KYEGWEGWA Host Community

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 (1.1 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.235)
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=0.311)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (8)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (4)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (37)
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 (1.09)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	3 (-0.48)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.22)
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	16 %

The overall score of this survey is 16 %, this is acceptable.

HOIMA Host Community

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 (0.3 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.253)
Age ratio(6-29 vs 30-59)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	4 (p=0.005)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (7)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	4 (18)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (33)
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 (1.05)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.29)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.21)
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	20 %

The overall score of this survey is 20 %, this is acceptable.

KOBOKO Host Community

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 (0.0 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.122)
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=0.942)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	4 (17)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	4 (14)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (38)
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 (1.01)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.23)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (-0.07)
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	19 %

The overall score of this survey is 19 %, this is acceptable.

ISINGIRO Host Community

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 (0.8 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.145)
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=0.252)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (7)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (6)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (32)
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 (1.09)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	3 (-0.53)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.31)
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	14 %

The overall score of this survey is 14 %, this is good.

ARUA Host Community
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 (0.0 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.810)
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=0.216)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (10)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (11)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (40)
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 (1.03)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	3 (-0.44)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	5 (-0.66)
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	22 %

The overall score of this survey is 22 %, this is acceptable.

KAMWENGE Host Community
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 (0.0 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.376)
Age ratio(6-29 vs 30-59)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	4 (p=0.003)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (12)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (12)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (37)
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 (1.01)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	5 (-0.69)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (0.01)
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	23 %

The overall score of this survey is 23 %, this is acceptable.

YUMBE Host Community
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 (0.0 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.333)
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=0.822)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (9)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (10)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (38)
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 (1.05)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.27)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	5 (-0.73)
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	20 %

The overall score of this survey is 20 %, this is acceptable.

LAMWO Host Community
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 (0.0 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.625)
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=0.725)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (11)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	4 (18)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (39)
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 (1.06)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.35)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	3 (-0.53)
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	20 %

The overall score of this survey is 20 %, this is acceptable.

MOYO Host Community
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 (0.0 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	0 (p=0.568)
Age ratio(6-29 vs 30-59)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
(Significant chi square)			0	2	4	10	2 (p=0.063)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	4 (13)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (10)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	10 (34)
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 (1.04)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	3 (-0.59)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (-0.01)
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	21 %

The overall score of this survey is 21 %, this is acceptable.

APPENDIX 2: Result Tables for NCHS Growth Reference 1977

Kiryandongo Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Kiryandongo Host Community

	All n = 281	Boys n = 148	Girls n = 133
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(15) 5.3 % (3.3 - 8.6 95% C.I.)	(8) 5.4 % (2.8 - 10.3 95% C.I.)	(7) 5.3 % (2.6 - 10.5 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(15) 5.3 % (3.3 - 8.6 95% C.I.)	(8) 5.4 % (2.8 - 10.3 95% C.I.)	(7) 5.3 % (2.6 - 10.5 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(0) 0.0 % (0.0 - 1.3 95% C.I.)	(0) 0.0 % (0.0 - 2.5 95% C.I.)	(0) 0.0 % (0.0 - 2.8 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Kiryandongo Host Community

	All n = 281	Boys n = 148	Girls n = 133
Prevalence of underweight (<-2 z-score)	(18) 6.4 % (4.1 - 9.9 95% C.I.)	(10) 6.8 % (3.7 - 12.0 95% C.I.)	(8) 6.0 % (3.1 - 11.4 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(17) 6.0 % (3.8 - 9.5 95% C.I.)	(9) 6.1 % (3.2 - 11.2 95% C.I.)	(8) 6.0 % (3.1 - 11.4 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(1) 0.4 % (0.1 - 2.0 95% C.I.)	(1) 0.7 % (0.1 - 3.7 95% C.I.)	(0) 0.0 % (0.0 - 2.8 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Kiryandongo Host Community

	All n = 277	Boys n = 148	Girls n = 129
Prevalence of stunting (<-2 z-score)	(72) 26.0 % (21.2 - 31.5 95% C.I.)	(41) 27.7 % (21.1 - 35.4 95% C.I.)	(31) 24.0 % (17.5 - 32.1 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(63) 22.7 % (18.2 - 28.0 95% C.I.)	(37) 25.0 % (18.7 - 32.5 95% C.I.)	(26) 20.2 % (14.1 - 27.9 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(9) 3.2 % (1.7 - 6.1 95% C.I.)	(4) 2.7 % (1.1 - 6.7 95% C.I.)	(5) 3.9 % (1.7 - 8.8 95% C.I.)

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	281	-0.20±0.99	1.00	0	0
Weight-for-Age	281	-0.71±0.89	1.00	0	0
Height-for-Age	277	-1.11±1.18	1.00	0	4

* contains for WHZ and WAZ the children with edema.

Kyegwegwa Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Kyegwegwa Host Community

	All n = 282	Boys n = 149	Girls n = 133
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(24) 8.5 % (5.8 - 12.4 95% C.I.)	(15) 10.1 % (6.2 - 15.9 95% C.I.)	(9) 6.8 % (3.6 - 12.4 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(22) 7.8 % (5.2 - 11.5 95% C.I.)	(13) 8.7 % (5.2 - 14.4 95% C.I.)	(9) 6.8 % (3.6 - 12.4 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(2) 0.7 % (0.2 - 2.5 95% C.I.)	(2) 1.3 % (0.4 - 4.8 95% C.I.)	(0) 0.0 % (0.0 - 2.8 95% C.I.)

The prevalence of oedema is 0.4 %

Prevalence of underweight based on weight-for-age z-scores by sex, Kyegwegwa Host Community

	All n = 284	Boys n = 151	Girls n = 133
Prevalence of underweight (<-2 z-score)	(44) 15.5 % (11.7 - 20.2 95% C.I.)	(30) 19.9 % (14.3 - 26.9 95% C.I.)	(14) 10.5 % (6.4 - 16.9 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(41) 14.4 % (10.8 - 19.0 95% C.I.)	(27) 17.9 % (12.6 - 24.8 95% C.I.)	(14) 10.5 % (6.4 - 16.9 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(3) 1.1 % (0.4 - 3.1 95% C.I.)	(3) 2.0 % (0.7 - 5.7 95% C.I.)	(0) 0.0 % (0.0 - 2.8 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Kyegwegwa Host Community

	All n = 281	Boys n = 151	Girls n = 130
Prevalence of stunting (<-2 z-score)	(102) 36.3 % (30.9 - 42.1 95% C.I.)	(70) 46.4 % (38.6 - 54.3 95% C.I.)	(32) 24.6 % (18.0 - 32.7 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(90) 32.0 % (26.8 - 37.7 95% C.I.)	(59) 39.1 % (31.7 - 47.0 95% C.I.)	(31) 23.8 % (17.3 - 31.9 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(12) 4.3 % (2.5 - 7.3 95% C.I.)	(11) 7.3 % (4.1 - 12.6 95% C.I.)	(1) 0.8 % (0.1 - 4.2 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Kyegwegwa Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	281	-0.20±1.09	1.00	1	3
Weight-for-Age	284	-0.90±0.98	1.00	1	0
Height-for-Age	281	-1.39±1.12	1.00	0	4

* contains for WHZ and WAZ the children with edema.

Hoima Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Hoima Host Community

	All n = 305	Boys n = 142	Girls n = 163
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(22) 7.2 % (4.8 - 10.7 95% C.I.)	(11) 7.7 % (4.4 - 13.3 95% C.I.)	(11) 6.7 % (3.8 - 11.7 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(20) 6.6 % (4.3 - 9.9 95% C.I.)	(9) 6.3 % (3.4 - 11.6 95% C.I.)	(11) 6.7 % (3.8 - 11.7 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(2) 0.7 % (0.2 - 2.4 95% C.I.)	(2) 1.4 % (0.4 - 5.0 95% C.I.)	(0) 0.0 % (0.0 - 2.3 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Hoima Host Community

	All n = 306	Boys n = 143	Girls n = 163
Prevalence of underweight (<-2 z-score)	(39) 12.7 % (9.5 - 16.9 95% C.I.)	(27) 18.9 % (13.3 - 26.1 95% C.I.)	(12) 7.4 % (4.3 - 12.4 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(35) 11.4 % (8.3 - 15.5 95% C.I.)	(24) 16.8 % (11.5 - 23.8 95% C.I.)	(11) 6.7 % (3.8 - 11.7 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(4) 1.3 % (0.5 - 3.3 95% C.I.)	(3) 2.1 % (0.7 - 6.0 95% C.I.)	(1) 0.6 % (0.1 - 3.4 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Hoima Host Community

	All n = 304	Boys n = 143	Girls n = 161
Prevalence of stunting (<-2 z-score)	(105) 34.5 % (29.4 - 40.0 95% C.I.)	(57) 39.9 % (32.2 - 48.0 95% C.I.)	(48) 29.8 % (23.3 - 37.3 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(89) 29.3 % (24.4 - 34.6 95% C.I.)	(45) 31.5 % (24.4 - 39.5 95% C.I.)	(44) 27.3 % (21.0 - 34.7 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(16) 5.3 % (3.3 - 8.4 95% C.I.)	(12) 8.4 % (4.9 - 14.1 95% C.I.)	(4) 2.5 % (1.0 - 6.2 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Hoima Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	305	-0.33±1.05	1.00	0	1
Weight-for-Age	306	-0.95±0.91	1.00	0	0
Height-for-Age	304	-1.32±1.16	1.00	0	2

* contains for WHZ and WAZ the children with edema.

Kamwenge Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Kamwenge Host Community

	All n = 287	Boys n = 151	Girls n = 136
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(19) 6.6 % (4.3 - 10.1 95% C.I.)	(15) 9.9 % (6.1 - 15.7 95% C.I.)	(4) 2.9 % (1.1 - 7.3 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(17) 5.9 % (3.7 - 9.3 95% C.I.)	(14) 9.3 % (5.6 - 15.0 95% C.I.)	(3) 2.2 % (0.8 - 6.3 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(2) 0.7 % (0.2 - 2.5 95% C.I.)	(1) 0.7 % (0.1 - 3.7 95% C.I.)	(1) 0.7 % (0.1 - 4.0 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Kamwenge Host Community

	All n = 287	Boys n = 151	Girls n = 136
Prevalence of underweight (<-2 z-score)	(24) 8.4 % (5.7 - 12.1 95% C.I.)	(18) 11.9 % (7.7 - 18.1 95% C.I.)	(6) 4.4 % (2.0 - 9.3 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(24) 8.4 % (5.7 - 12.1 95% C.I.)	(18) 11.9 % (7.7 - 18.1 95% C.I.)	(6) 4.4 % (2.0 - 9.3 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(0) 0.0 % (0.0 - 1.3 95% C.I.)	(0) 0.0 % (0.0 - 2.5 95% C.I.)	(0) 0.0 % (0.0 - 2.7 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Kamwenge Host Community

	All n = 285	Boys n = 149	Girls n = 136
Prevalence of stunting (<-2 z-score)	(81) 28.4 % (23.5 - 33.9 95% C.I.)	(45) 30.2 % (23.4 - 38.0 95% C.I.)	(36) 26.5 % (19.8 - 34.5 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(70) 24.6 % (19.9 - 29.9 95% C.I.)	(37) 24.8 % (18.6 - 32.3 95% C.I.)	(33) 24.3 % (17.8 - 32.1 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(11) 3.9 % (2.2 - 6.8 95% C.I.)	(8) 5.4 % (2.7 - 10.2 95% C.I.)	(3) 2.2 % (0.8 - 6.3 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Kamwenge Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	287	-0.20±1.01	1.00	0	0
Weight-for-Age	287	-0.84±0.86	1.00	0	0
Height-for-Age	285	-1.31±1.08	1.00	0	2

* contains for WHZ and WAZ the children with edema.

Adjumani Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Adjumani Host Community

	All n = 296	Boys n = 165	Girls n = 131
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(17) 5.7 % (3.6 - 9.0 95% C.I.)	(13) 7.9 % (4.7 - 13.0 95% C.I.)	(4) 3.1 % (1.2 - 7.6 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(16) 5.4 % (3.4 - 8.6 95% C.I.)	(12) 7.3 % (4.2 - 12.3 95% C.I.)	(4) 3.1 % (1.2 - 7.6 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(1) 0.3 % (0.1 - 1.9 95% C.I.)	(1) 0.6 % (0.1 - 3.4 95% C.I.)	(0) 0.0 % (0.0 - 2.8 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Adjumani Host Community

	All n = 296	Boys n = 165	Girls n = 131
Prevalence of underweight (<-2 z-score)	(18) 6.1 % (3.9 - 9.4 95% C.I.)	(8) 4.8 % (2.5 - 9.3 95% C.I.)	(10) 7.6 % (4.2 - 13.5 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(15) 5.1 % (3.1 - 8.2 95% C.I.)	(7) 4.2 % (2.1 - 8.5 95% C.I.)	(8) 6.1 % (3.1 - 11.6 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(3) 1.0 % (0.3 - 2.9 95% C.I.)	(1) 0.6 % (0.1 - 3.4 95% C.I.)	(2) 1.5 % (0.4 - 5.4 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Adjumani Host Community

	All n = 296	Boys n = 165	Girls n = 131
Prevalence of stunting (<-2 z-score)	(67) 22.6 % (18.2 - 27.7 95% C.I.)	(35) 21.2 % (15.7 - 28.1 95% C.I.)	(32) 24.4 % (17.9 - 32.4 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(62) 20.9 % (16.7 - 25.9 95% C.I.)	(34) 20.6 % (15.1 - 27.4 95% C.I.)	(28) 21.4 % (15.2 - 29.2 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(5) 1.7 % (0.7 - 3.9 95% C.I.)	(1) 0.6 % (0.1 - 3.4 95% C.I.)	(4) 3.1 % (1.2 - 7.6 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Adjumani Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	296	-0.21±1.01	1.00	0	0
Weight-for-Age	296	-0.75±0.86	1.00	0	0
Height-for-Age	296	-1.10±1.08	1.00	0	0

* contains for WHZ and WAZ the children with edema.

Koboko Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Koboko Host Community

	All n = 221	Boys n = 122	Girls n = 99
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(16) 7.2 % (4.5 - 11.4 95% C.I.)	(8) 6.6 % (3.4 - 12.4 95% C.I.)	(8) 8.1 % (4.2 - 15.1 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(15) 6.8 % (4.2 - 10.9 95% C.I.)	(8) 6.6 % (3.4 - 12.4 95% C.I.)	(7) 7.1 % (3.5 - 13.9 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(1) 0.5 % (0.1 - 2.5 95% C.I.)	(0) 0.0 % (0.0 - 3.1 95% C.I.)	(1) 1.0 % (0.2 - 5.5 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Koboko Host Community

	All n = 221	Boys n = 122	Girls n = 99
Prevalence of underweight (<-2 z-score)	(20) 9.0 % (5.9 - 13.6 95% C.I.)	(14) 11.5 % (7.0 - 18.3 95% C.I.)	(6) 6.1 % (2.8 - 12.6 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(20) 9.0 % (5.9 - 13.6 95% C.I.)	(14) 11.5 % (7.0 - 18.3 95% C.I.)	(6) 6.1 % (2.8 - 12.6 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(0) 0.0 % (0.0 - 1.7 95% C.I.)	(0) 0.0 % (0.0 - 3.1 95% C.I.)	(0) 0.0 % (0.0 - 3.7 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Koboko Host Community

	All n = 221	Boys n = 122	Girls n = 99
Prevalence of stunting (<-2 z-score)	(48) 21.7 % (16.8 - 27.6 95% C.I.)	(34) 27.9 % (20.7 - 36.4 95% C.I.)	(14) 14.1 % (8.6 - 22.3 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(43) 19.5 % (14.8 - 25.2 95% C.I.)	(31) 25.4 % (18.5 - 33.8 95% C.I.)	(12) 12.1 % (7.1 - 20.0 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(5) 2.3 % (1.0 - 5.2 95% C.I.)	(3) 2.5 % (0.8 - 7.0 95% C.I.)	(2) 2.0 % (0.6 - 7.1 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Koboko Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	221	-0.47±1.01	1.00	0	0
Weight-for-Age	221	-0.92±0.75	1.00	0	0
Height-for-Age	221	-1.09±1.10	1.00	0	0

* contains for WHZ and WAZ the children with edema.

Isingiro Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Isingiro Host Community

	All n = 478	Boys n = 223	Girls n = 255
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(39) 8.2 % (6.0 - 11.0 95% C.I.)	(20) 9.0 % (5.9 - 13.4 95% C.I.)	(19) 7.5 % (4.8 - 11.3 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(37) 7.7 % (5.7 - 10.5 95% C.I.)	(18) 8.1 % (5.2 - 12.4 95% C.I.)	(19) 7.5 % (4.8 - 11.3 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(2) 0.4 % (0.1 - 1.5 95% C.I.)	(2) 0.9 % (0.2 - 3.2 95% C.I.)	(0) 0.0 % (0.0 - 1.5 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Isingiro Host Community

	All n = 476	Boys n = 222	Girls n = 254
Prevalence of underweight (<-2 z-score)	(51) 10.7 % (8.2 - 13.8 95% C.I.)	(31) 14.0 % (10.0 - 19.1 95% C.I.)	(20) 7.9 % (5.2 - 11.8 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(48) 10.1 % (7.7 - 13.1 95% C.I.)	(31) 14.0 % (10.0 - 19.1 95% C.I.)	(17) 6.7 % (4.2 - 10.5 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(3) 0.6 % (0.2 - 1.8 95% C.I.)	(0) 0.0 % (0.0 - 1.7 95% C.I.)	(3) 1.2 % (0.4 - 3.4 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Isingiro Host Community

	All n = 468	Boys n = 220	Girls n = 248
Prevalence of stunting (<-2 z-score)	(142) 30.3 % (26.4 - 34.7 95% C.I.)	(79) 35.9 % (29.9 - 42.4 95% C.I.)	(63) 25.4 % (20.4 - 31.2 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(114) 24.4 % (20.7 - 28.4 95% C.I.)	(62) 28.2 % (22.7 - 34.5 95% C.I.)	(52) 21.0 % (16.4 - 26.5 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(28) 6.0 % (4.2 - 8.5 95% C.I.)	(17) 7.7 % (4.9 - 12.0 95% C.I.)	(11) 4.4 % (2.5 - 7.8 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Isingiro Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	478	-0.16±1.09	1.00	0	4
Weight-for-Age	476	-0.80±0.96	1.00	0	6
Height-for-Age	468	-1.34±1.14	1.00	0	14

* contains for WHZ and WAZ the children with edema.

Arua Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Arua Host Community

	All n = 278	Boys n = 137	Girls n = 141
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(30) 10.8 % (7.7 - 15.0 95% C.I.)	(20) 14.6 % (9.7 - 21.5 95% C.I.)	(10) 7.1 % (3.9 - 12.6 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(28) 10.1 % (7.1 - 14.2 95% C.I.)	(19) 13.9 % (9.1 - 20.6 95% C.I.)	(9) 6.4 % (3.4 - 11.7 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(2) 0.7 % (0.2 - 2.6 95% C.I.)	(1) 0.7 % (0.1 - 4.0 95% C.I.)	(1) 0.7 % (0.1 - 3.9 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Arua Host Community

	All n = 278	Boys n = 137	Girls n = 141
Prevalence of underweight (<-2 z-score)	(35) 12.6 % (9.2 - 17.0 95% C.I.)	(20) 14.6 % (9.7 - 21.5 95% C.I.)	(15) 10.6 % (6.6 - 16.8 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(35) 12.6 % (9.2 - 17.0 95% C.I.)	(20) 14.6 % (9.7 - 21.5 95% C.I.)	(15) 10.6 % (6.6 - 16.8 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(0) 0.0 % (0.0 - 1.4 95% C.I.)	(0) 0.0 % (0.0 - 2.7 95% C.I.)	(0) 0.0 % (0.0 - 2.7 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Arua Host Community

	All n = 278	Boys n = 137	Girls n = 141
Prevalence of stunting (<-2 z-score)	(67) 24.1 % (19.4 - 29.5 95% C.I.)	(33) 24.1 % (17.7 - 31.9 95% C.I.)	(34) 24.1 % (17.8 - 31.8 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(61) 21.9 % (17.5 - 27.2 95% C.I.)	(30) 21.9 % (15.8 - 29.5 95% C.I.)	(31) 22.0 % (15.9 - 29.5 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(6) 2.2 % (1.0 - 4.6 95% C.I.)	(3) 2.2 % (0.7 - 6.2 95% C.I.)	(3) 2.1 % (0.7 - 6.1 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Arua Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	278	-0.57±1.03	1.00	0	0
Weight-for-Age	278	-1.02±0.80	1.00	0	0
Height-for-Age	278	-1.14±1.10	1.00	0	0

* contains for WHZ and WAZ the children with edema.

Lamwo Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Lamwo Host Community

	All n = 268	Boys n = 138	Girls n = 130
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(27) 10.1 % (7.0 - 14.3 95% C.I.)	(14) 10.1 % (6.1 - 16.3 95% C.I.)	(13) 10.0 % (5.9 - 16.4 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(25) 9.3 % (6.4 - 13.4 95% C.I.)	(13) 9.4 % (5.6 - 15.5 95% C.I.)	(12) 9.2 % (5.4 - 15.4 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(2) 0.7 % (0.2 - 2.7 95% C.I.)	(1) 0.7 % (0.1 - 4.0 95% C.I.)	(1) 0.8 % (0.1 - 4.2 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Lamwo Host Community

	All n = 268	Boys n = 138	Girls n = 130
Prevalence of underweight (<-2 z-score)	(35) 13.1 % (9.5 - 17.6 95% C.I.)	(21) 15.2 % (10.2 - 22.1 95% C.I.)	(14) 10.8 % (6.5 - 17.3 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(34) 12.7 % (9.2 - 17.2 95% C.I.)	(21) 15.2 % (10.2 - 22.1 95% C.I.)	(13) 10.0 % (5.9 - 16.4 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(1) 0.4 % (0.1 - 2.1 95% C.I.)	(0) 0.0 % (0.0 - 2.7 95% C.I.)	(1) 0.8 % (0.1 - 4.2 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Lamwo Host Community

	All n = 268	Boys n = 138	Girls n = 130
Prevalence of stunting (<-2 z-score)	(49) 18.3 % (14.1 - 23.3 95% C.I.)	(27) 19.6 % (13.8 - 27.0 95% C.I.)	(22) 16.9 % (11.4 - 24.3 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(46) 17.2 % (13.1 - 22.1 95% C.I.)	(25) 18.1 % (12.6 - 25.4 95% C.I.)	(21) 16.2 % (10.8 - 23.4 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(3) 1.1 % (0.4 - 3.2 95% C.I.)	(2) 1.4 % (0.4 - 5.1 95% C.I.)	(1) 0.8 % (0.1 - 4.2 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Lamwo Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	268	-0.54±1.06	1.00	0	0
Weight-for-Age	268	-0.93±0.94	1.00	0	0
Height-for-Age	268	-1.02±1.07	1.00	0	0

* contains for WHZ and WAZ the children with edema.

Moyo Host ommunity

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Moyo Host Community

	All n = 249	Boys n = 129	Girls n = 120
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(20) 8.0 % (5.3 - 12.1 95% C.I.)	(11) 8.5 % (4.8 - 14.6 95% C.I.)	(9) 7.5 % (4.0 - 13.6 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(18) 7.2 % (4.6 - 11.1 95% C.I.)	(9) 7.0 % (3.7 - 12.7 95% C.I.)	(9) 7.5 % (4.0 - 13.6 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(2) 0.8 % (0.2 - 2.9 95% C.I.)	(2) 1.6 % (0.4 - 5.5 95% C.I.)	(0) 0.0 % (0.0 - 3.1 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Moyo Host Community

	All n = 246	Boys n = 126	Girls n = 120
Prevalence of underweight (<-2 z-score)	(25) 10.2 % (7.0 - 14.6 95% C.I.)	(14) 11.1 % (6.7 - 17.8 95% C.I.)	(11) 9.2 % (5.2 - 15.7 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(25) 10.2 % (7.0 - 14.6 95% C.I.)	(14) 11.1 % (6.7 - 17.8 95% C.I.)	(11) 9.2 % (5.2 - 15.7 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(0) 0.0 % (0.0 - 1.5 95% C.I.)	(0) 0.0 % (0.0 - 3.0 95% C.I.)	(0) 0.0 % (0.0 - 3.1 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Moyo Host Community

	All n = 237	Boys n = 124	Girls n = 113
Prevalence of stunting (<-2 z-score)	(64) 27.0 % (21.8 - 33.0 95% C.I.)	(43) 34.7 % (26.9 - 43.4 95% C.I.)	(21) 18.6 % (12.5 - 26.7 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(48) 20.3 % (15.6 - 25.8 95% C.I.)	(33) 26.6 % (19.6 - 35.0 95% C.I.)	(15) 13.3 % (8.2 - 20.8 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(16) 6.8 % (4.2 - 10.7 95% C.I.)	(10) 8.1 % (4.4 - 14.2 95% C.I.)	(6) 5.3 % (2.5 - 11.1 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Moyo Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	249	-0.29±1.04	1.00	0	0
Weight-for-Age	246	-0.89±0.92	1.00	0	3
Height-for-Age	237	-1.32±1.12	1.00	0	12

* contains for WHZ and WAZ the children with edema.

Yumbe Host Community

Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema) and by sex, Yumbe Host Community

	All n = 309	Boys n = 146	Girls n = 163
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(30) 9.7 % (6.9 - 13.5 95% C.I.)	(17) 11.6 % (7.4 - 17.9 95% C.I.)	(13) 8.0 % (4.7 - 13.2 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(28) 9.1 % (6.3 - 12.8 95% C.I.)	(16) 11.0 % (6.9 - 17.1 95% C.I.)	(12) 7.4 % (4.3 - 12.4 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(2) 0.6 % (0.2 - 2.3 95% C.I.)	(1) 0.7 % (0.1 - 3.8 95% C.I.)	(1) 0.6 % (0.1 - 3.4 95% C.I.)

The prevalence of oedema is 0.0 %

Prevalence of underweight based on weight-for-age z-scores by sex, Yumbe Host Community

	All n = 307	Boys n = 146	Girls n = 161
Prevalence of underweight (<-2 z-score)	(37) 12.1 % (8.9 - 16.2 95% C.I.)	(22) 15.1 % (10.2 - 21.8 95% C.I.)	(15) 9.3 % (5.7 - 14.8 95% C.I.)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(32) 10.4 % (7.5 - 14.3 95% C.I.)	(18) 12.3 % (7.9 - 18.6 95% C.I.)	(14) 8.7 % (5.3 - 14.1 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	(5) 1.6 % (0.7 - 3.8 95% C.I.)	(4) 2.7 % (1.1 - 6.8 95% C.I.)	(1) 0.6 % (0.1 - 3.4 95% C.I.)

Prevalence of stunting based on height-for-age z-scores and by sex, Yumbe Host Community

	All n = 304	Boys n = 144	Girls n = 160
Prevalence of stunting (<-2 z-score)	(60) 19.7 % (15.7 - 24.6 95% C.I.)	(30) 20.8 % (15.0 - 28.2 95% C.I.)	(30) 18.8 % (13.5 - 25.5 95% C.I.)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(52) 17.1 % (13.3 - 21.7 95% C.I.)	(27) 18.8 % (13.2 - 25.9 95% C.I.)	(25) 15.6 % (10.8 - 22.0 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	(8) 2.6 % (1.3 - 5.1 95% C.I.)	(3) 2.1 % (0.7 - 5.9 95% C.I.)	(5) 3.1 % (1.3 - 7.1 95% C.I.)

Mean z-scores, Design Effects and excluded subjects, Yumbe Host Community

Indicator	n	Mean z-scores ± SD	Design Effect (z-score < -2)	z-scores not available*	z-scores out of range
Weight-for-Height	309	-0.51±1.05	1.00	0	0
Weight-for-Age	307	-0.87±0.96	1.00	0	2
Height-for-Age	304	-0.94±1.19	1.00	0	5

* contains for WHZ and WAZ the children with edema.

APPENDIX 3: FSNA Questionnaire

Household ID: |__|__|__|__|__|
(Check and complete during data entry)
(First digit for Host Community; second and third digit for Cluster ID; fourth and fifth digit for household #)

Food Security and Nutrition Assessment in Host Community 2015

0.1 Date |__|__|/|__|__|/2015

0.2 Interviewer Name: _____ **Signature:** _____

0.3 Supervisor Name:_____ **Signature:**_____

0.4 **Host Community: 1-Isingiro 2–Oruchinga 3–Kyegwegwa 4–Hoima 5–Rwamanja 6–Kiryandongo 7–Arua 8-Adjumani/Pakelle - Old caseload (Pre influx) 9 - Adjumani/Pakelle (South Sudan Influx)** ***(skip if not refugees – go to 0.5)***

0.5 Sub county: _____

0.6 Host Community: 1- Isingiro, 2- Kyegegwa, 3- Kamwenge, 4- Hoima, 5- Kiryandongo, 6-Adjumani, 7-Arua, 8-Koboko

0.6 Sub-county…… 0.7 Parish…….. 0.8 Village……..…

0.9 Cluster ID |__|__| **0.10 HH No:** |__|__|

SECTION 1 – HOUSEHOLD AND MOTHER/CAREGIVER INFORMATION

A1. Is the head of household a refugee? Yes = 1 No=2 **(if no go to A3)**

A2. If yes (refugee) from which country: 1: Burundian 2: DRC, 3: Eritrean, 4: Ethiopian, 5: Rwandan, 6: Somalis, 7: South Sudanese 8: Sudanese 9: Others

A3. Is the head of household a Ugandan? Yes = 1 No=2

A4. Household head number of completed years of formal education |__|__|

A5. Is the respondent the head of household? Yes = 1 No=2 **(if no go to A8)**

A6. What is the sex of the household head? Male = 1 Female = 2

A7. What is the age of the household head? (best guess estimate) |__|__| Years

A8. **Is the household head on the Extremely Vulnerable Individuals (EVI) Programme?**
(Ask to see card) 1= Yes 0=No

A9. What is the sex of the respondent? Male = 1 Female = 2

A10. What is the age of the respondent? |__|__| Years

A11. Do you have a close family member still in the country of origin (only for refugees)? Yes = 1 No=2

A12. What is the marital status of the Head of Household?
1=Married, 2=Single, 3=Widowed 4=Separated / divorced

A13. Do you have any member of your household who is chronically ill? Yes=1 No=2

A14. If yes, is this person the head of the household? Yes=1 No=2

A15. How many people are in your household (eating with you every day) |__|__|

A16. Respondents number of completed years of formal education |__|__|
(If respondent is the household head put as A4)

A17. Please specify the age groups of the people in your household
0-5 year |__|__|, 6-12 years |__|__|, 13-17 years |__|__|, 18-60 years |__|__|, 60 and above |__|__|

SECTION 2: ANTHROPOMETRY AND ANAEMIA STATUS OF WOMEN AT REPRODUCTIVE AGE

A1	A2	A3	A4	A5	A6	A7	A8	A9
WM1	WMHH2	Consent given 1=Yes 2=No 3=Absent	Age in Yrs	How many live children have you given birth to? *(Ask all women at reproductive age in the HH – 15 – 49 years)*	Are pregnant? 1=Yes 2=No (GO TO HB) 8=Don't know (GO TO HB)	Are you currently <u>enrolled</u> in the ANC programme? 1=Yes 2=No 8=Don't know	Why you are not enrolled in the ANC? 1. I don't know about the ANC programme 2. Too much time required to participate 3. The ANC site is too far 4. No transportation to reach the ANC site 5. I had other commitments that prevented enroLLINTg the me in the programme 6. Other – Specify……	Are you currently <u>receiving</u> iron-folate pills (*SHOW PILL*)? 1=Yes (STOP NOW) 2=No (STOP NOW) 8=Don't know (STOP NOW)

A10	A11	A12	A13
MUAC (15-49 yrs even if mother/caregiver is breastfeeding or pregnant)	WEIGHT (15-49 yrs ONLY if mother/caregiver is NOT pregnant)	HEIGHT (15-49 yrs ONLY if mother/caregiver is NOT pregnant	Hb (g/L or g/dL)

SECTION 3: WATER, SANITATION AND HYGIENE

B1. **How many people live in this household and slept here last night? _____**

B2. **What is the *main* source of drinking water for members of your household? *(Please adapt to context)***
01=Piped water;

02=Public tap/standpipe;
03=Tube well/borehole (& pump);
04=Protected dug well;
05=Protected spring;
06=Rain water collection;
07=UNHCR Tanker;
08=Unprotected spring;
09=Unprotected dug well;
10= Small water vendor;
11=Tanker truck;
12=Bottled water;
13=Surface water (e.g. river, pond);
96=Other;
98=Don't know

B3. **Are you satisfied with the water supply?** If the response is 'Yes', 'Partially' or 'Don't know' surveyor should skip to question B5.
1=Yes;
2=No;
3=Partially;
8=Don't know

B4. **What is the *main* reason you are not satisfied with the water supply? (**This question only applies to household answering 'No' to B3). (Do not read answers, select one answer only) ***(To be adapted to our context)***

01=Not enough;
02=Long waiting queue;
03=Long distance;
04=Irregular supply;
05=Bad taste;
06=Water too warm;
07=Bad quality;
08=Have to pay;
96=Other;
98=Don't know

B5. **Please show me the containers you used yesterday for collecting water.**
CALCULATE THE TOTAL AMOUNT OF WATER USED BY THE HOUSEHOLD PER DAY. THIS RELATES TO ALL SOURCES OF WATER (DRINKING WATER AND NON-DRINKING WATER SOURCES)

No	OBSERVATION / QUESTION	ANSWER			
B6.	CALCULATE THE TOTAL AMOUNT OF WATER USED BY THE HOUSEHOLD PER DAY THIS RELATES TO ALL SOURCES OF WATER (DRINKING WATER AND NON-DRINKING WATER SOURCES)	Please show me the containers you used yesterday for collecting water ASSIGN A NUMBER TO EACH CONTAINER	Capacity in litres	Number of journeys made with each container	Total litres **SUPERVISOR TO COMPLETE HAND CALCULATION**
		1 E.g. jerry can	20 L		
		2 E.g. jerry can	10 L		
		3 E.g. jerry can	5 L		
		4 E.g. bucket	20 L		
		5 E.g. bucket	10 L		
		6			
		7			
		Total litres used by household			

B7.	Please show me where you store your drinking water.	Are the drinking water containers covered or narrow necked? None are ..... 0 Some are ..... 1 All are 2	|___|

B8. **What kind of toilet facility does this household use?** ***(To be adapted to our context)***
01=Flush to piped sewer system;
02=Flush to septic system;
03=Pour-flush to pit;
04=VIP/simple pit latrine with floor/slab;
05=Composting/dry latrine;
06=Flush or pour-flush elsewhere;
07=Pit latrine without floor/slab;
08=Service or bucket latrine;
09=Hanging toilet/latrine;
10=No facility, field, bush, plastic bag

B9. **How many households share this toilet?**
Number of households (including the surveyed household)_____

1=Not shared (**1 HH**)
2=Shared family (**2 HH**)
3=Communal toilet (**3 HH or more**)
4=Public toilet (**in market or clinic etc**.)
8=Don't know

B10. **Do you have children under three years old? (**The child should be 35 months or younger and might be a young baby).
1=Yes
2=No

B11. **The last time [NAME OF YOUNGEST CHILD] passed stools, what was done to dispose of the stools?**
01=Child used toilet/latrine;
02=Put/rinsed into toilet or latrine;
03=Buried;
04=Thrown into garbage;
05=Put/rinsed into drain or ditch;
06=Left in the open;
96=Other;
98=Don't know

SECTION 4 – LIVESTOCK PRODUCTION					
				1=Yes 0=No	Number of livestock
	Does your household own any of the following livestock? If '*Yes*', how many of the following livestock does your household currently own?	**C1.**	Cattle	|__|	|__|__|__|
		C2.	Sheep	|__|	|__|__|__|
		C3.	Goat	|__|	|__|__|__|
		C4.	Pig	|__|	|__|__|__|
		C5.	Poultry	|__|	|__|__|__|
		C6.	Donkey	|__|	|__|__|__|
		C7.	Other: Specify		|__|__|__|
C8.	What are the main constraints for livestock and livestock production for your household? *Circle all that apply*	**Main constraints**			
		1=Poor breed		6=Lack of veterinary services	
		2=Parasites/diseases		7=Insecurity	
		3=Inadequate labour		8=Theft	
		4=Shortage of pasture/feed		9=Lack of market for livestock	
		5=Shortage of water		10=Other *(specify)*:	

SECTION 5 – FOOD AVAILABILITY				
D1.	Do you have access to agricultural land (arable land for cultivation)?			1=Yes 0= No ***(if "No" Go to D24)***
D2.	What type and how big is the land do you have access to?	1= Flatland for small garden		acres
		2= Up land for cultivation		acres
		3= Swamp		acres
		4= Other (specify):		acres
D3 – D11	What type of crops did you cultivate last season and how much land each occupy?	**D3.** Maize	1= yes 0=No	acres
		D4. Beans	1= yes 0=No	acres
		D5. Cassava	1= yes 0=No	acres
		D6. Millet	1= yes 0=No	acres
		D7. Sorghum	1= yes 0=No	acres
		D8. Potato	1= yes 0=No	acres
		D9. Banana	1= yes 0=No	acres
		D10. Rice	1= yes 0=No	acres
		D11. Other specify)		Acres
D12.	Compare the amount of food produced this year (last season) to the same season last year **(Circle one response)**	1.Much less than the amount of food produced last year		
		2.Somewhat less than the amount of produced last year		
		3.About the same as the amount of food produced last year		
		4.Somewhat greater than the amount of food produced last year		
		5.Much greater than the amount of food produced last year		
D13.	Compare the amount of food sold from the harvest this year with that sold from the harvest at the same time last year **(Circle one response)**	1.Much less than the amount of food sold last year		
		2.Somewhat less than the amount of food sold last year		
		3.About the same as the amount of food sold last year		
		4.Somewhat greater than the amount of food sold last year		
		5.Much greater than the amount of food sold last year		
D14.	What is the **BIGGEST** constraint to agriculture in the past six months? **(Circle one response)**	1=Insecurity 2=I have been prohibited by the clan/my husband 3=The land is infertile/farming is unproductive 4=I have been prohibited by the government 5=Sickness or physical inability 6=I did not have adequate seeds and tools 7=I do not have sufficient family/household labour 8= Land conflicts; 9= Drought/Low rainfall 10= Lack of household storage facility; 11=Other (Specify)		

D15 -23.	If household cultivated food in last season, fill in the table below**. For harvested crops, ask the quantity of output; Leave a blank space if crop was not planted**			
	Crop Harvested	**Number of Units**	**Name of Unit**	**Kilogram per one Unit**
	D15. Maize	|__|__|__|__|__|		|__|__|__|
	D16. Bean	|__|__|__|__|__|		|__|__|__|
	D17. Cassava	|__|__|__|__|__|		|__|__|__|
	D18. Millet	|__|__|__|__|__|		|__|__|__|
	D19. Sorghum	|__|__|__|__|__|		|__|__|__|
	D20. Potato	|__|__|__|__|__|		|__|__|__|
	D21. Banana	|__|__|__|__|__|		|__|__|__|
	D22. Rice	|__|__|__|__|__|		|__|__|__|
	D23. Other (specify)	|__|__|__|__|__|		|__|__|__|
D24.	How much food is in your current stock? |__|__|__|__|__|kg			
D25.	How long will your stock last? |__|__|.|__| months			

D26.	Does your household have a ration card?	Yes.....1 No.....0	|___| **IF ANSWER IS 1 GO TO D28**
D27.	If no, why do you not have a ration card?	Not given one at registration .....1 Lost card.....2 Traded/sold card.....3 Not registered but eligible .....4 Not eligible (not in targeting criteria) .....5 Other.....6	|___|
D28.	If yes, how people from your household are registered **on the food ration card**?	Record the number of people registered in the food ration **from the card**	|___|
D30.	Does your household receive full or reduced ration?	None……..……..…0 Half……..…….…..…...1 Full…….…….…2	|___|
D15.	How many days did the food from the general food aid ration from last month last?	RECORD THE NUMBER OF DAYS IF KNOWN (RECORD 98 IF UNKNOWN)	|___|___|

SECTION 6 : CROSS CUTTING INDICATORS

E1	In the last 6 months, did this household receive the following from WFP – circle all that apply	1. Food aid 2. Cash 3. No assistance from WFP (If "No Assistance", STOP here)
E2	Regarding the last WFP distribution, Who (men, women or both) decides what to do with the cash/voucher given by WFP, such as when, where and what to buy?	1. Women 2. Men 3. Women and Men Together
E3	Regarding the last WFP distribution, Who (men, women or both) decides what to do with the food given by WFP, such as whether to sell, trade, lend or share a portion of it?	1. Women 2. Men 3. Women and Men Together
E4	How many HH members went (or tried to go) to the WFP programme site during the last 2 months?	|__|
E5	Have any of these HH member(s) experienced safety problems 1) going to WFP programme sites, 2) at WFP programme sites, and/or 3) going from WFP programme sites during the last 2 months?	1=Yes 0= No **(If no, skip question E6)**
E6	If yes, could you let me know where the problem occurred (select all that are relevant):	a) Going to the WFP programme site |__| b) At the WFP programme site |__| c) Going from the WFP programme site |__|

SECTION 7 – MAIN INCOME SOURCE

F1. - How many members of the household earn an income?			|____|
Please complete the table, one activity at a time *(use income source codes, up to 3 activities)*		During the past 30 days, what were your household's most important livelihood sources? *(use income source codes, up to 3 activities)*	Using proportional piling or 'divide the pie' methods, please estimate the relative contribution to total income of each source **(%)**
F2.	**Most important**	|__|__|	|__|__|__|
F3.	**Second** *(leave blank if none)*	|__|__|	|__|__|
F4.	**Third** *(leave blank if none)*	|__|__|	|__|__|

Income source codes:	*7 = Small business/self-employed*	*14 = Borrowing*
1 = Food crop production/sales	*8 = Petty trade (firewood sales, etc.)*	*15 = Food assistance*
2 = Cash crop production/sale (e.g. coffee)	*9 = Pension, allowances*	*16 = Skilled Trade*
3 = Sale of animals or animal products	*10 = Salary/wages*	*17 = Sale of food assistance*

4 = Livestock production (Animal Husbandry)	*11 = Fishing*	*19=Government allowance*
5 = Agricultural wage labor	*12 = Handicrafts*	*20=Remittances*
6 = Non-agricultural wage labor	*13 = Gifts/ begging*	*18 = Other*

SECTION 8– EXPENDITURES AND DEBT

Food Expenditure

		G1 – Did you purchase any of the following items during the last 30 days for domestic consumption? If '**no**', enter '0' and proceed to the next food-item. If '**yes**', ask the respondent to estimate the total cash and credit expenditure on the item for **the 30 days.** (*register the expenses according to local currency*)		**G2** – During the **last 30 days**, did your household consume the following foods **without purchasing** them? If so, estimate the value of the non-purchased food items consumed during **the last 30 days**
		(Cash, local currency)	**(Credit, local currency)**	**(Local currency)**
1.	Cereals (maize, rice, sorghum, wheat, bread)			
2.	Tubers (sweet potatoes, cassava)			
3.	Pulses (beans, peas, groundnuts)			
4.	Fruits & vegetables			
5.	Fish/Meat/Eggs/Poultry			
6.	Oil, fat, butter			
7.	Milk, cheese, yogurt			
8.	Sugar/salt			
9.	Tea/Coffee			
10.	Other meals/snacks consumed outside the home			
11.	Matooke			

Non Food expenditure					
G3 – Did you purchase the following items during the **last 30 days** for domestic consumption? ***If none, write 0 and go to next item***		**G4** – Estimate expenditure during the **last 30 days** (*register the expenses according to the currency in which it was done*)	**G5** – In the past **6 months** how much money have you spent on each of the following items or service? ***Use the following table, write 0 if no expenditure.***		**G6**– Estimate expenditure during the **last six months**
		(local currency)			**(local currency)**
1	Rent		10	Medical expenses, health care	
2	Soap & HH items		11	Clothing, shoes	
3	Transport		12	Education, school fees, uniform, etc.	
4	Fuel (wood, paraffin, etc.)		13	Debt repayment	
5	Water		14	Celebrations/social events	
6	Electricity/Lighting		15	Agricultural inputs	
7	Communication (phone)		16	Savings	
9	Alcohol/Palm wine & Tobacco		17	Constructions/house repairs	

G7	Do you have any debt or credit to repay at the moment?	**0**= No **1**= Yes	|___| ***If 'No', go to section 9***
G8	If yes, approximate the amount of current debt in Uganda shiLLINTgs		……..UgX
G9	What was the main reason for new debts or credit? **1**= To buy food **2**= To cover health expenses **3**= To pay school, education costs **4**= To buy agricultural inputs (seed, tools...) **5**= To buy animal feed, fodder, veterinary **6**= To buy or rent land **7**= To buy or rent animals **8**= To buy or rent or renovate a flat/ house **9**= To pay for social events / ceremonies **10**= To invest for other business **11**= Other reason(specify)_____		**Main reason** |___|
G10	Who is the main source of credit for all debts and loans?		**Main source**

	1= Relatives **2**= Traders/shop-keeper **3**= Bank/ Credit institution/Micro-credit project **4**= Money lender **5**= Other (*specify*)	|____|

SECTION 9– FOOD SOURCES AND CONSUMPTION

Read: I would now like to ask you a few questions about food consumption in your household (**Ask all the three questions for each row)**

	Food Item	***a.*** *Number of days food item was eaten during last 7 days*	***b.*** *Main Source (use codes at bottom of table)*	***c.*** *Was food item eaten in last 24 hours? 1= Yes 0= No*
H1.	**Cereals and grain:** Rice, bread / cake and / or donuts, sorghum, millet, maize, chapatti.	|__|	|__|	
H2.	**Roots and tubers:** potato, yam, cassava, sweet potato, and / or other tubers	|__|	|__|	
H3.	**Pulses:** beans, cowpeas, lentils, soy, pigeon pea	|__|	|__|	
H4.	**Nuts:** ground nuts, peanuts, sim sim, coconuts or other nuts	|__|	|__|	
H5.	**Orange vegetables (vegetables rich in Vitamin A):** carrot, red pepper, pumpkin, orange sweet potatoes,	|__|	|__|	
H6.	**Green leafy vegetables:**, spinach, broccoli, amaranth and / or other dark green leaves, cassava leaves, bean leaves, pea leaves.	|__|	|__|	
H7.	**Other vegetables:** onion, tomatoes, cucumber, radishes, green beans, peas, lettuce, cabbage, etc.	|__|	|__|	
H8.	**Orange fruits (Fruits rich in Vitamin A):** mango, papaya, apricot, peach	|__|	|__|	
H9.	**Other Fruits:** banana, apple, lemon, tangerine	|__|	|__|	
H10.	**Meat:** goat, beef, chicken, pork *(report only meat consumed in large quantities and not as a condiment)*	|__|	|__|	
H11.	**Liver, kidney, heart and / or other organ meats and blood**	|__|	|__|	
H12.	**Fish / Shellfish:** fish, including canned tuna, and/or other seafood *(report only fish consumed in large quantities and not as a condiment)*	|__|	|__|	
H13.	**Eggs**	|__|	|__|	
H14.	**Milk and other dairy products**: fresh milk / sour, yogurt, cheese, other dairy products *(Exclude margarine / butter or small amounts of milk for tea / coffee)*	|__|	|__|	
H15.	**Oil / fat / butter:** vegetable oil, palm oil, shea butter, margarine, other fats / oil	|__|	|__|	
H16.	**Sugar, or sweet:** sugar, honey, jam, cakes, candy, cookies, pastries, cakes and other sweet (sugary drinks)	|__|	|__|	
H17.	**Condiments / Spices:** tea, coffee / cocoa, salt, garlic, spices, yeast / baking powder, lanwin, tomato / sauce, meat or fish as a condiment, condiments including small amount of milk / tea coffee.	|__|	|__|	
Food source codes *1 = Own production (crops, animal)* *2 = Fishing / Hunting* *3 = Gathering* *4 = Borrowed* *5 = Market (purchase with cash)* *6 = Market (purchase on credit)* *7 = Beg for food* *8 = Exchange labor or items for food*				

9 = Gift (food) from family relatives or friends *10 = Food aid from civil society, NGOs, government, WFP etc*			

SECTION 10– SHOCKS AND COPING

What have been your main **difficulties or shocks** in the past 30 days ***Do NOT list, leave the household answer spontaneously*** *Once done, ask the household to rank the 2 most important ones*	1st Difficulty		2nd Difficulty	
1 = Loss employment/reduced salary/wages 2 = Crop Loss due to Rodents 3 = Death household member/funerals 4 = High food prices 5 = High fuel/transportation prices 6= Debt to reimburse 7 = Floods, heavy rains, drought, land slides 8= Other shock (Specify) 99= No difficulty mentioned	**I1.**	|___|	**I2.**	|___|

Reduced Coping Strategies Index During the last 7 days, how many times (in days) did your household have to employ one of the following strategies to cope with a lack of food or money to buy it? **READ OUT STRATEGIES**		**Frequency (number of days from 0 to 7)**
I3.	Relied on less preferred, less expensive food	| __ |
I4.	Borrowed food or relied on help from friends or relatives	| __ |
I5.	Reduced the number of meals eaten per day	| __ |
I6.	Reduced portion size of meals	| __ |
I7.	Reduction in the quantities consumed by adults/mothers for young children	| __ |

Livelihood Coping Strategies Index During the last 30 days, did anyone in your household have to engage in any of the following activities because there was not enough food or money to buy food			**1=Yes** **2= No, because it wasn't necessary** **3=No, because i already sold those assets or did this activity and cannot continue** **4=No, because i never had the possibility to do so**
I8.	STRESS	Sold more animals (non-productive) than usual	| __ |
I9.		Sold household goods (radio, furniture, refrigerator, television, jewelry etc..)	| __ |
I10.		Spent savings	| __ |
I11.		Borrowed money	| __ |
I12.	CRISIS	Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, goats, cows, etc.)	| __ |
I13.		Reduced essential non-food expenditures such as education, health, etc.	| __ |
I14.		Consume seed stock held for next season	| __ |
I15.	EMERGENCY	Sold house or land	| __ |
I16.		Illegal income activities (theft, smuggling, prostitution)	| __ |
I17.		Begged	| __ |

SECTION 11: ANTHROPOMETRIC DATA FORM AND QUESTIONNAIRE FOR CHILDREN 0-59 MONTHS

(*All children in age-range in the household should be assessed)*

Initials	J1.	J2.	J3.	J4.	J5.	J6.	J7.	J8.	J9.	J10.				J.14	J15
	Sex 1=M 2=F	Date of birth (if available) dd/mm/yyyy	Age of child in months	Weight (kg) ±0.1 kg	Height/ Length [1](cm) ±0.1cm	Oedema 1=Y 0=N	MUAC ±0.1cm ***(skip if child under 6 months)***	Hemocue g/dl	Feeding program Enrolled 1=SFP 2=TFP 3=BSFP	Has the child received the following 1= Yes (with child health card); 2= Yes (without card); 3= No with card; 4= No without card; 88 = Don't know				Did this child have the diarrhoea in the last 2 weeks 1= YES 0= No, 88 =Don't know)	1 = Diarrhea 2 = If Yes for dirrhoea, did the child receive ORS?
										H10. Measles	**H11.** DPT3 *(only assessed with child card)*	**H12.** De-worming (past 6 months)	**H13.** Vitamin A (In past 6 months)		

Case definition:
- Diarrhoea= any episode of more than three loose stools per day; bloody diarrhoea: any episode of more than three stools per day in which there is presence of blood in stools

[1] Height measurement standing when child is ≥24 months (height proxy ≥87 cm) and lying down when child is < 24 months (< 87 cm)

SECTION 12: INFANT AND YOUNG CHILD FEEDING QUESTIONNAIRE FOR CHILDREN 0-23 MONTHS

(The questionnaire is to be administered to the mother of care giver responsible for feeding the child)

Section code / number:_____**Block code / number**: _____**Consent** : yes / no / absent

Date of interview (dd/mm/yyyy)	**Cluster Number (*in cluster survey only*)**	
|___|___|/|___|___|/|___|___||___|___|	|___|___|	
Team Number	**ID Number**	**HH Number**
|___|	|___|___|___|	|___|___|___|

No	QUESTION	ANSWER CODES	
SECTION IF1			
IF1	Sex	Male.....1 Female 2	|___|
IF2	Birthdate RECORD FROM AGE DOCUMENTATION. LEAVE BLANK IF NO VALID AGE DOCUMENTATION.	Day/Month/Year…..|___|___| /|___|___| / |___|___||___|___|	
IF3	Child's age in months	IF AGE DOCUMENTATION NOT AVAILABLE, ESTIMATE USING EVENT CALENDAR. IF AGE DOCUMENTATION AVAILABLE, RECORD THE AGE IN MONTHS FROM THE DATE OF BIRTH.	|___|___|
IF4	Has [NAME] ever been breastfed?	Yes.....1 No.....2 Don't know.....8	|___| **IF ANSWER IS 2 or 8 GO TO IF7**
IF5	How long after birth did you first put [NAME] to the breast?	Less than one hour.....1 Between 1 and 23 hours.....2 More than 24 hours .....3 Don't know.....8	|___|
IF6	Was [NAME] breastfed yesterday during the day or at night?	Yes.....1 No.....2 Don't know.....8	|___|
SECTION IF2			
IF7	Now I would like to ask you about liquids that [NAME] 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. IF ITEM WAS GIVEN, CIRCLE '1'. IF ITEM WAS NOT GIVEN, CIRCLE '2'. IF CAREGIVER DOES NOT KNOW, CIRCLE '8'. EVERY LINE MUST HAVE A CODE. REPLACE AND ADAPT THE TEXT HIGHLIGHTED IN REDY TO THE CONTEXT (TO BE DONE DURING THE TRAINING) THE TEXT IN *ITALICS* NEEDS TO BE DELETED FROM THE FINAL SURVEY QUESTIONNAIRE – THE LIST THAT IS PROVIDED BELOW IS AN EXAMPLE.		
			Yes No DK
	7A. Plain water		7A……1 2 8

	7B. Infant formula, for example [INSERT LOCALLY AVAILABLE BRAND NAMES OF INFANT FORMULA, *ALL TYPES*]	7B……1 2 8	
	7C. Milk such as tinned, powdered, or fresh animal milk, for example [INSERT LOCALLY AVAILABLE BRAND NAMES OF TINNED AND POWDERED MILK]	7C……1 2 8	
	7D. Juice or juice drinks, for example [INSERT LOCALLY AVAILABLE BRAND NAMES OF JUICE DRINKS]	7D……1 2 8	
	7E. Clear broth	7E……1 2 8	
	7F. Sour milk or yogurt, for example [INSERT LOCAL NAMES]	7F……1 2 8	
	7G. Thin porridge, for example [INSERT LOCAL NAMES]	7G……1 2 8	
	7H. Tea or coffee with milk	7H……1 2 8	
	7I. 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)*	7I……...1 2 8	
IF8	Yesterday, during the day or at night, did [NAME] eat solid or semi-solid (soft, mushy) food?	Yes……....1 No……....2 Don't know…....8	|___|
SECTION IF3			
IF9	Did [NAME] drink anything from a bottle with a nipple yesterday during the day or at night?	Yes….....1 No……....2 Don't know…....8	|___|
SECTION IF4			
IF10	IS CHILD AGED 6-23 MONTHS? REFER TO IF2 / IF3	Yes……1 No……...…...2	|___| **IF ANSWER IS 2 STOP NOW**
IF11	Now I would like to ask you about some particular foods [NAME] may eat. I am interested in whether your child had the item even if it was combined with other foods. Yesterday, during the day or at night, did [NAME] consume any of the following? ASK ABOUT EVERY ITEM. IF ITEM WAS GIVEN, CIRCLE '1'. IF ITEM WAS NOT GIVEN, CIRCLE '2'. IF CAREGIVER DOES NOT KNOW, CIRCLE '8'. EVERY LINE MUST HAVE A CODE. REPLACE AND ADAPT THE TEXT HIGHLIGHTED IN GREY TO THE CONTEXT. THE TEXT IN *ITALICS* NEEDS TO BE DELETED FROM THE FINAL SURVEY QUESTIONNAIRE – THE LIST THAT IS PROVIDED BELOW IS AN EXAMPLE. IF A CATEGORY OF IRON-RICH FOOD (11A-11H) IS NOT AVAILABLE IN THE SETTING, DELETE IT FROM THE QUESTIONNAIRE BUT KEEP THE ORIGINAL QUESTION NUMBERS AND DO NOT CHANGE. Yes No DK		

	11A. [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)*	11A……..1 2 8	
	11B. [INSERT FBF AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] (e.g. CSB+, WSB+)	11B……...…….1 2 8	
	11C. [INSERT FBF++ AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] *(e.g. CSB++, WSB++)*	11C……...……1 2 8	
	11D. [INSERT RUTF PRODUCTS AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] *(e.g. Plumpy'Nut®, eeZeePaste™)* (SHOW SACHET)	11D……..…1 2 8	
	11E. [INSERT RUSF PRODUCTS AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] *(e.g. Plumpy'Sup®)* (SHOW SACHET)	11E……..…1 2 8	
	11F. [INSERT LNS PRODUCTS AVAILABLE IN THE LOCAL SETTING AND USE LOCAL NAMES] *(e.g. Nutributter®, Plumpy'doz®)* (SHOW SACHET / POT)	11F……..…1 2 8	
	11G. [INSERT LOCALLY AVAILABLE BRAND NAMES OF *IRON FORTIFIED* INFANT FORMULA *ONLY*] *(e.g. Nan, S26 infant formula)*	11G……...…….....1 2 8	
	11H. [INSERTST 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)*	11H……....1 2 8	
IF12	**In a setting where micronutrient powders are used:** 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] like this? (SHOW MICRONUTRIENT POWDER SACHET)	Yes……...…1 No…….……....2 Don't know..……...8	|___|

SECTION 13: MOSQUITO NET COVERAGE

No	QUESTION		ANSWER CODES		
SECTION TN1					
TN1	How many people live in this household and slept here last night? INSERT NUMBER **TOTHH**				|___|___|
TN2	How many children 0-59 months live in this household and slept here last night? INSERT NUMBER **TOTCH**				|___|___|
TN3	How many pregnant women live in this household and slept here last night? INSERT NUMBER **TOTPW**				|___|___|
TN4	Did you have your house sprayed with insecticide in an indoor residual spray campaign in the past I___I months? (OPTIONAL) **HHIRS**		Yes ..... 1 No 0		|___|
TN5	Do you have mosquito nets in this household that can be used while sleeping? **MOSNETS**		Yes ..... 1 No 0		|___| **IF ANSWER IS 2 STOP NOW**
TN6	How many of these mosquito nets that can be used while sleeping does your household have? INSERT NUMBER **NUMNETS**		IF MORE THAN 4 NETS, ENTER THE NUMBER AND USE ADDITIONAL NET QUESTIONNAIRE SHEETS ENTERING THE NUMBER OF THE NETS SEQUENTIALLY AT THE TOP.		|___| Nets
TN7	ASK RESPONDENT TO SHOW YOU THE NET(S) IN THE HOUSEHOLD. IF NETS ARE NOT OBSERVED → CORRECT TN6 ANSWER	NET #|___|	NET #|___|	NET #|___|	NET #|___|
TN8	OBSERVE NET AND RECORD THE BRANDNAME OF NET ON THE TAG. IF NO TAG EXISTS OR IS UNREADABLE RECORD 'DK' FOR DON'T KNOW.				
TN9	**For surveyor/supervisor only (not to be done during interview)**: WHAT TYPE OF NET IS THIS? BASED ON THE TAG INDICATE IF THIS IS A LLINT OR OTHER TYPE OF NET OR DK.	1=LLINT 2=Other/DK |___| **LNTYPE1**	1=LLINT 2=Other/DK |___| **LNTYPE2**	1=LLINT 2=Other/DK |___| **LNTYPE3**	1=LLINT 2=Other/DK |___| **LNTYPE4**
TN10	**For surveyor/supervisor only (not to be done during interview)**:				|___| LLINTs

SECTION TN2

Line no	Household members	Sex	Age	Pregnancy status	Slept under net	Which net	Type of net

#	COL1	COL 2	COL 3	COL4	COL5	COL6	COL7
	Please give me the names of the household members who live here and who slept here last night	Sex m/f	Age years	FOR WOMEN 15-49 YEARS, ASK: Is (NAME) currently pregnant? (CIRCLE NOT APPLICABLE OR N/A '99' IF FEMALE <15->49 YEARS OR MALE) Yes No/DK N/A	Did (NAME) sleep under a net last night? Yes No/DK	ASK THE RESPONDENT TO PHYSICALLY IDENTIFY WHICH OF THE OBSERVED NETS THEY SLEPT UNDER. WRITE THE NUMBER CORRESPONDING TO THE NET THEY USED.	**For surveyor/ supervisor only:** BASED ON THE OBSERVED NET BRANDNAME RECORDED (TN8) ,INDICATE IF IT IS AN LLINT OR OTHER / DON'T KNOW (DK) LLINT OTHER/DK
01		m f	<5 ≥5	1 0 99	1 0	|___|	1 2
02		m f	<5 ≥5	1 0 99	1 0	|___|	1 2
03		m f	<5 ≥5	1 0 99	1 0	|___|	1 2
04		m f	<5 ≥5	1 0 99	1 0	|___|	1 2
05		m f	<5 ≥5	1 0 99	1 0	|___|	1 2
06		m f	<5 ≥5	1 0 99	1 0	|___|	1 2
07		m f	<5 ≥5	1 0 99	1 0	|___|	1 2
08		m f	<5 ≥5	1 0 99	1 0	|___|	1 2
09		m f	<5 ≥5	1 0 99	1 0	|___|	1 2

Mosquito net summary (for surveyor / supervisor only, not to be done during interview)						
	Total household members		**Total <5**		**Total Pregnant**	
Slept under a net of any type	Count the number of '1' in COL5	**TN11** |___|___| **TOTSLPNT**	For children < 5 (COL3 is '<5'), count the number of '1' in COL5	**TN13** |___|___| **TOTCHNT**	For pregnant women (COL4 is '1'), count the number of '1' in COL5	**TN15** |___|___| **TOTPWNT**
Slept under an LLINT	Count the number of '1' in COL7	**TN12** |___|___| **TOTSLPLN**	For children <5 (COL3 is '<5'), count the number of '1' in COL7	**TN14** |___|___| **TOTCHLN**	For pregnant women (COL4 is '1'), count the number of '1' in COL7	**TN16** |___|___| **TOTPWLN**

SECTION 14: MORTALITY ASSESSMENT IN THE PAST 90 DAYS

L1. Current HH members – total		
L2. Current HH members - < 5		
L3. Current HH members who arrived during recall (exclude births)		
L4. Current HH members who arrived during recall - <5		
L5. Past HH members who left during recall (exclude deaths)		
L6. Past HH members who left during recall - < 5		
L7. Births during recall		
L8. Total deaths		
L9. Deaths < 5		