

Food Security and Nutrition Assessment in Refugee Settlements and Kampala



THE REPUBLIC OF UGANDA

December 2020



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Additional information about the December 2020 FSNA can be obtained from The UNHCR Representation Office in Uganda, at Plot 11/13, Mackenzie Close, Off Mackenzie Vale, Kololo, Kampala, Uganda.

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FOREWORD

Uganda is host to refugees and asylum seekers from several countries with the majority from South Sudan (62%), the Democratic Republic of Congo (DRC) (29%), Burundi (3%) and Somalia (3%). They leave their countries in search of protection from several factors, mostly conflict related. By the end of February 2021, the total number of refugees and asylum-seekers in Uganda was 1,462,164, with 81% of them women and children. Most of the refugees live in settlements and host communities in the West Nile, Mid-West and South West sub-regions of Uganda. The existence of refugees and the influx of new arrival asylum-seekers into Uganda increases demand for essential services and exerts pressure on common resources in both refugee settlements and host communities. Delivery of services to both refugees and host communities not only serves to stabilize, build self-reliance and resilience to shocks, but also helps to strengthen the peaceful coexistence between the two populations. The Government of Uganda (GoU) with support of Humanitarian and Development actors (UNHCR, WFP, UNICEF, FAO, UNFPA, partner organizations et al.) provides basic services to the PoCs which include health and nutrition services, food and non-food items, Water, Sanitation and Hygiene (WASH) services, education, fuel, shelter, and economic inclusion.

The Government of Uganda (UBOS, MoH, OPM, MAAIF) and the Development and Humanitarian actors UNHCR, WFP, and UNICEF conducted the annual refugee Food Security and Nutrition Assessment (FSNA) to inform multi-stakeholder programming through key recommendations and to identify priority areas of intervention for the benefit of refugees and their host communities. The nutrition survey incorporates key modules on Demography, Anthropometry, Child Health, Food Security, Infant and Young Child Feeding (IYCF), Maternal Health and Nutrition, WASH, Mosquito Net Coverage and Mortality Rates among others.

We strongly appeal to all stakeholders involved in the study areas to use the findings of the 2020 FSNA to adequately plan for the PoCs and their hosts.

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ABBREVIATIONS

ACF	Action Against Hunger
AFI	Andre Foods International
AHA	Africa Humanitarian Action
AIRD	African Initiatives for Relief and Development
ANC	Ante Natal Care
BMI	Body Mass Index
CAPI	Computer Assisted Personal Interviewing
CBT	Cash Based Transfers
CDR	Crude Death Rate
CHD	Child Health Days
COCs	Combined Oral Contraceptives
DEFF	Design Effect
DHO	District Health Officer
DLG	District Local Government
DRC	Democratic Republic of Congo
EBF	Exclusive Breast Feeding
EPI	Expanded Programme on Immunization
FDP	Final Distribution Points
FHU	Food for the Hungry Uganda
FAO	Food and Agriculture Organization of the United Nations
FRRM	Feedback, Referral and Response Mechanism
FSC	Food Consumption Score
FSNA	Food Security and Nutrition Assessment
GAM	Global Acute Malnutrition
GBV	Gender-Based Violence
GFA	General Food Assistance
GFD	General Food Distribution
GoU	Government of Uganda
HAZ	Height for Age Z-score
Hb	Haemoglobin concentration
HFA	Height for Age
HFU	Hunger Fighters Uganda
HH	Household
HIS	Health Information System
IFA	Iron and Folic Acid
IRC	International Rescue Committee
IUD	Intra Uterine Device
IYCF	Infant and Young Child Feeding
KAP	Knowledge, Attitudes and Practices
LLITN/ ITN	Long-Lasting Insecticide Treated Mosquito Nets
LNS	Lipid-based Nutrient Supplements
LWF	Lutheran World Federation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MAM	Moderate Acute Malnutrition

MCHN	Maternal Child Health and Nutrition
MDC	Mobile Data Collection
MDD	Minimum Dietary Diversity
MDD-C	Minimum Dietary Diversity for Children 6-23 months
MDD-W	Minimum Dietary Diversity for Women of Reproductive Age (15-49 years)
MIYCAN	Maternal, Infant, Young Child, and Adolescent Nutrition
MoH	Ministry of Health
MTI	Medical Teams International
MUAC	Mid Upper Arm Circumference
MWE	Ministry of Water and Environment
NGO	Non-Governmental Organizations
ODK	Open Data Kit
OPM	Office of the Prime Minister
ORS	Oral Rehydration Salts
OTC	Out-patient Therapeutic Care
PACHEDO	Partners for Community Health and Development Organization
PAG	Pentecostal Assemblies of God
PDM	Post Distribution Monitoring
PLW	Pregnant and Lactating Women
POC	Persons of Concern
POPs	Progestogen-Only Pills
PPS	Probability Proportional to Size
PSU	Primary Sampling Unit
rCSI	reduced Copying Strategy Index
RTI	Respiratory Tract Infections
RWCs	Refugee Welfare Committees
SACCO	Savings and Credit Co-operatives
SAM	Severe Acute Malnutrition
SC	Stabilization Centre
SCI	Save the Children International
SENS V3	Standardized Expanded Nutrition Survey Version 3
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SRS	Systematic Random Sampling
SSU	Secondary Sampling Unit
TFP	Therapeutic Feeding Programme
TSFP	Targeted Supplementary Feeding Programme
U5DR	U5 Death Rate
UBOS	Uganda Bureau of Statistics
UNFPA	United Nations Population Fund
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UN-WFP	United Nations World Food Programme
VAD	Vitamin A Deficiency
VHT	Village Health Team
VSLA	Village Savings and Loans Associations
WASH	Water, Sanitation and Hygiene

WAZ	Weight for Age Z-score
WFA	Weight for Age
WFH	Weight for Height
WHO	World Health Organization
WHZ	Weight for Height Z-scores
WRA	Women of Reproductive Age

EXECUTIVE SUMMARY

Key findings

Demography

- * Overall, 60.2% of household heads were involved in agriculture and 41.4% in livelihoods. Household heads in Oruchinga (60.6%), Kyaka II (57.6%), Rwamwanja (56.0%), and Kampala (52.2%) had the biggest involvement in economic activities. Predictably, only 3.1% of household heads in Kampala were involved in Agriculture.

Nutrition

- * The weighted prevalence of GAM by weight for height z-scores (WHZ) among refugee children aged 6-59 months reduced from 9.5% in October 2017 to 5.1% in December 2020 across all settlements indicating POOR¹ or MEDIUM level nutrition situation (WHO classification). Regional differences in GAM prevalence between South-West and West Nile were significant. South West had a weighted GAM prevalence of 1.8% while West Nile had 6.9%. Wasting was more prevalent in children aged 6-17 months while Oedema was more prevalent in children aged 30-41 months.
- * Stunting prevalence among children aged 6-59 months was Very High² in South West and Medium to Low in West Nile. Kyaka II (48.7%) had the highest Stunting prevalence while Kiryandongo (7.5%) had the lowest.
- * Undernutrition among pregnant and lactating women based on MUAC was 4.6%

Anemia

- * The study found a sustained upward trend of Anemia in children 6-59 months from 2014, and at 55.4% above 40% of public health significance - the highest anemia prevalence recorded since 2014. West Nile (61.9%) had the highest anemia among children while South West had 47.5%, but regardless, it's all High. Kampala (24.9%), Oruchinga (32.6%) and Nakivale (37.6%) had the lowest anemia.
- * Anaemia in non-pregnant women of reproductive age (15-49 years) was High (41.8%) across all locations down from 31.7% and 35.2% in October 2017 and January 2020 respectively. The increasing trend in high prevalence of anemia remains a key public health concern among the refugee population.

Child Health, Program Coverage & Enrolment

- * The study found that overall, across the settlements, 12.7% of refugee children aged 6-59 months had had a diarrhea episode in the two weeks preceding the survey, and Palabek (22%) had the highest diarrhea prevalence while Kampala (4%) had the lowest. Of those, only 57% had used ORS and 58.6% had used zinc for treatment.
- * Vitamin A supplementation coverage in the last 6 months was 70.4%, below MoH standards³ among children below 5 years. Palabek (51.8%) had the lowest Vit. A supplementation coverage while Kyangwali (84.7%) had the highest while not meeting expected target.

¹ Global Acute Malnutrition Prevalence Threshold (%), WHO-UNICEF, 2019: Very Low (< 2.5), Low (2.5 – 4.9), Medium (5 – 9.9), High (10 – 14.9), Very High (≥ 15).

² Stunting Prevalence Threshold (%), WHO-UNICEF, 2019: Very Low (<2.5), Low (2.5-9.9), Medium (10-19.9), High (20-29.9), Very High (≥30)

³ Ministry of Health standards: Vitamin A Supplementation (≥90%), Deworming (≥75%)

- * Deworming coverage for children 12-59 months was at 78.1%, within MoH cutoffs, and Oruchinga had the highest deworming coverage amongst all locations at 90.2% while Kampala (55.7%) had the lowest.

Maternal Infant Young Child and Adolescent Nutrition (MIYCAN)

- * The study found that 74.4% of children had been initiated to breastfeeding within 1 hour of birth - a drop from 98% and 80% in October 2017 and January 2020 respectively, and Exclusively breastfeeding (62.3%) of children below 6 months and continued breastfeeding at 1 and 2 years had sustained a downtrend since 2014.
- * Consumption of iron-rich foods among children 6-23 months (23.9%) dropped across all locations compared to the previous years, which is consistent with the low child minimum dietary diversity (MDD-C) of only 22.1% of children 6-23 months that had consumed 4-7 food groups.
- * The study found that only 28.9% of women consumed 5 out of 7 food groups. The dietary sources were largely plant based with 98.7% and 79.7% consuming cereals/tubers and legumes/pulses respectively.

WASH

- * The study found that 42.9% of households did nothing to their drinking water to ensure its safety, and 30.3% were not satisfied with their water sources. The commonest reasons for dissatisfaction were long waiting queues (24.7%), irregular supply (19.2%), and bad quality (19.1%).
- * The study found that 42% of households utilized more than 20 liters per person per day while 22.1% of households utilized less than 10 liters per person per day.
- * The study found that 93.5% of households used improved fecal disposal methods while 3.7% practiced open defecation. Open defecation was most prevalent in Kiryandongo (14.4%) and Palabek (11.9%).

Long-lasting Insecticide Treated Mosquito Nets (LITN)

- * The study found an improvement in household LITN ownership from 50.7% in Jan 2020 to 75.7% in Dec 2020. Coverage was lowest in Kyaka II (27.1%) and Kampala (43.8%). Locations with low coverage were yet to receive or had partially received LITNs during the MoH Under the Net campaign.
- * The average number of nets per household improved from 1.8 nets in January 2020 to 3.0 nets in Dec 2020, and the universal coverage (net sharing by 2 people only) was 32.1%, with the highest proportion in Imvepi (53.0%) and Rhino camp (52.7%), and lowest in Kyaka (15.1%) and Rwamwanja (17.7%).

Food Security

- * Overall, 98.7% had access to General Food Assistance at the time of data collection. Overall, 95.8% of households spent cash received on purchase of food, 26.6% on debt repayment, and 24.5% on household and personal hygiene items.
- * WFP/partner distribution was the main source of available food stocks at the HH level. Food stocks from the market were mainly reported in Kampala and Nakivale. More households in Oruchinga and Kiryandongo reported own production as their source of food stocks.
- * Overall, the proportion of household with acceptable food consumption decreased from 47.5% in Jan 2020 to 33% in Dec 2020 due to ration cuts, food prices and COVID 19 effects among others.
- * Household food expenditure share showed a deterioration in household economic vulnerability from 45.0% percentage points in January 2020 to 72.0% in December 2020 as shown by households allocating at least 65.0% of their total expenditure on food in December 2020. Increased expenses on

food were driven by household expenditure substitution as households spent more on food to cover the consumption deficits caused by ration cuts.

- * The study based on household self-reporting found that 47.7% of the unmet needs was food, 41.2% hygiene items, 35.0% utilities, and 32.5% healthcare. Lobule (61.7%), Nakivale (58.0%), Kiryandongo (52.5%), Kyaka II (51.7%) and Kyangwali (51.6%) had the highest food unmet needs.
- * Overall, 32.5% of settlement-based refugee households had access to financial services and 44.8% of refugee households had a debt to repay. Buying food (37.6%) and covering health expenses (29.0%) were the major reasons for debt acquisition.
- * The overall food insecurity classification showed that 35.5% of settlement-based refugee households were food insecure out of which 7.1% were severely food insecure. Rhino Camp (12.3%) had the highest proportion of severely food insecure households

GBV

- * Overall, 6.9% of household members reported experiencing GBV linked to humanitarian assistance in 6 months preceding the study. Palabek (16.4%) and Oruchinga (10.1%) reported the highest GBV incidents linked to humanitarian assistance. An estimated 2.8% of respondents reported to having been asked for sex in exchange for humanitarian assistance with Bidibidi (5.6%), Kiryandongo (4.3%), Nakivale (4.2%), Rhino camp and Palabek (3.4%) reporting the highest incidents.

Energy

- * Firewood (62.1%) and charcoal (36.1%) were the commonest sources of fuel for cooking. Kampala reported the highest use of charcoal (73.5%) and LPG (3.2%).

Sexual and Reproductive Health

- * In Dec 2020, 14.7% of the women of reproductive age had ever used a family planning (FP) method, with Kampala (4.9%) reporting the lowest FP rates. The biggest barriers to family planning were Other Reasons (43.6%) - unspecified reasons that we need to further explore in subsequent studies.

Recommended Actions

Recommendations	Priority locations	Timeline	Responsible Agencies
Scale-up of deworming, Vitamin A supplementation, and routine mass anemia testing, and aligning them with existing community structures e.g., quarterly mass nutrition screening, Integrated Child Health Days (iCHDs), Integrated Community Case Management (iCCM), care groups and VHTs; adoption and scale up of other malaria control approaches e.g., the integrated Community Case Management (iCCM), Indoor Residual Spraying (IRS).	<i>Vit A supplementation: all locations</i> <i>Deworming: Adjumani, Kampala, Kiryandongo, Rhino Camp</i>	Immediate to Mid Term	MoH, DLGs, UNHCR, UNICEF, WFP, Health and Nutrition Partners
Mop-up distribution of ITNs in locations with low ownership and hang up campaigns on proper ITN use after distributions, investigation of ITN misuse in locations with low ITN access and utilization	<i>ITN mop up distribution – Kyaka II, Rhino camp, Palorinya, Palabek</i>	Immediate	MoH, DLGs, UNHCR, Health and Nutrition Partners
Strengthening health systems to enable early case detection, treatment, defaulter tracking and routine follow-up of acute malnutrition through Family MUAC.	<i>Palabek, Kiryandongo, Adjumani, Bidibidi, Rhino Camp</i>	Immediate	MoH, DLGs, UNHCR, UNICEF, WFP, Health and Nutrition Partners
Strengthening health and food systems to reduce the high stunting prevalence. Comprehensive stunting reduction strategy with priority actions around the 1000-day window (maternal and infant, young child) health and nutrition, linkages to complementary health services e.g., ANC, EPI, GMP, deworming etc.; livelihoods, nutrition education, WASH, food production etc.	<i>South West, Palabek</i>	Mid to long term	MoH, DLGs, UNHCR, UNICEF, WFP, FAO, Health and Nutrition Partners
With gaps drinking water safety and improper fecal disposal in some locations, there is need for more awareness creation on water safety and household hygiene through community health promotion campaigns, risk communication, community dialogues etc. Community disposal pits for waste disposal	<i>Diarrhea: Rhino Camp Palabek, Nakivale, Rwamwanja</i> <i>Fecal disposal: Kiryandongo, Palabek</i> <i>Drinking water safety: All locations but Kampala</i>	Immediate	DLGs, MoWE (MWSC), WASH Partners, Health and Nutrition Partners, UNHCR, UNICEF
Targeting and prioritization of food assistance in the current context increasing need and refugee funding shortfalls to protect the most vulnerable, fundraising appeals to guarantee food assistance	<i>All locations</i>	Immediate	WFP, OPM, UNHCR
Increasing and spreading available water points to improve coverage of protected safe water sources in settlements where proportions were lower. Investing in water infrastructure to increase water points to address issues of long waiting queues and walking distances	<i>Kyaka II, Kyangwali, Oruchinga, Palabek, Bidibidi, Imvepi</i>	Mid to Long term	MoWE (NWSC), DLGs, UNHCR, UNICEF, WASH Partners

Drafting an anemia policy advisory paper based on all available evidence to inform targeted and multisectoral actions on anemia reduction, establishing the prevalence of sickle cell anemia and its impact on the anemia prevalence, exploring tried and tested anemia reduction approaches from other parts of the world.	<i>All locations</i>	Mid to Long term	MoH, WFP, UNHCR, UNICEF, Health and Nutrition Partners
Implementation of the new MoH MIYCAN strategy to accelerate behavior change linked to optimal maternal and child feeding and childcare practices for using existing delivery structures at facility and community levels, and the mainstreaming of MIYCAN actions across the different sectors through the IYCF Multisector Framework for action.	<i>All locations</i>	Mid to Long term	MoH, WFP, UNHCR, UNICEF, Health and Nutrition Partners
Scaleup of existing food systems-based approaches to anemia reduction and dietary diversity e.g., mainstreaming backyard/kitchen gardening of micronutrient-rich foods, adoption of micronutrient rich cultivars like iron rich beans, orange-fleshed sweet potatoes; production and consumption of vit C rich foods; Strengthening linkages of selective feeding programs to livelihoods to improve economic access to diversified foods, multistakeholder engagement on nutrition commodity misuse	<i>All locations</i>	Mid to Long term	MAAIF, WFP, FAO, UNHCR, OPM, Partners (Nutrition, Livelihoods), UNICEF, DLGs
Barrier analysis on family planning to explore further the reasons for not using family planning.	<i>Imvepi, Kyaka, Nakivale, Oruchinga. Generally, all locations are priority</i>	Mid to Long term	MoH, DLGs, UNHCR, UNFPA, Health Partner
In-depth protection-based study to explore GBV in humanitarian assistance, especially around decision making and sexual exploitation, using data to address protection SGBV issues identified, sensitization on the role of gender and resources in humanitarian assistance	<i>All locations</i>	Immediate	UNHCR, WFP, OPM, Protection Partners
Explore alternative sustainable and clean energy options. These include solar cooking, grid electricity, and energy saving stoves.	<i>All locations. West Nile more priority due to more utilization of firewood</i>	Mid Term to Long term	MoWE, UNHCR, FAO, WFP, Energy Partners
Adapting optimized land use based, climate-smart, nutrition-sensitive, environmentally sustainable agronomic and livestock production practices on existing refugee livelihood plots in the context of decreasing land access, to produce more diversified foodstuff to complement general food assistance rations; Government engagement on land access	<i>All locations. Land access bigger challenge in West Nile</i>	Mid to Long Term	MAAIF, WFP, FAO, UNHCR, OPM, Partners (Livelihoods, Nutrition)
Scaleup of existing economic inclusion activities e.g., skilling and tooling, financial literacy, value chain enhancement, access to micro-credit, market access, private sector engagement etc. to catalyze asset and job creation and built resilience and social protection to shocks.	<i>All locations</i>	Mid to Long Term	WFP, FAO, UNHCR, OPM, WBG, Partners (Livelihoods, Nutrition)

BACKGROUND

Current Status

By the end of December 2020, Uganda was host to approximately 1,446,378 (OPM, UNHCR) refugees and asylum seekers across 13 settlements and urban areas. The total number of persons of concern by location are shown in the table below. At the end of December 2020, the Crude Mortality Rate (CMR) across all

Settlement	Population
<i>Adjumani</i>	<i>215,560</i>
<i>Bidibidi</i>	<i>232,697</i>
<i>Imvepi</i>	<i>69,834</i>
<i>Kampala</i>	<i>88,157</i>
<i>Kiryandongo</i>	<i>70,749</i>
<i>Kyaka II</i>	<i>124,101</i>
<i>Kyangwali</i>	<i>123,820</i>
<i>Lobule</i>	<i>5,557</i>
<i>Nakivale</i>	<i>136,160</i>
<i>Oruchinga</i>	<i>8,135</i>
<i>Palabek</i>	<i>54,533</i>
<i>Palorinya</i>	<i>122,244</i>
<i>Rhino Camp</i>	<i>121,580</i>
<i>Rwamwanja</i>	<i>75,241</i>

settlements in Uganda was 0.08 deaths per 1000 population per month, and the Under 5 Mortality Rate (U5MR) was 0.26 deaths per 1000 U5 children per month. These rates compare below the international emergency mortality thresholds. In 2020, the leading morbidities among children below 5 years were Malaria (41%), Respiratory Tract Infections (23%), Acute Watery Diarrhea (12.7%), skin disease (10%), eye disease (2%), and intestinal infections (2%).

The year 2020 was particularly challenging due to the COVID-19 pandemic to optimally deliver health and nutrition services. This was partly contributed by the GoU measures in place to limit movement and the MoH Guidance on the Continuity of Essential Health Services (CEHS) which limited many community engagement activities. Health seeking tendencies dropped and the admissions for acute malnutrition reduced. Amidst the challenges, there were 2,544,969 total consultations

across all refugee settlements, at a rate of 57 consultations per clinicians per day, 22% of which were consultations from nationals accessing health and nutrition services in refugee settlements. Coverage for EPI was: 64.6% BCG, 76.6% Polio, 75.1% DPT and 78.6% measles and 77.1% fully vaccinated.

Global Acute Malnutrition (GAM) prevalence dropped from 9.5% in Oct 2017 to 5.1% in Dec 2020. Regional differences in GAM prevalence between South-West and West Nile are significant. South West had a weighted GAM prevalence of 1.8% while West Nile estimated at 6.9%. While West Nile maintained the highest prevalence, it also made the biggest reductions. Kiryandongo (8.7%), Adjumani (8.3%) and Palabek (8.2%) had had the highest GAM prevalence. Trend shows that the most reduction in GAM prevalence was attributable to a reduction in MAM prevalence. The trend also indicates a narrowing divide between MAM and SAM prevalence. Despite of reducing trends in GAM prevalence since 2017 the overall situation remains in POOR or MEDIUM level nutrition status (WHO classification of GAM prevalence between 5 - <10%) among refugee population with presence of aggravating factors.

Figure 1: GAM trends (WHZ) by region

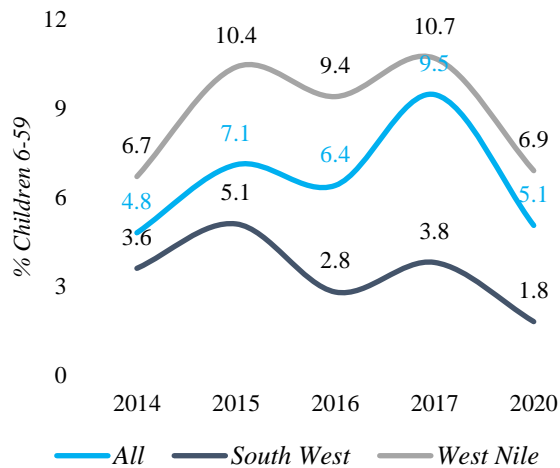
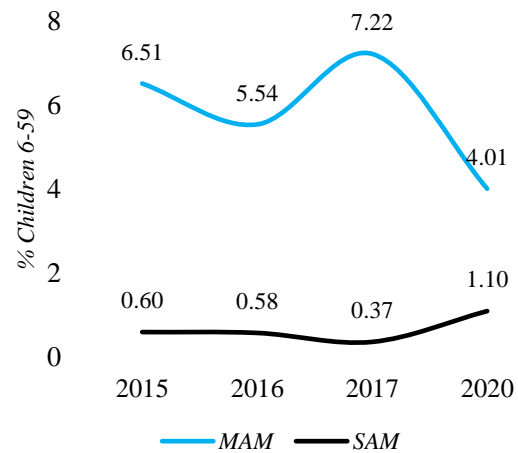


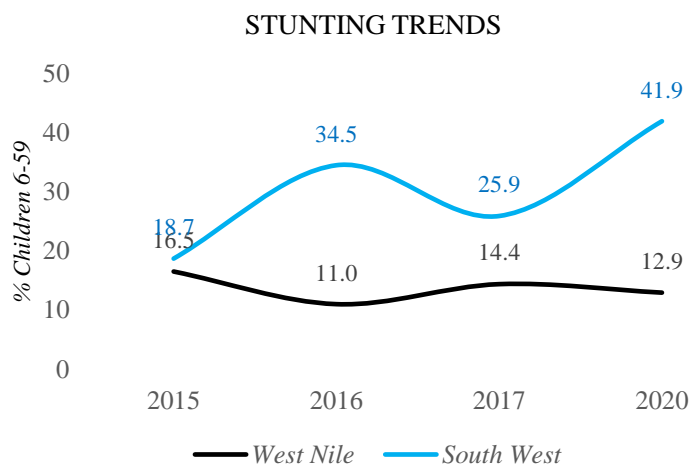
Figure 2: SAM and MAM trends (WHZ)



Source: Refugee FSNAs 2014, 2015, 2016, 2017, 2020

Stunting or chronic malnutrition increased to an all-time high in South West locations at 41.9%, down from 34.5% in 2016. Stunting was significantly higher in South West locations with regional prevalence of 41.9% versus 12.9% in West Nile. Stunting was highest in Kyaka II (48.7%) and Rwamwanja (45.2%) and reduced the most in Kampala (9.4%) and Kiryandongo (7.5%). Settlements with High Underweight (>10%) either had higher GAM or higher stunting or both.

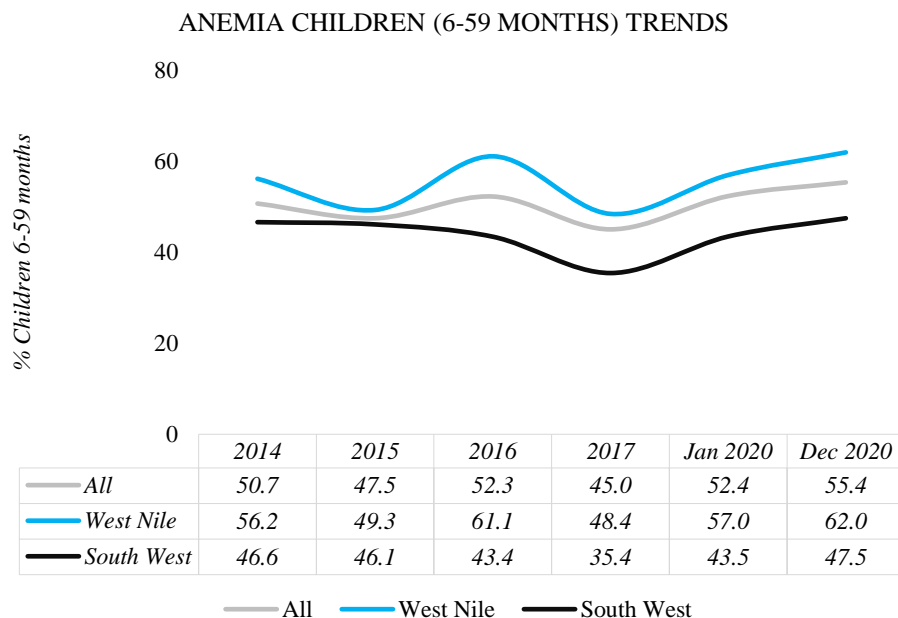
Figure 3: Trend of stunting in children 6-59 months



Source: Refugee FSNAs 2015, 2016, 2017, 2020

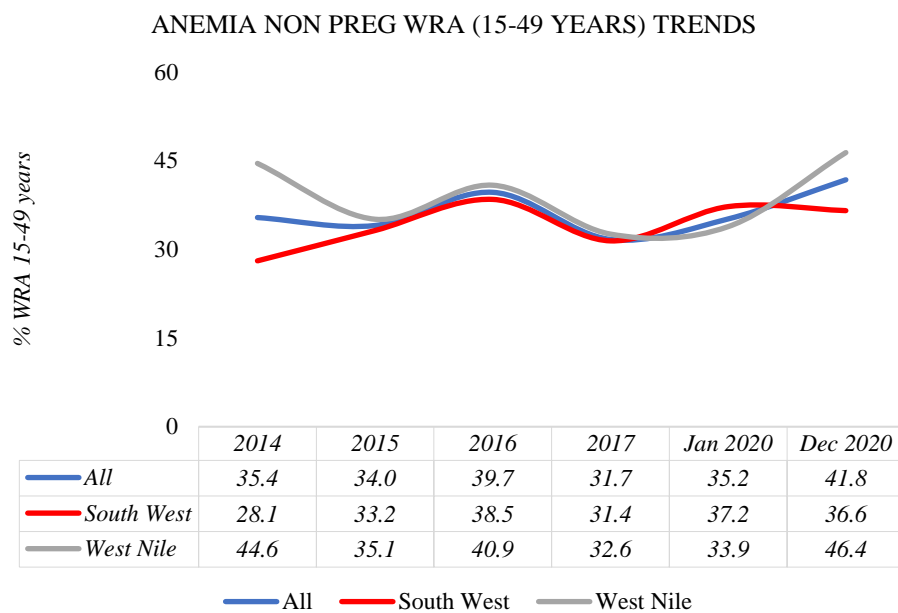
At 55.37%, anemia is the leading public health nutrition burden among refugee children aged 6-59 months with Bidibidi (73.8%) having the biggest burden proportional to the refugee population. Similarly, anemia amongst non-pregnant women of reproductive age (15-49 years) increased from 35.2% in Jan 2020 to 41.8% in Dec 2020. The increasing trend of anemia remains a key public health concern in the refugee settlements in Uganda.

Figure 4: Total anemia trends children (6-59 months)



Source: Refugee FSNAs 2014, 2015, 2016, 2017, Jan 2020, Dec 2020

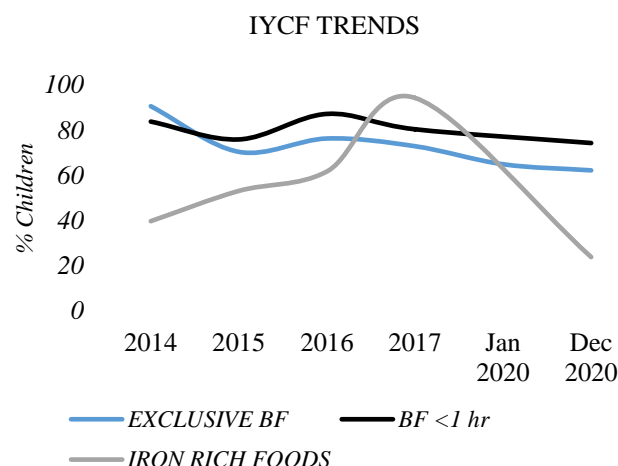
Figure 5: Total anemia trends WRA (15-49 years)



Source: Refugee FSNAs 2014, 2015, 2016, 2017, Jan 2020, Dec 2020

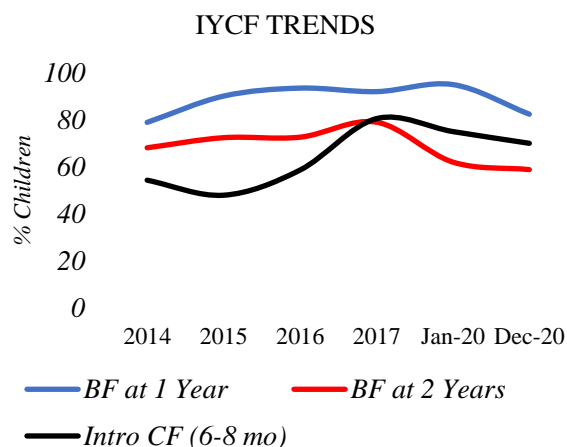
The study found that exclusive breastfeeding (EBF) and early initiation of breastfeeding within 1 hour of birth had consistently dropped between 2014 and December 2020. EBF dropped from 90.7% in 2014 to 62.3% in December 2020 while BF within 1 hour of birth dropped from 83.9% in 2014 to 74.4% in December 2020. In 2020, consumption of iron rich foods for children 6-23 months was at its lowest (23.9%) since 2014, while bottle feeding has dropped to its lowest at 8.2% - a desirable statistic.

Figure 6: Optimal Feeding Trend Analysis P1



Source: Refugee FSNAs 2014, 2015, 2016, 2017, Jan 2020, Dec 2020

Figure 7: Optimal Feeding Trend Analysis PII



Vitamin A supplementation coverage has been reducing from 89.5% in 2015 to 70.4% in December 2020, while deworming coverage was below 75% in January 2020 up from 82.2% in October 2017. As of December 2020, the coverage had improved to 78.1% in an upward trend.

Figure 8: Trends for Deworming Coverage

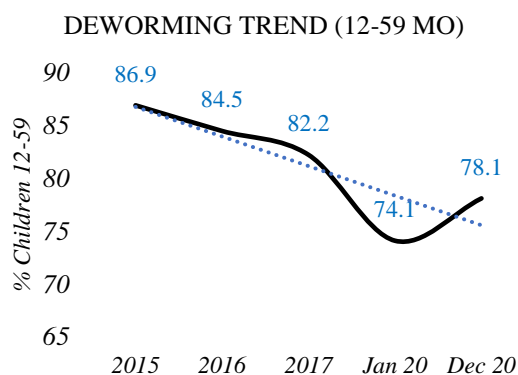
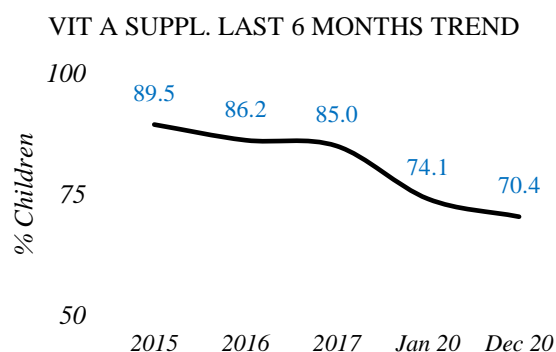


Figure 9: Vitamin A supplementation



Source: Refugee FSNAs 2015, 2016, 2017, Jan 2020, Dec 2020

The HIV and TB programme is integrated into nutrition services which ensures that anti-retroviral therapy (ART) clients not only receive ART services, and those that are malnourished receive treatment for malnutrition. Voluntary counselling and testing (VCT), 99% received post-test counselling and results in 2020, 30% of whom were nationals. During labour and delivery, 97% of HIV+ mothers swallowed ARVs

during delivery and 99% of the new-born were given ARVs within 72 hours of birth. On post-natal PMTCT, 89% of HIV mothers planned to exclusively breastfeed.

Survey General Objective

The main objective of the Food Security and Nutrition Assessment (FSNA) was to assess the general status of Health and Nutrition, WASH, Food Security, and LITN of refugees in all settlements and Kampala, to guide formulation of workable recommendations for appropriate actions.

Primary objectives

- * To determine the demographic profile of the population
- * To measure the prevalence of acute malnutrition, stunting and underweight in children aged 6-59
- * To determine the coverage of measles vaccination among children aged 9-59 months
- * To determine the coverage of vitamin A supplementation in the last 6 months among children aged 6-59 months.
- * To determine the two-week period prevalence of diarrhoea among children aged 6-59 months
- * To measure the prevalence of anaemia in children aged 6-59 months and non-pregnant women of 15-49 years
- * To investigate IYCF practices among children aged 0-23 months
- * To determine the populations overall ability to meet their food needs with assistance
- * To determine the extent to which negative coping strategies are used by households
- * To assess household food consumption (quantity and quality)
- * To determine the ownership and utilization of mosquito nets by (all types and LITNs) by the total population, children 0-59 months and pregnant women.
- * To determine the population's access to, and use of WASH facilities and access to soap
- * To determine the proportion of households in each of the targeting categories
- * To establish recommendations for actions to be taken to address the situation among the refugee population.

Secondary objectives:

- * To determine the coverage of de-worming among children aged 12-59 months in the last six months.
- * To determine the enrolment into selective feeding programmes for children aged 6-59 months.
- * To determine enrolment into ANC and coverage of iron-folic acid supplementation in pregnant women.
- * To determine the population's access to and use of cooking fuel.

Optional objectives:

- * To determine the prevalence of MUAC malnutrition in women of reproductive age 15-49 years.
- * To determine the use of oral rehydration salt (ORS) and/or zinc during diarrhoea episodes in children ages 6-59 months.
- * To determine mortality rate among refugee population (crude mortality rate and under 5 mortality rate).

METHODOLOGY

The design of the nutrition survey was based on the guidelines from Uganda Bureau of Statistics (UBOS) and the UNHCR Standardized Expanded Nutrition Survey V3 (SENS V3, 2019 <http://sens.unhcr.org/>). SENS is based on the Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology (<https://smartmethodology.org/>) adapted for displacement situations globally, including the Uganda Refugee Response. The Food Security module design was adapted from the Consolidated Approach for Reporting Indicators of Food Security (CARI) and was closely supported by WFP. Thematic areas covered by the methodology included demographic, nutrition, health, IYCF practices, food security, WASH, and mosquito nets. In addition, mortality indicators included in the survey.

Study Population

The study population was refugees in 13 refugee settlements and urban refugees (Kampala). Planning for the December 2020 FSNA was inclusive of the host population initially, but due to time constraints including the festive season and COVID-19 related restrictions, the study only covered the refugee settlements. The 14 refugee locations included in the study were Kampala (Kampala), Rhino Camp (Madi-Okollo), Imvepi (Terego), Lobule (Koboko), Bidibidi (Yumbe), Palorinya (Obongi), Adjumani (Adjumani), Palabek (Lamwo), Kiryandongo (Kiryandongo), Kyangwali (Kikuube), Kyaka II (Kyegegwa), Rwamwanja (Kamwenge), Nakivale (Isingiro) and Oruchinga (Isingiro).

Study design

A two-stage cluster sampling cross-sectional design was used across all the locations with more than 10,000 people, while a one-stage sampling design was used for settlements with less than 10,000 people i.e., Oruchinga (7,909) and Lobule (5,547). The sample size was calculated using the ENA for SMART software (January 11, 2020) and the parameters used for sample size calculation are mentioned in the sample size calculation section. The average household size and the proportion of children under 5 years used was from the UNHCR/OPM ProGres V4 registration data which is updated monthly. The reference expected prevalence of GAM used for the sample size calculations was based on the 2017 nutrition survey where a 10% non-response rate was used.

Sampling

Stage I – Selection of the Primary Sampling Units (PSUs) was based on the smallest administrative units in refugee settlements e.g., villages (source, UNHCR/OPM ProGres V4 settlement address data). Population figures of the PSUs for each location were used in the assignment of clusters using the ENA for SMART software (version January 11, 2020). Due to the variations in population sizes across the PSUs, selection of clusters was based on the Probability Proportional to Size (PPS) to equate the probability of selection regardless of size. For PSUs where more than one cluster was assigned, the study design provided for segmentation and cluster selection based on PPS. Each settlement had 3 reserve clusters ready for replacement in case data collection was not possible in the primary clusters.

Stage II – This involved the creation of a sampling frame for each cluster and randomly selecting the Secondary Sampling Units (SSUs) in the respective clusters. Selection of SSUs or households was based on Systematic Random Sampling (SRS) in both two-stage and single-stage sampling locations. Households or SSUs were listed door to door to establish a sampling frame. The sampling frame was subjected to a count and depending on the number of SSUs per cluster, a sampling interval was determined. The first SSU was randomly selected between SSU 1 on the sampling frame and the sampling interval. By establishing a sampling interval, households were selected based on a fixed skipping pattern. Locations with the one-stage sampling (Oruchinga, Lobule), the entire location was treated a single cluster while the rest of the sampling

steps (household listing, systematic random sampling etc.) remained the same. and therefore, and this included listing the entire settlement as one sampling unit.

Considerations

Absentee households

For absentee households, the survey team asked neighbours of the residents' whereabouts or called them. If they were away for long hours, survey team returned later. Households that were absent on the day of data collection were skipped and not replaced. A household was considered as absent when household members slept there last night and left the day of the survey.

Refusal

For participants or an entire household that refused to participate in the survey, it was considered a refusal and the individual or the household was not be replaced with another.

Households without U5 children, WRA

When selected households did not have U5 children and WRA, the survey team only completed the Demography and the Household sections (Food security, LLITN and WASH).

Absentee U5 children, WRA

If the child/woman (or children or women) were absent but close to the home, other household members were sent to fetch them. If the child/woman were expected to return before the survey team left the cluster, the survey team would return before the end of the day to take their measurements. If the child/woman could not be traced before the team's departure from the cluster, only non-measurement information was collected from family members.

Disabled Children

Disabled children were included in the survey and if physical deformity prevented the measurement of any of the anthropometric fields, the data was recorded as missing and the remaining data collected.

Sample size calculation

Key parameters in sample size calculation included *estimated prevalence of GAM, desired precision, design effect (2-stage cluster), average household size, proportion of children under 5, non-response rate, level of confidence (95%), margin of error (5%)*

Table 1: Sample size calculation

Settlement	Total Popn.	Total HHs	Average HH Size	Total U5 Popn.	% U5	Design Effect	Estimated GAM Prev. (%)	± Desired Precision	HH Non-Response Rate (%)	U5 to be included	HH to be included
<i>Adjumani</i>	214,500	33,230	6.5	28,157	18	1.5	11.8	3.5	10	533	562
<i>Bidibidi</i>	232,733	42,740	5.4	36,353	20	1.5	11.8	3.5	10	519	593
<i>Imvepi</i>	69,195	20,383	5.0	11,473	20.5	1.5	10.8	3.5	10	493	594
<i>Kyaka II</i>	124,106	41,063	4.6	22,452	20.0	1.5	4.0	2.5	10	385	517
<i>Kyangwali</i>	123,007	42,545	4.2	24,580	20.0	1.5	3.2	2.5	10	311	457
<i>Nakivale</i>	134,199	39,596	4.2	20,926	15.6	1.5	3.8	2.5	10	367	599
<i>Palorinya</i>	122,732	30,448	5.2	17,081	13.9	1.5	11.1	3.5	10	505	589
<i>Rhino Camp</i>	121,547	30,339	5.0	17,222	20.0	1.5	10.8	3.5	10	493	609
<i>Rwamwanja</i>	72,996	18,435	4.4	14,799	20.3	1.5	3.8	2.5	10	367	507
<i>Kampala</i>	81,483	43,170	4.8	6,192	15.0	1.5	9.0	3.4	10	431	739
<i>Kiryandongo</i>	67,743	10,389	6.5	9,775	14.4	1.5	7.5	3.0	10	469	557
<i>Lobule</i>	5,547	891	6.2	807	14.5	1.0	6.1	3.0	10	240	330
<i>Oruchinga</i>	7,909	1,882	4.4	1,264	16.0	1.0	4.1	2.5	10	238	417
<i>Palabek</i>	53,780	15,940	5.2	9,522	21.0	1.5	12.3	3.5	10	552	625

Source © UNHCR/OPM ProGres V4 refugee registration data October 2020

For settlements with <10,000 U5 children, sample sizes were calculated using the correction factor for small population size and a design effect of 1.

Table 2: Sample size for all FSNA modules

Location	Anthro (6-59)	Health (6-59)	Hb (6-59)	Hb WRA 15-49	IYCF (0-23)	Demog. (HH)	Food Security (HH)	LLITN (HH)	WASH (HH)
<i>Adjumani</i>	562	562	562	281	562	562	281	281	281
<i>Bidibidi</i>	593	593	593	297	593	593	297	297	297
<i>Imvepi</i>	594	594	594	297	594	594	297	297	297
<i>Kampala</i>	739	739	739	370	739	739	370	370	370
<i>Kiryandongo</i>	557	557	557	279	557	557	279	279	279
<i>Kyaka II</i>	517	517	517	259	517	517	259	259	259
<i>Kyangwali</i>	457	457	457	229	457	457	229	229	229
<i>Lobule</i>	330	330	330	165	330	330	165	165	165
<i>Nakivale</i>	599	599	599	300	599	599	300	300	300
<i>Oruchinga</i>	417	417	417	209	417	417	209	209	209
<i>Palabek</i>	625	625	625	313	625	625	313	313	313
<i>Palorinya</i>	589	589	589	295	589	589	295	295	295
<i>Rhino Camp</i>	609	609	609	305	609	609	305	305	305
<i>Rwamwanja</i>	507	507	507	254	507	507	254	254	254

Questionnaire

The FSNA questionnaire was divided into four main sections: 1) Demography, 2) Household (Food Security, Mosquito Net Coverage and WASH), 3) Children (anthropometry, IYCF, health and anaemia) and 4) Women (anthropometry, health, maternal nutrition, and anaemia). Interviews were translated into respective local languages of the household with the help of Village Health Teams (VHTs) and refugee translators.

The December 2020 FSNA used Computer Assisted Personal Interviewing (CAPI) data collection system for simplicity of data collection. The tool was programmed into Survey CTO and was uploaded to a UNHCR Kobo server and was administered electronically on tablets and smart phones with MDC platforms like ODK Collect and Survey CTO.

Demography tool

Household-level information on description of the population demographics, average household size, mortality rates, education attainment, involvement in economic activities and agriculture etc.

Mortality

The Crude Death Rate (CDR) and the U5 Death Rate (U5DR) is expressed as the number of deaths per 1000 people per month.

Mortality benchmarks for defining crisis situations (NICS, 2010)

Emergency threshold
CDR > 0.33/1000/ month: ‘very serious’
CDR > 0.65/1000/month ‘out of control’
CDR > 1.6/1000/month: ‘major catastrophe’ (double for U5MR thresholds)

Household tool

Food Security

Availability, Accessibility, Utilization and Stability of food, including the use of the food assistance, negative coping mechanisms used by household members and household food consumption was assessed. The food security module was contextualized to capture food security pillars on food availability, access and utilization, food production as well as income and expenditure. Analysis was based on the Consolidated Approach to Reporting Indicators for Food Security (CARI).

Mosquito net Coverage

Mosquito net ownership and utilization of mosquito nets among all household members i.e. U5 children, pregnant women, and other household members etc.

MoH and WHO define a long-lasting insecticidal net as a factory-treated mosquito net made with netting material that has insecticide incorporated within or bound around the fibre. The net must retain its effective biological activity without re-treatment for at least 20 WHO standard washes under laboratory conditions and three years of recommended use.

LITN Targets

National Standard	Indicator
Proportion of households owning at least one Long-Lasting Insecticide treated bed net (LLIN)	>80%
Average number of persons per LLIN	Two persons per LLIN (universal coverage)

WASH

Access to a protected drinking water source, use of an adequate quantity of water, use of toilets/latrines and access to soap.

WASH standards

National standards	Indicator target	
Average liters per person per day (LPPPD) of domestic water collected at HH level from protected/treated sources (with protected containers only)	Emergency standard	≥15 liters
	Post emergency standard	≥20 liters
% households with at least 10 L/p drinking water storage capacity	Emergency standard	≥70%
	Post emergency standard	≥80%
% households collecting drinking water from protected/treated sources	Emergency standard	≥70%
	Post emergency standard	≥95%
% households reporting defecating in a toilet/latrine	Emergency standard	≥60%
	Post emergency standard	≥85%
% households with access to soap	Emergency standard	≥70%
	Post emergency standard	≥90%

Children's tool (0-59 months)

Sex – The child's sex was recorded as “f” or “m”: f = female and m = male.

Age – Age was recorded in months from relevant documents such as birth certificate and EPI card and recorded in the DD/MM/YYYY format. If the date of birth was unknown, a local events calendar was used to guide recall and age estimation. **The age on the refugee attestation was not used.

Weight – Children were weighed using a 2-in-1 electronic scale with the precision of 100 grams. At the consent of their caregivers, children were measured naked.

Height/Length – The children's height/length was measured with a precision of 0.1cm by using height boards. Children were measured lightly dressed in no shoes and hairpieces. Children less than 87cm height were measured laying down while those taller than > 87cm were measured in a standing position.

Oedema – Only bilateral pitting oedema was considered as nutritional oedema. It was assessed by applying a gentle pressure with the thumbs to top part of both feet for three seconds. If the imprint of the thumbs remained on both feet for a few seconds after releasing the thumbs, the child was considered to have nutritional oedema.

Mid-Upper Arm Circumference (MUAC) – The MUAC was measured in centimeters on the left arm, at midpoint between the shoulder's tip and the elbow, on a relaxed arm. MUAC was taken only for children between 6 and 59 months of age. Measurements were recorded to the nearest millimetres

Anthropometry

Acute malnutrition in children 6-59 months – Acute malnutrition is defined using weight-for-height (WFH) 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.

Acute malnutrition (WFH)

Categories of acute malnutrition	Z-scores (NCHS Growth Reference 1977 and WHO Growth Standards 2006)	Bilateral oedema
Global acute malnutrition	<-2SD &/or bilateral oedema	Yes/No
Moderate acute malnutrition	< -2 z-scores and \geq -3 z-scores	No
Severe acute malnutrition	<-3 SD &/or bilateral oedema	Yes

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

MUAC cut-offs in children 6-59 months and PLWs

Threshold	Children 6-59 months	PLWs
Acute malnutrition	<12.5 cm	<23 cm
Moderate acute malnutrition	\geq 11.5 cm and <12.5 cm	\geq 19 cm and <23 cm
Severe acute malnutrition	< 11.5 cm	<19cm

MoH and WHO targets for the prevalence of Global Acute Malnutrition (GAM) and Severe Acute Malnutrition (SAM) for children 6-59 months are <10% and <2% respectively.

BMI cut-offs

Cut-offs for the body mass index in assessing wasting among non-pregnant women of reproductive age (15-49 years).

<i>BMI cut-off</i>	<i>Threshold</i>
<18.5	Underweight
18.5-24.9	Normal
25-29.9	Overweight
30-34.9	Obese type I
35-39.9	Obese type II
≥40	Obese type III

Stunting – also referred to as chronic malnutrition is defined using Height-for-Age Z-scores (HAZ) 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.

Stunting (HFA)

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

Underweight – Defined by Weight-for-Age Z-scores (WAZ) and is classified as severe or moderate based on the following cut-offs. Main results are reported according to the WHO Growth Standards 2006

Underweight (WFA)

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

Overweight – Overweight is weight higher than what is considered as a healthy weight for a given height (WFH). Overweight in children is measured by the weight for height z-scores (WHZ) based on the 2006 WHO child growth standards

Overweight (WFH)

Categories of overweight	Z-scores (WHO Growth Standards 2006 and NCHS Growth Reference 1977)
Overweight (total)	(WHZ > 2)
Severe overweight	(WHZ > 3)

WHO-UNICEF (2019) Recommendations on Data Collection, Analysis, and Reporting⁴

Classification	Critical	Serious	Poor	Acceptable	
Prevalence threshold (%)	Very High	High	Medium	Low	Very low
Wasting	≥ 15	10 - < 15	5 - < 10	2.5 - < 5	< 2.5
Stunting	≥ 30	20 - < 30	10 - < 20	2.5 - < 10	< 2.5
Overweight	≥ 15	10 - < 15	5 - < 10	2.5 - < 5	< 2.5
Underweight	≥ 30	20 - < 30	10 - < 20	< 10%	

⁴ WHO-UNICEF Recommendations on Data Collection, Analysis, and Reporting of Anthropometric Indicators of Children Under 5 Years Old (2019).

Anaemia

Haemoglobin concentration (Hb) – After renewal in advance of the verbal consent, all children 6-59 months were assessed for their haemoglobin concentration using a portable HemoCue Hb 301+ analyser, and if severe anaemia (<7.0 g/dL) was detected, the child will be referred for treatment immediately.

National target for the prevalence of anaemia in children 6-59 months of age and in women 15-49 years of age should be < 20% corresponding to the ‘low’ category as defined by WHO and shown in the table below

WHO classification of public health significance for Anaemia

Classification	High	Medium	Low
Prevalence of anaemia	≥40%	20-39%	5-19%

Source: WHO (2000) *The Management of Nutrition in Major Emergencies*

Measles Vaccination, Vitamin A Supplementation and Deworming

Measles vaccination – The interviewer confirmed first if the child had received measles vaccination by examining an official document (EPI card/clinic card/health card). If there was no document, the interviewer asked the respondent if the child received measles vaccination. Only children aged 9-59 months were assessed for measles vaccination.

Vit A supplementation in the past six months – The interviewer confirmed first if the child received vitamin A supplementation by examining an official document (EPI card/clinic card/health card). If there was no document, the interviewer showed vitamin A blue and red capsules to the respondent and asked them if the child had received vitamin A supplementation drops in the mouth in the past six months.

Deworming in the past six months – The deworming status in the past six months was confirmed first with an official document (EPI card/clinic card/health card). If not possible, the interviewer would show the respondent a deworming tablet (mebendazole) and asked if the child had received “worm medicine” in the past four months.

National targets for measles vaccination, vitamin a supplementation and deworming coverage

Indicator	Target coverage	Source
Measles vaccination coverage (9-59 months)	95%	MOH
Vit A supplementation in the last 6 months coverage (6-59m)	>90%	MOH
Deworming in the last 6 months coverage (appropriate age group)	75%	MOH

Infant and Young Child Feeding (0-23 months)

Several questions on breastfeeding practices and complementary feeding practices were asked to the mothers/caregivers of children from 0 to 23 months

Infant and Young Child indicator definition

Children ever breastfed - Proportion of children born in the last 24 months who ever breastfed.

Children born in the last 24 months who were ever breastfed x100

Children born in the last 24 months

Timely initiation of breastfeeding - % children born in the last 24 months who were breastfed within 1 hour of birth.

Children born in the last 24 months who were put to the breast within one hour after birth x100

Children born in the last 24 months

Exclusive breastfeeding under 6 months - % infants 0-5 months of age who are fed exclusively with breast milk.

Infants 0-5 months of age who received only breast milk during the previous day x100

Infants 0-5 months of age

Continued breastfeeding at 1 year: % children 12-15 months of age who are fed breast milk.

Children 12-15 months of age who received breast milk during the previous day x100

Children 12-15 months of age

Continued breastfeeding at 2 years: % children 20-23 months of age who are fed breast milk.

Children 20-23 months of age who received breast milk during the previous day x100

Children 20-23 months of age

Exclusive breastfeeding – infant receives only breast milk, no water, no other liquids, or solids are given except for ORS, or drops/syrups of vitamins, minerals, or medicines.

Age-appropriate introduction of complementary foods: % infants 6-8 months who receive solid, semi-solid or soft foods.

Infants 6-8 months of age who received solid, semi-solid or soft foods during the previous day x100

Infants 6-8 months of age

Consumption of iron rich or iron fortified foods in children aged 6-23 months: % children 6–23 months who consume an iron-rich or iron-fortified food that is specially designed for infants and young children, or that is fortified in the home.

Children 6-23 months who consumed iron-rich food or food specially designed for infants and young children and fortified with iron, or a food fortified at home with a product that included iron during the previous day x100

Children 6-23 months of age

Bottle feeding: % children 0-23 months of age who are fed with a bottle

Children 0–23 months of age who were fed with a bottle during the previous day x100

Children 0–23 months of age

Enrolment into selective feeding (Targeted Supplementary Feeding Programme (TSFP)/Outpatient Therapeutic Care (OTC)/Inpatient Therapeutic Care (ITC)) – Enumerator asked the mother/caregiver if child was receiving sachets of Plumpy Nut’ or CSB++, by showing her both sachets. If the child was receiving the Plumpy Nut’ sachets, they were enrolled in a Therapeutic Feeding Programme

$$\text{Coverage of TSFP (\%)} = \frac{\text{No. of surveyed children with MAM according to TSFP criteria who reported being enrolled in TSFP}}{\text{No. of surveyed children with MAM according to TSFP admission criteria}} \times 100$$

$$\text{Coverage of OTC/ITC (\%)} = \frac{\text{No. of surveyed children with SAM according to OTC/ITC criteria who reported being enrolled in OTC/ITC}}{\text{No. of surveyed children with SAM according to OTP/SC admission criteria}} \times 100$$

Performance indicators for selective feeding (SPHERE standards)

	Recovery	Case fatality	Defaulter rate	Coverage		
				Rural areas	Urban	Settlements
TSFP	>75%	<3%	<15%	>50%	>70%	>90%
OTC/ITC	>75%	<10%	<15%	>50%	>70%	>90%

Enrolment into MCHN programme – Enumerator asked if children 6-23 months were enrolled in the MCHN programme and if they were receiving the CSB++

Women tool (WRA, 15 to 49 years)

Age – Age was recorded in years

Pregnant and Lactating Status – Enumerator asked if WRA were pregnant and/or lactating. Pregnant women were not assessed haemoglobin concentration.

MUAC– The MUAC was measured in centimeters on the left arm, at midpoint between the shoulder's tip and the elbow, on a relaxed arm for all women.

Enrolment in ANC - Iron and folic acid (IFA) supplementation – If pregnant, the enumerator would ask about her enrolment in ANC and consumption of IFA pills. The pregnant women were asked to show an IFA pills, or an image of IFA was showed for recall.

Enrolment into MCHN programme – Enumerator will ask all PLWs with an infant younger than 6 months if they were enrolled in the MCHN programme and if they are receiving the CSB++

Haemoglobin concentration (Hb) – After renewal in advance of the verbal consent, non pregnant WRA in selected households were assessed for their haemoglobin concentration using a a portable HemoCue Hb 301+ analyser, and if severe anaemia (<8.0 g/dL) was detected, the child was referred for treatment immediately.

Survey team, training, data collection

At the national level, technical coordination of the nutrition survey was led by UNHCR in close collaboration with The Government of Uganda (UBOS and MOH), WFP and UNICEF. Key stakeholders at the district/settlement level included OPM, DLGs, MoH Regional Referral Hospitals, UNHCR, WFP, UNICEF, and partners. District Local Governments allowed their staff to participate. Health and Nutrition partners in the refugee settlements were fully invested in the process.

A regional training approach was adapted to ensure better understanding and more accurate replication of the methodology. A dedicated and roving team of trainers organized and led by UNHCR led the training in four regions. The team was comprised of staff from MoH, UNHCR and WFP.

Regional FSNA training for South West – Mbarara

Regional FSNA training for Mid-West – Hoima

Regional FSNA training for West Nile I – Arua

Regional FSNA training for West Nile II – Adjumani

The training covered all modules of the nutrition survey including interview skills to minimize respondent bias. The training also involved 1) standardization tests to identify and refine skills of measurers in capturing anthropometry and 2) testing out and familiarizing with ODK Collect and Survey CTO. This also helped in collecting feedback required for the iterations to the tool.

The data collection exercise comprised of 122 data collectors (District Local Governments, Office of the Prime Minister, Partner Organizations, and Regional Referral Hospitals), 122 VHTs, 20 UNHCR, 2 UNICEF, 12 WFP, 1 Uganda Bureau of Statistics, and 3 MoH, collectively assuming roles ranging from technical support, ITCT, logistics, information management and coordination. VHTs supported in field navigation and translation into local languages. Each member of the data collection team was paired with a VHT.

The data collection team convened daily every to share experiences, raise challenges and receive real time feedback. UNHCR and WFP data analysts swept through the incoming raw data daily to identify errors and provide real time feedback. This helped to minimize errors and to provide the much-needed support. A mop-up strategy was implemented to correct measurement errors and identify data collectors prone to making errors. Errors included recording of birthdates, capturing anthropometry etc.

Strengths

- *Functional and dedicated FSNA technical working group*
- *Daily data uploads, real time access to data, analysis, and feedback*
- *Daily FSNA feedback sessions*
- *Mop-up strategy – anthropometry, food security*
- *Real time support – logistics, equipment, ICT, communication*
- *Dedicated UNHCR, WFP support teams*
- *Monitoring of activity from MOH*

Challenges/limitations

- *Competing activities:* The data collection coincided with the 1) MoH Under the Net distribution campaign in some of the locations, 2) Quarter 4 nutrition mass screening exercise in some locations and 3) Food/ Cash aid distributions in some locations. Some of these activities relied on the same VHTs for community engagement. This limited the number of VHTs the study could work with. This also increased the number of absentee households in some locations especially in places like Adjumani, Palabek etc.
- *Survey fatigue:* Due to the vast sizes of refugee settlements, teams walked long distances to the

next house during systematic random sampling. Some locations like Kiryandongo were found to be geographically sparse in some zones/clusters. That said, there was logistical support.

- *Volume of the questionnaire:* The refugee FSNA tool is still largely lengthy, especially for some modules like food security. This reduces the number of tools that can be completed in a day let alone the impact on quality of data if targets are to be met.
- *A few observations under the IYCF module.* This largely results from the nature of indicators that are mostly subsets of main indicators. This results into fewer observations and wider confidence intervals.
- *Hostility:* Some locations experienced some form of hostility towards the data collection teams especially in Kampala. Some of the respondents were drunk. Data collection teams did not insist on collecting data in those households.
- *Consent:* It was a significant observation that many Somali urban refugees (Kampala) declined taking a blood sampling (Hb) to test for Anemia. Sensitization is needed
- *GBV questions:* There was anticipated sensitivity around certain GBV questions for which respondents were sometimes not open to responding to them in the presence of their spouses or other family members e.g. question on GBV in the last 6 months in fear of possible retaliation by partner. It is highly likely that the prevalence of GBV was underestimated based on this factor.

Pretesting

The survey tool was pretested in Oruchinga, Rwamwanja, Nakivale, Kyaka II a week before the nutrition survey. Observations from the pretesting were used to improve the tool.

SUMMARY OF KEY INDICATORS

Table 3: Summary of Cut-Offs and Targets for Key Indicators

SUMMARY OF PUBLIC HEALTH SIGNIFICANCE CLASSIFICATION CUT-OFFS AND TARGETS FOR KEY SENS INDICATORS															
	NAKIVALE Refugee Settlement		ORUCHINGA Refugee Settlement		KYAKA II Refugee Settlement		RWAMWANJA Refugee Settlement		KYANGWALI Refugee Settlement		KAMPALA Urban		KIRYANDONGO Refugee Settlement		
	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	
CHILDREN 6-59 months															
ACUTE MALNUTRITION BY WHZ (WHO 2006 GROWTH STANDARDS FOR CHILDREN BELOW 5 YEARS)															
Global Acute Malnutrition	11/495	2.2 (1.1-4.5)	6/284	2.1 (1.0-4.5)	5/434	1.2 (0.4-3.3)	11/499	2.2 (1.2-3.9)	4 / 374	1.1 (0.4 - 2.9)	7/ 191	3.7 (1.7 - 7.6)	37 / 425	8.7 (6.0- 12.4)	
Moderate Acute Malnutrition	5/495	1 (0.4 -2.8)	5 / 284	1.8 (0.8 - 4.1)	4 / 434	0.9 (0.3 - 3.1)	4 / 499	0.8 (0.3 - 2.1)	3 / 374	0.8 (0.2 - 2.7)	5 / 191	2.6 (1.1 - 6.0)	28 / 425	6.6 (4.4 - 9.7)	
Severe Acute Malnutrition	6/495	1.2 (0.4 - 3.6)	1 / 284	0.4 (0.1 - 2.0)	1 / 434	0.2 (0.0 - 1.9)	7 / 499	1.4 (0.6 - 3.2)	1 / 374	0.3 (0.0 - 2.1)	2 / 191	1.0 (0.2 - 4.7)	9 / 425	2.1 (1.1 - 3.9)	
Oedema	6/495	1.2 (0.4-3.6)	1/284	0.3 (-0.3-0.9)	1/434	0.2 (0.0-1.9)	7/499	1.4 (0.6-3.2)	1/374	0.3 (0.0-2.1)	1/191	0.5 (-0.5-1.5)	4/425	0.9 (0.0-1.8)	
ACUTE MALNUTRITION BY MID UPPER ARM CIRCUMFERENCE															
Global Malnutrition	14/509	2.8 (1.5 - 5.1)	6 /297	2.0 (0.9 - 4.3)	15 / 445	3.4 (2.0 - 5.6)	21 / 518	4.1 (2.4 - 6.7)	15 / 384	3.9 (1.9 - 7.8)	4 / 194	2.1 (0.7 - 5.9)	21 / 429	4.9 (2.8 - 8.3)	
Moderate Malnutrition	7/509	1.4 (0.7 - 2.7)	3 / 297	1.0 (0.3 - 2.9)	10 / 445	2.2 (1.1 - 4.7)	11 / 518	2.1 (1.1 - 4.1)	12 / 384	3.1 (1.4 - 6.9)	1 / 194	0.5 (0.1 - 4.1)	15 / 429	3.5 (1.9 - 6.5)	
Severe Malnutrition and or Oedema	7/509	1.4 (0.5 - 3.6)	3 / 297	1.0 (0.3 - 2.9)	5 / 445	1.1 (0.5 - 2.6)	10 / 518	1.9 (1.0 - 3.9)	3 / 384	0.8 (0.2 - 3.6)	3 / 194	1.5 (0.4 - 5.3)	6 / 429	1.4 (0.6 - 3.2)	
UNDERWEIGHT (WHO 2006 GROWTH STANDARDS FOR CHILDREN BELOW 5 YEARS)															
Total Underweight	22/499	4.4 (2.9 - 6.8)	20 / 291	6.9 (4.5- 10.4)	46 /430	10.7 (7.5- 15.1)	62 / 504	12.3 (10-15.1)	27 / 375	7.2 (4.6- 11.1)	9 / 183	4.9 (2.6 - 9.0)	18 / 425	4.2 (2.9 - 6.1)	
Severe underweight	4/499	0.8 (0.0-1.6)	2/291	0.7 (-0.3-1.7)	8/430	1.9 (0.6-3.2)	9/504	1.8 (0.6-3.0)	6/ 375	1.6 (0.3-2.9)	0 / 183	0 (0.0-0.0)	6/ 425	0.5 (-0.2-1.2)	
STUNTING (WHO 2006 GROWTH STANDARDS FOR CHILDREN BELOW 5 YEARS)															
Total Stunting	156/491	31.8 (27.7-35.9)	77 / 271	28.4 (23.4-33.8)	200 /411	48.7 (43.9-53.5)	221 / 489	45.2 (40.8-49.6)	138 / 362	38.1 (31.9-44.8)	33 / 172	19.2 (13.3-25.1)	32 / 424	7.5 (4.7- 11.9)	
Severe stunting	53/491	10.8 (8.1-13.5)	22/271	8.1 (4.9-11.3)	83/411	20.2 (16.3- 24.1)	101/489	20.7 (17.1-24.3)	59/ 362	16.3 (12.5-20.1)	10/ 172	5.8 (2.3-9.3)	5/ 424	1.2 (0.2-2.2)	
OVERWEIGHT (WHO 2006 GROWTH STANDARDS FOR CHILDREN BELOW 5 YEARS)															
Total overweight	30/495	6.1 (4.2 - 8.7)	12 / 284	4.2 (2.4 - 7.2)	44 / 434	10.1 (7.4- 13.7)	33 / 499	6.6 (4.6 - 9.3)	21 / 374	5.6 (3.6 - 8.6)	13/ 191	6.8 (3.5- 12.9)	13 / 427	3 (1.5 - 5.9)	
Severe Overweight	3/ 495	0.6 (-0.1-1.3)	0/284	0 (0.0-0.0)	4/ 434	0.9 (0.0-1.8)	3/ 499	0.6 (-0.1-1.3)	2/ 374	0.5 (-0.2-1.2)	0/ 191	0 (0.0-0.0)	0/ 427	0 (0.0-0.0)	

	NAKIVALE Refugee Settlement		ORUCHINGA Refugee Settlement		KYAKA II Refugee Settlement		RWAMWANJA Refugee Settlement		KYANGWALI Refugee Settlement		KAMPALA Urban		KIRYANDONGO Refugee Settlement	
	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total		Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)
PROGRAMME COVERAGE														
<i>Measles vaccination with card or recall (9-59 mo)</i>	465/498	93.6 (91.2-95.6)	314/320	98.1 (96.6-99.6)	441/454	97.2 (95.7-98.7)	509/523	97.4 (96.0-98.7)	365/371	98.4 (97.1-99.7)	174/185	93.8 (90.2-97.4)	567/609	93.2 (91.2-95.2)
<i>Vit A suppl. in past 6 months with card or recall</i>	429/586	73.3 (69.1-77.5)	273/371	73.6 (68.4-78.8)	343/540	63.6 (58.5-68.7)	480/622	77.2 (73.5-81.0)	366/431	84.7 (81.0-88.4)	171/219	78.1 (71.9-84.3)	469/708	66.3 (62.0-70.6)
<i>De-worming in past 6 months with card or recall (12-59 mo)</i>	355/470	75.6 (71.2-80.1)	267/296	90.2 (86.6-93.8)	370/425	86.9 (83.5-90.4)	377/494	76.3 (72.0-80.6)	277/352	78.8 (74.0-83.6)	100/179	55.7 (46.0-65.5)	376/583	64.4 (59.6-69.3)
<i>TFP (based WHZ, oedema and MUAC)</i>	9.1		10.0		11.1		7.1		33.3		0.0		8.3	
<i>TSFP enrolment. (based on WHZ and MUAC)</i>	8.3		11.1		0.0		23.8		25.0		0.0		4.9	
DIARRHOEA														
<i>Diarrhoea in last 2 weeks</i>	97/586	16.6 (13.6-19.6)	40/371	10.8 (7.6-14.0)	65/540	12 (9.3-14.7)	91/622	14.7 (11.9-17.5)	60/431	14 (10.7-17.3)	9/219	4 (1.4-6.6)	47/708	6.6 (4.8-8.4)
ANAEMIA (CHILDREN AGED 6-59 MONTHS)														
<i>Total Anaemia (Hb<11 g/dl)</i>	199/530	37.6 (33.5-41.7)	108/331	32.6 (27.6-37.6)	232/489	47.5 (43.1-51.9)	260/563	46.1 (42.0-50.2)	243/412	59 (54.3-63.7)	51/204	24.9 (19.0-30.8)	/514	52.4 (48.1-56.7)
<i>Severe Anemia</i>	6/530	1.2 (0.3-2.1)	1/331	0.3 (-0.3-0.9)	11 /489	2.2 (0.9-3.5)	6/563	1 (0.2-1.8)	9/412	2.1 (0.7-3.5)	11/204	5.2 (2.2-8.2)	/514	2 (0.8-3.2)
Children 0-23 Months														
IYCF INDICATORS														
<i>Timely initiation of breastfeeding</i>	172/212	81.1 (75.7-86.3)	117/144	81.3 (75.7-86.3)	151/183	82.6 (77.6-88.4)	177/210	84.4 (79.0-89.0)	88/151	58.0 (50.1-65.9)	53/70	75.8 (69.2-82.8)	158/218	72.3 (66.0-78.0)
<i>Exclusive BF under 6 months</i>	44/55	80.0 (69.4-90.6)	24/33	72.7 (57.5-87.9)	50/57	87.7 (79.2-96.2)	46/50	92.0 (84.5-99.5)	34/39	87.2 (76.7-97.7)	12//25	48.0 (28.4-67.6)	25/70	35.7 (24.5-46.9)
<i>Predominant BF under 6 months</i>	44/55	80.5 (70.6-91.4)	24/34	70.6 (55.7-86.3)	50/57	87.3 (78.3-95.7)	46/50	91.4 (83.1-98.9)	34/39	87.1 (76.4-97.6)	12//25	49.2 (29.4-68.6)	25/70	36.2 (24.8-47.2)
<i>Continued BF At 1 Year</i>	31/40	77.5 (65.2-90.8)	14//16	87.5 (72.1-103)	16//20	80.0 (62.5-97.5)	30/36	83.3 (71.1-95.5)	26/27	96.3 (89.2-103)	4//7	57.1 (20.4-93.8)	71/75	94.7 (90.1-99.9)
<i>Continued BF At 2 Years</i>	15/30	50.0 (32.1-67.9)	9//14	64.3 (38.9-89.1)	11//16	68.8 (47.5-92.5)	12//16	75 (53.8-96.2)	13/14	92.9 (79.6-106)	01//11	9.1 (-7.9-25.9)	11//13	84.6 (63.3-106)

	NAKIVALE Refugee Settlement		ORUCHINGA Refugee Settlement		KYAKA II Refugee Settlement		RWAMWANJA Refugee Settlement		KYANGWALI Refugee Settlement		KAMPALA Urban		KIRYANDONGO Refugee Settlement	
	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total		Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)
<i>Intro of Solid, Semi-Solid or Soft Foods (age 6-8 months)</i>	13/20	65.0 (44.1-85.9)	7//10	70.0 (41.6-98.4)	13/17	76.5 (57-97.0)	20/31	64.5 (48.2-81.8)	08//11	72.7 (46.8-99.2)	04//05	80 (44.9-115)	10//18	55.6 (33.1-78.9)
<i>Consump. iron-rich or iron-fortified foods</i>	24/179	13.3 (8.3-18.3)	16/124	12.9 (7.0-18.8)	43/138	31.3 (23.6-39.0)	45/185	24.3 (18.1-30.5)	35/125	27.8 (19.9-35.7)	14/61	23.7 (13.0-34.4)	27/181	14.7 (9.5-19.9)
<i>Bottle feeding</i>	33/274	12.2 (8.3-16.1)	7/194	3.6 (1.0-6.2)	13/195	6.6 (3.1-10.1)	27/240	11.1 (7.1-15.1)	17/168	10.0 (5.5-14.5)	33/90	37.0 (27.0-47.0)	16/303	5.2 (2.7-7.7)
<i>Non-breastfed children <6 months</i>	2//54	4.3 (-1.1-9.7)	0/ 31	0 (0.0-0.0)	0/ 52	0 (0.0-0.0)	2//47	3.9 (-1.6-9.4)	0/ 30	0 (0.0-0.0)	7// 19	34.8 (13.4-56.2)	8//46	16.4 (5.7-27.1)
<i>Non-breastfed children <12 months</i>	3/ 105	2.7 (-0.4-5.8)	0/ 68	0 (0.0-0.0)	0/ 99	0 (0.0-0.0)	4/ 108	3.4 (0.0-6.8)	0/ 63	0.6 (-1.3-2.5)	7//30	24 (8.7-39.3)	13/ 82	16.3 (8.3-24.3)
WOMEN 15-49 years														
ANAEMIA (NON-PREGNANT)														
<i>Total Anaemia (Hb<12 g/dl)</i>	103 / 318	32.4 (27.3-37.5)	53/ 211	25.1 (19.2-31.0)	87/ 246	35.4 (29.4-41.4)	84/ 264	31.7 (26.1-37.3)	91/ 198	45.9 (39.0-52.8)	47/ 223	21.2 (15.8-26.6)	125/ 320	39.2 (33.9-44.5)
<i>Severe Anaemia (Hb<8 g/dL)</i>	1/318	0.2 (-0.3-0.7)	0/211	0.0 (0.0-0.0)	0/246	0.0 (0.0-0.0)	5/264	1.8 (0.2-3.4)	1/198	0.5 (-0.5-1.5)	0/223	0.0 (0.0-0.0)	1/320	0.3 (-0.3-0.9)
<i>Prev of Malnutrition (MUAC) WRA (non-pregnant)</i>	12/ 107	11.5 (5.5-17.5)	3 //72	4.3 (-0.4-9.0)	6 / 111	5.7 (1.4-10.0)	4 / 108	3.8 (0.2-7.4)	5 / 107	4.9 (1.0-9.0)	0 / 36	0 (0.0-0.0)	2//62	3.3 (-1.1-7.7)
PROGRAM COVERAGE PREGNANT WOMEN														
<i>Pregnant women currently enrolled in the ANC</i>	38/51	75.3 (63.5-87.1)	25/39	64.1 (49.0-79.2)	49/61	80.7 (70.8-90.6)	50/ 61	83.4 (74.1-92.7)	41/63	65 (53.2-76.8)	13/23	57.6 (37.4-77.8)	19/24	79.7 (63.6-95.8)
<i>Pregnant women currently receiving Iron-folic acid pills</i>	36/51	71.1 (58.7-83.5)	25/39	64.1 (49.0-79.2)	48/61	78.9 (70.7-90.5)	51/61	83.6 (74.3-92.9)	42/63	66.4 (54.7-78.1)	14/23	61.9 (42.1-81.7)	20/24	85.3 (71.1-99.5)
FOOD SECURITY														
<i>Ave. # days Cash lasts in 30 days</i>	231	13.7/30	170	12/30	244	8.7/30	238	11/30	211	16.4/30	45	10.3/30	177	16/30
<i>Ave. # of days in-kind lasts in 30 days</i>	14	14.7/30	5	15/30	0	0/30	4	11.1/30	1	12.5/30	4	14.4/30	94	13.9/30
NEGATIVE HOUSEHOLD COPING STRATEGIES														
<i>% HHs using none of coping strategies over past month</i>		24.5		20.8		15.5		24.2		39.5		13.2		40.2

	NAKIVALE Refugee Settlement		ORUCHINGA Refugee Settlement		KYAKA II Refugee Settlement		RWAMWANJA Refugee Settlement		KYANGWALI Refugee Settlement		KAMPALA Urban		KIRYANDONGO Refugee Settlement	
	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total		Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)
WASH														
<i>Ave. l/p/d of domestic water collected from protected sources at HH level</i>	307	10	201	13.3	259	13.3	273	10.9	228	17.8	193	12.0	300	20
<i>Daily water consumption ≥20 l/p/d</i>	72/ 307	23.3 (18.6-28.0)	69/ 201	34.3 (27.7-40.9)	100/ 259	38.5 (32.6-44.4)	59/ 273	21.6 (16.7-26.5)	111/ 228	48.8 (42.3-55.3)	71/ 193	36.6 (29.8-43.4)	162/ 300	54.1 (48.5-59.7)
<i>% HHs with at least 10 L/p potable/ drinking water storage capacity</i>	304/ 307	99 (97.9-100)	193/ 201	96 (93.3-98.7)	254/ 259	98 (96.3-99.7)	273/ 273	100 (100-100)	228/ 228	100 (100-100)	185/ 193	95.8 (93.0-98.6)	300/ 300	100 (100-100)
<i>% HHs collecting drinking water from protected sources</i>	257/ 306	84 (79.9-88.1)	183/ 201	91.0 (87.0-95.0)	197/ 259	76.1 (70.9-81.3)	248/ 273	90.9 (87.5-94.3)	161/ 228	70.4 (64.5-76.3)	168/ 193	87.3 (82.6-92.0)	290/ 300	96.5 (94.4-98.6)
<i>% HHs reporting defecating in a toilet/ latrine</i>	291/ 306	95.2 (93.0-98.0)	190/ 201	94.5 (91.0-98.0)	231/ 259	89.1 (85.0-93.0)	259/ 273	95 (92.0-98.0)	212/ 228	93.1 (89.8-96.4)	192/ 193	99.4 (98.3-101)	244/ 300	81.4 (77.0-85.8)
<i>% households with access to soap</i>	251 / 306	82.1 (78.0-86.0)	131/ 201	65.2 (59.0-72.0)	152/ 259	58.7 (53.0-65.0)	239/ 273	87.5 (84.0-91.0)	149/ 228	65.4 (59.2-71.6)	152/ 193	78.8 (73.0-84.6)	190/ 300	63.4 (57.9-68.9)
MOSQUITO NET COVERAGE														
<i>% of households owning at least one LLINT</i>	259/305	84.9 (81.0-89.0)	191/202	94.6 (92.0-98.0)	70/260	27.1 (21.6-32.4)	262/273	95.8 (93.7-98.3)	189/228	82.9 (78.1-87.9)	78/178	43.8 (36.7-51.3)	237/297	79.9 (75.5-84.5)
<i>Average number of persons per LLINT</i>	1114	3.1	794	3	238	3.1	1227	3.2	694	2.9	191	2.8	1121	2.8
MORTALITY														
<i>Crude mortality rate (CDR)/ 1000/month</i>	2/3137	0.05	1/1963	0.04	7/2249	0.26	3/2880	0.09	2/2064	0.08	0/1586	0.0	0/3736	0.0
<i>Under five mortality (U5M)/1000/month</i>	1/579	0.14	1/371	0.22	4/474	0.7	3/617	0.4	1/421	0.2	0/229	0.0	0/605	0.0

	RHINO CAMP Refugee Settlement		IMVEPI Refugee Settlement		LOBULE Refugee Settlement		ADJUMANI Refugee Settlement		PALABEK Refugee Settlement		PALORINYA Refugee Settlement		BIDIBIDI Refugee Settlement	
	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)
CHILDREN 6-59 months														
ACUTE MALNUTRITION BY WHZ (WHO 2006 GROWTH STANDARDS FOR CHILDREN BELOW 5 YEARS)														
<i>Global Acute Malnutrition</i>	36 / 524	6.9 (5.0 - 9.4)	24 / 559	4.3 (2.9 - 6.3)	6 / 173	3.5 (1.6 - 7.4)	24 / 290	8.3 (4.5 - 14.7)	29 / 353	8.2 (5.0 - 13.2)	15 / 283	5.3 (3.0 - 9.2)	37 / 549	6.7 (4.2 - 10.6)
<i>Moderate Acute Malnutrition</i>	30 / 524	5.7 (3.8 - 8.5)	19 / 559	3.4 (2.1 - 5.5)	6 / 173	3.5 (1.6 - 7.4)	20 / 290	6.9 (3.9 - 12.0)	21 / 353	5.9 (3.7 - 9.5)	14 / 283	4.9 (2.7 - 8.9)	29 / 549	5.3 (3.1 - 8.8)
<i>Severe Acute Malnutrition</i>	6 / 524	1.1 (0.5 - 2.8)	5 / 559	0.9 (0.4 - 2.0)	0 / 173	0 (0.0 - 2.2)	4 / 290	1.4 (0.5 - 3.5)	8 / 353	2.3 (1.0 - 5.0)	1 / 283	0.4 (0.0 - 2.8)	8 / 549	1.5 (0.8 - 2.8)
<i>Oedema</i>	2/524	0.4 (-0.1-0.9)	4/599	0.7 (0.0-1.4)	0/173	0 (0.0-0.0)	1/290	0.3 (-0.3-0.9)	6/353	1.7 (0.4-3.0)	0/283	0 (0.0-0.0)	2/549	0.4 (-0.1-0.9)
ACUTE MALNUTRITION BY MID UPPER ARM CIRCUMFERENCE														
<i>Global Acute Malnutrition</i>	17 / 530	3.2 (2.1 - 5.0)	10 / 571	1.8 (1.0 - 3.0)	7 / 177	4.0 (1.9 - 7.9)	15 / 290	5.2 (3.2 - 8.3)	13 / 359	3.6 (1.8 - 7.1)	8 / 284	2.8 (1.3 - 6.2)	10 / 553	1.8 (1.0 - 3.3)
<i>Moderate Acute Malnutrition</i>	11 / 530	2.1 (1.1 - 3.9)	6 / 571	1.1 (0.5 - 2.3)	5 / 177	2.8 (1.2 - 6.4)	12 / 290	4.1 (2.3 - 7.3)	3 / 359	0.8 (0.2 - 3.8)	6 / 284	2.1 (0.8 - 5.7)	5 / 553	0.9 (0.4 - 2.0)
<i>Severe Acute Malnutrition and or Oedema</i>	6 / 530	1.1 (0.5 - 2.4)	4 / 571	0.7 (0.3 - 1.8)	2 / 177	1.1 (0.3 - 4.0)	3 / 290	1.0 (0.3 - 3.3)	10 / 359	2.8 (1.3 - 5.9)	2 / 284	0.7 (0.2 - 3.0)	5 / 553	0.9 (0.4 - 2.2)
UNDERWEIGHT (WHO 2006 GROWTH STANDARDS FOR CHILDREN BELOW 5 YEARS)														
<i>Total Underweight</i>	20 / 525	3.8 (2.7 - 5.3)	39 / 557	7.0 (5.0 - 9.7)	21 / 177	11.9 (7.9 - 17.5)	17 / 289	5.9 (3.5 - 9.7)	40 / 351	11.4 (8.4 - 15.3)	19 / 284	6.7 (3.7 - 11.8)	41 / 546	7.5 (5.3 - 10.6)
<i>Severe underweight</i>	1 / 525	0.2 (-0.2-0.6)	5 / 557	0.9 (0.1-1.7)	3 / 177	1.7 (-0.2-3.6)	2 / 289	0.7 (-0.3-1.7)	10 / 351	2.8 (1.1-4.5)	4 / 284	1.4 (0.0-2.8)	1 / 546	0.2 (-0.2-0.6)
STUNTING (WHO 2006 GROWTH STANDARDS FOR CHILDREN BELOW 5 YEARS)														
<i>Total Stunting</i>	66 / 518	12.7 (9.7-16.5)	97 / 531	18.3 (15.0-22.1)	16 / 171	9.4 (5.0-13.8)	33/287	11.5 (8.0 - 16.2)	84 / 347	24.2 (19.6- 29.6)	34 / 284	12 (8.3 - 17.0)	65 / 536	12.1 (9.9 - 14.7)
<i>Severe stunting</i>	11 / 518	2.1 (0.9-3.3)	18 / 531	3.4 (1.9-4.9)	3 / 171	1.8 (-0.2-3.8)	7 / 287	2.4 (0.6-4.2)	27 / 347	7.8 (5.0-10.6)	6 / 284	2.1 (0.4-3.8)	8 / 536	1.5 (0.5-2.5)
OVERWEIGHT (WHO 2006 GROWTH STANDARDS FOR CHILDREN BELOW 5 YEARS)														
<i>Total overweight</i>	17 / 524	3.2 (2.1 - 4.9)	21 / 559	3.8 (2.2 - 6.3)	8 / 173	4.6 (2.4 - 8.9)	3 / 290	1.0 (0.3 - 3.0)	8 / 353	2.3 (1.3 - 4.0)	11 / 283	3.9 (2.0 - 7.4)	11 / 549	2.0 (1.1 - 3.6)
<i>Severe Overweight</i>	0 / 524	0	0 / 559	0	0 / 173	0	0 / 290	0	0 / 353	0	0 / 283	0	0 / 549	0

	RHINO CAMP Refugee Settlement		IMVEPI Refugee Settlement		LOBULE Refugee Settlement		ADJUMANI Refugee Settlement		PALABEK Refugee Settlement		PALORINYA Refugee Settlement		BIDIBIDI Refugee Settlement	
	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total		Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)
PROGRAMME COVERAGE														
Measles vaccn. card /recall (9-59 mo)	590/624	94.5 (92.7-96.3)	640/660	96.9 (95.6-98.2)	216/221	97.7 (95.8-99.7)	368/395	93.1 (90.6-95.6)	474/497	95.5 (93.7-97.3)	344/351	97.8 (96.2-96.3)	617/636	96.9 (95.5-98.3)
Vit A suppl. in past 6 months card/recall	442/696	63.4 (58.9-67.9)	543/730	73.8 (70.1-77.5)	189/261	72.4 (66.0-78.8)	285/479	59.4 (53.7-65.1)	312/602	51.8 (46.3-57.4)	340/429	79.1 (74.8-83.5)	583/738	79.0 (75.7-82.3)
De-worming in past 6 months with card or recall (12-59 mo)	454/602	75.4 (71.5-79.4)	519/634	81.8 (78.5-85.1)	177/211	83.9 (78.5-89.3)	254/373	68.1 (62.3-73.8)	380/474	80.2 (76.2- 84.2)	297/334	89.1 (85.6-92.6)	517/615	84.2 (81.0-87.3)
TFP (WHZ, oedema and MUAC)	14.3		10.0		0.0		50.0		21.4		25.0		21.4	
TSFP enrolment. (based on WHZ and MUAC)	15.4		14.3		25.0		25.0		18.2		23.8		28.0	
DIARRHOEA														
Diarrhoea in last 2 weeks	109/696	15.6 (12.9-18.3)	77/736	10.5 (8.3-12.7)	42/261	16.1 (11.6-20.6)	36/479	7.6 (5.2-10.8)	132/602	22 (18.7-25.3)	37/429	8.6 (5.9-11.3)	100/738	13.5 (11.0-16.0)
ANAEMIA (CHILDREN AGED 6-59 MONTHS)														
Total Anaemia (Hb<11 g/dl)	321/566	56.7 (52.6-60.8)	287/609	47.2 (43.2-51.2)	160 /202	79.2 (73.6-84.8)	193/336	57.5 (52.2-62.8)	306/487	62.9 (58.6-67.2)	209/362	57.8 (52.7-62.9)	448/607	73.8 (70.3-77.3)
Severe Anemia (Hb<7 g/dL)	6 /566	1(0.2-1.8)	3/609	0.5 (-0.1-1.1)	6/202	3 (0.6-5.4)	2/336	0.6 (-0.2-1.4)	8/487	1.6 (0.5-2.7)	8/362	2.2 (0.7-3.7)	13/607	2.1 (1.1-3.2)
Children 0-23 Months														
IYCF INDICATORS														
Timely initiation of breastfeeding	134/184	72.6 (66.0-79.4)	162/210	77.3 (71.3-82.7)	46/71	64.8 (53.9-76.1)	90/119	75.3 (67.2-82.8)	101/153	66.1 (58.5-73.5)	82/120	68.7 (60.7-77.3)	142/204	69.5 (63.2-75.8)
Exclusive BF under 6 months	15/35	42.9 (26.5-59.3)	38/45	84.4 (73.8-95.0)	9//21	42.9 (21.7-64.1)	25/59	42.4 (29.8-55.0)	44/72	61.1 (49.8-72.4)	28/63	44.4 (32.1-56.7)	36/66	54.5 (42.5-66.5)
Predominant BF under 6 months	15/37	41.7 (26.1-57.9)	39/46	84.0 (73.4-94.6)	10//22	45.5 (25.2-66.8)	25/59	42.3 (29.4-54.6)	44/72	60.7 (49.7-72.3)	28/63	44.4 (31.7-56.3)	38/68	56.0 (44.2-67.8)
Continued BF At 1 Year	34/35	97.1 (91.3-103)	30/30	100 (100-100)	12//15	80.0 (59.8-100)	14//17	82.4 (63.2-100)	14/19	94.4 (83.0-105)	23/25	92.0 (81.4-103)	41/43	95.3 (88.5-102)
Continued BF At 2 Years	27/32	84.4 (71.3-96.7)	30/35	85.7 (74.5-97.5)	5//7	71.4 (37.4-105)	10//17	58.8 (35.6-82.4)	17/18	73.7 (54.3-93.7)	07//08	87.5 (65.5-111)	21/25	84.4 (69.6-98.4)

	RHINO CAMP Refugee Settlement		IMVEPI Refugee Settlement		LOBULE Refugee Settlement		ADJUMANI Refugee Settlement		PALABEK Refugee Settlement		PALORINYA Refugee Settlement		BIDIBIDI Refugee Settlement	
	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total		Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)
<i>Intro of Solid, Semi-Solid or Soft Foods (age 6-8 months)</i>	14/22	63.6 (43.9-84.1)	15/16	93.8 (82.4-106)	05//10	50.0 (19.0-81.0)	07//09	77.8 (50.9-105)	17/18	94.4 (83.0-105)	02//04	50.0(1.0-99.0)	12/210	63.2 (56.5-69.5)
<i>Consumption of iron-rich or iron-fortified foods</i>	50/176	28.3 (21.6-35.0)	60/198	30.3 (23.9-36.7)	22/65	33.8 (22.3-45.3)	35/111	31.8 (23.1-40.5)	28/143	19.5 (13.0-26.0)	7//92	7.5 (2.1-12.9)	61/173	35.3 (28.2-42.4)
<i>Bottle feeding</i>	18/307	5.9 (3.3-8.5)	25/261	9.7 (3.3-8.5)	8//89	9.0 (3.1-14.9)	8/208	4.0 (1.3-6.7)	1/253	0.2 (-0.4-0.8)	6/191	3.1 (0.6-5.6)	34/241	14.2 (9.8-18.6)
<i>Non-breastfed children < 6 months</i>	2// 26	8.4 (-2.3-19.1)	1// 37	3.8 (-2.4-10.0)	2// 13	15.4 (-4.2-35.0)	1// 30	2.7 (-3.1-8.5)	1// 45	2.2 (-2.1-6.5)	3//36	9.3 (-0.2-18.8)	4// 44	8.9 (0.5-17.3)
<i>Non-breastfed children<12 months</i>	4// 71	5.9 (0.4-11.4)	4// 84	4.8 (0.2-9.4)	2// 35	5.7 (-2.0-13.4)	2// 57	3.4 (-1.3-8.1)	2// 77	2.3 (-1.0-5.6)	4// 56	7.2 (0.4-14.0)	4// 85	4.6 (0.1-9.1)
WOMEN 15-49 years														
ANAEMIA (NON-PREGNANT)														
<i>Total Anaemia (Hb<12 g/dL)</i>	140/ 402	34.8 (30.1-39.5)	127/ 442	28.7 (24.5-32.9)	92/ 189	48.7 (41.6-55.8)	136/ 271	50.3 (44.3-56.3)	161/ 303	53.2 (47.6-58.8)	196/ 347	56.5 (51.3-61.7)	207/ 420	49.2 (44.4-54.0)
<i>Severe Anaemia (Hb<8 g/dL)</i>	2/402	0.6 (-0.2-1.4)	0/442	0.0 (0.0-0.0)	1/189	0.5 (-0.5-1.5)	2/271	0.6 (-0.3-1.5)	2/303	0.5 (-0.3-1.3)	12/347	3.5 (1.6-5.4)	5/420	1.1 (0.1-2.1)
<i>Prev. Malnutrition (MUAC) WRA (non-preg.)</i>	4 / 100	4.2 (0.3-8.1)	5 / 112	4.7 (0.8-8.6)	0 / 32	0 (0.0-0.0)	0 / 57	0 (0.0-0.0)	6 / 101	6.3 (1.6-11.0)	2 // 78	2.6 (-0.9-6.1)	5 / 132	3.9 (0.6-7.2)
PROGRAM COVERAGE PREGNANT WOMEN														
<i>Pregnant women currently enrolled in ANC</i>	52/65	80.5 (70.9-90.1)	55/66	85.7 (77.3-94.1)	19/23	82.6 (67.1-98.1)	19/24	78.8 (62.4-95.2)	31/40	77.8 (64.9-90.7)	39 /51	75.9 (64.2-87.6)	43 /52	82.4 (72.0-92.8)
<i>Pregnant women currently receiving Iron-folic acid pills</i>	45/65	70.2 (59.1-81.3)	46/66	70.5 (59.5-81.5)	20/23	87 (73.3-101)	19/24	78.8 (62.4-95.2)	31/40	77.8 (64.9-90.7)	33/51	65.7 (52.7-78.7)	38/52	73.7 (61.7-85.7)
FOOD SECURITY														
<i>Ave. # days Cash lasts out of 30 days</i>	79	17.6/30	11	20.7/30	100	18.1/30	82	14.9/30	0	0/30	5	3.2/30	7	7.2/30
<i>Ave. # days in-kind lasts out of 30 days</i>	208	18/30	297	18.5/30	11	8.9/30	95	17/30	280	16/30	253	13.7/30	291	18.7/30
NEGATIVE HOUSEHOLD COPING STRATEGIES														

% HHs using none of coping strategies over past month		30.9		40.5		32.5		32.2		36.5		53.3		52.4
	RHINO CAMP Refugee Settlement		IMVEPI Refugee Settlement		LOBULE Refugee Settlement		ADJUMANI Refugee Settlement		PALABEK Refugee Settlement		PALORINYA Refugee Settlement		BIDIBIDI Refugee Settlement	
	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total		Number /total	% (95% CI)	Number /total	% (95% CI)	Number /total	% (95% CI)
WASH														
Ave. l/p/d domestic water collected from protected sources at HH level	323	17.5	314	15.6	125	16	222	20	289	16.7	308	20	300	15.4
Daily water consump. ≥20 l/p/d	156/ 323	48.2 (42.8-53.6)	122/ 314	39 (33.6-44.4)	56/ 125	44.8 (36.1-53.5)	123/ 222	55.3 (48.8-61.8)	141/ 289	48.8 (43.0-54.6)	161/ 308	52.4 (46.8-58.0)	127/ 300	42.2 (36.6-47.8)
% HHs with at least 10 L/p potable/ drinking water storage capacity	313/ 323	96.9 (95.0-98.8)	313/ 314	99.6 (98.9-100)	123/ 125	98.4 (96.2-101)	222/ 222	100 (100-100)	272/ 289	94.2 (91.5-96.9)	303/ 308	98.4 (97.0-99.8)	299/ 300	99.7 (99.1-100)
% HHs collecting drinking water from protected sources	308/ 323	95.5 (93.2-97.8)	307/ 314	97.7 (96.0-99.4)	124/ 125	99.2 (97.6-101)	220/ 222	99 (97.7-100)	280/ 289	97 (95.0-99.0)	302/ 308	97.9 (96.3-99.5)	292/ 300	97.3 (95.5-99.1)
% HHs reporting defecating in a toilet/ latrine	313/ 323	96.9 (95.0-98.8)	306/ 314	97.6 (95.9-99.3)	118/ 125	94.4 (90.4-98.4)	211/ 222	95.2 (92.4-98.0)	240/ 289	83 (78.7-87.3)	303/ 308	98.3 (96.9-99.7)	294/ 300	98.1 (96.6-99.6)
% households with access to soap	217/ 323	67.2 (62.1-72.3)	246/ 314	78.4 (73.8-83.0)	82/ 125	65.6 (57.3-73.9)	136/ 222	61.2 (54.8-67.6)	174/ 289	60.3 (54.7-65.9)	147/ 308	47.6 (42.0-53.2)	218/ 300	72.5 (67.4-77.6)
MOSQUITO NET COVERAGE														
% of households owning at least one LLINT	177/309	57.4 (51.4-62.5)	303/303	98.9 (97.9-100)	123/126	99.2 (100-100)	201/221	91.0 (87.2-94.8)	178/274	64.8 (59.1-70.6)	162/262	61.9 (56.1-67.9)	250/303	82.6 (78.8-87.2)
Average number of persons per LLINT	527	2.6	1429	2.6	502	3	930	3	550	3	509	3	1010	3.1
MORTALITY														
Crude mortality rate (CMR)/1000/month	5/4119	0.10	5/3861	0.11	0/1634	0.0	2/2848	0.06	4/2437	0.14	2/2715	0.06	7/3922	0.15
Under five mortality (U5M)/1000/month	1/639	0.13	3/680	0.37	0/256	0.0	0/432	0.0	2/439	0.38	0/392	0.0	3/705	0.35

RESULTS

DEMOGRAPHY

FSNA Coverage (household composition by age)

The December 2020 Refugee FSNA reached a total of 42,530 individual household members in 7141 households in all the refugee settlements and Kampala: 51.8% female and 48.2% male. The FSNA coverage was an all-time high from 33,830 in the January 2020 FSNA. Household members aged 18-64 years constituted the largest group at 35.7%, followed by 5-11 years at 25.3%, 12-17 years 19.6%, children 0-4 years (0-59 months) at 17.4%, and the elderly above 65 years at 2.0%. For subgroups, adolescents (10-19 years) made up 31.1%, while women of reproductive age (WRA) (15-49 years) made up 21.9%.

Table 4: Age groups

<i>AGE GROUPS</i>						
	Male	%	Female	%	Total	%
<i><5 years</i>	3761	51.0	3619	49.0	7380	17.4
<i>5-11 years</i>	5425	50.5	5324	49.5	10749	25.3
<i>12-17 years</i>	4386	52.5	3968	47.5	8354	19.6
<i>18-64 years</i>	6573	43.3	8620	56.7	15193	35.7
<i>≥65 years</i>	353	41.3	501	58.7	854	2.0
<i>Total</i>	20498	48.2	22032	51.8	42530	100.0
<i>Subgroups</i>						
<i>WRA (15-49 years)</i>	n/a	n/a	9316	100.0	9316	21.9
<i>Adolescents (10-19 years)</i>	6899	52.2	6317	47.8	13216	31.1

Household composition

Of the 7141 households visited during the data collection, 98.5% consented to providing response, and 75.3% were household heads and 24.7% other household members. By gender, 60.9% of the household heads were female, and 39.1% male. South West except for Kyangwali had more male headed households, while more than 50% of all households in West Nile were female headed with Kiryandongo and Adjumani at 84% and 83.7% respectively.

The reason for a high incidence of female heads households in West Nile is related to the fact that most of the persons of concern in West Nile that crossed the border during the high influx in 2016 to 2017 were mostly women and children. Other reasons for the substantial difference include increased and frequent movement of male adults outside settlements to urban areas and back to South Sudan.

Majority (43.45%) of households constituted of 6 -10 persons, 41.3% 2-5 persons, 8.2% >10 persons, and 5.3% single headed households. The average household size across all locations was 6 individuals per household. Kiryandongo had the highest average household size at 7.5 persons per household while Kampala had the lowest at 4.6 household members.

Table 5: Household Demographics

Head of Household															
	Adjumani	Bidibidi	Imvepi	Lobule	Kampala	Kiryandongo	Kyaka II	Kyangwali	Nakivale	Oruchinga	Palabek	Palorinya	Rhino Camp	Rwamwanja	Total
<i>Households</i>	453	580	587	257	335	594	539	466	607	416	601	547	630	529	7141
<i>Consent given</i>	99.8	99.4	100.0	100.0	98.1	98.0	97.0	96.7	98.9	97.6	100.0	95.3	100.0	98.5	98.5
<i>Respond Head</i>	80.4	84.3	81.6	86.8	82.3	68.8	67.7	73.3	66.6	66.7	78.2	80.8	81.2	61.5	75.3
<i>Female</i>	83.7	73.5	66.4	72.0	58.3	84.0	39.8	53.0	38.5	38.2	70.8	72.9	70.7	31.5	60.9
<i>Male</i>	16.3	26.5	33.6	28.0	41.7	16.0	60.2	47.0	61.5	61.8	29.2	27.1	29.3	68.5	39.1
Household Size															
<i>Households</i>	451	576	587	257	329	581	523	450	599	406	601	521	630	521	7031
<i>1 HH</i>	2.1	1.9	2.2	5.8	12.5	1.9	10.1	4.6	8.4	11.8	4.1	4.4	3.1	6.6	5.3
<i>2-5 HH</i>	41.3	32.9	33.4	41.6	54.3	26.9	53.6	62.8	47.0	48.8	48.9	44.8	36.6	41.6	43.1
<i>6-10 HH</i>	42.1	52.2	52.2	37.7	30.1	56.1	32.9	31.4	40.7	37.7	43.6	45.5	43.8	47.4	43.4
<i>≥11 HH</i>	14.4	12.9	12.2	14.8	3.2	15.1	3.4	1.2	3.9	1.7	3.5	5.3	16.4	4.4	8.2
<i>Average size</i>	6.7	7.1	7.0	6.4	4.6	7.5	4.9	4.8	5.3	4.8	5.5	5.8	7.0	5.7	6.0
Household Age Categories															
<i>Households</i>	451	576	587	257	329	581	523	450	599	406	601	521	630	521	7031
<i><5 years</i>	15.5	18.0	17.7	15.8	14.4	16.2	21.4	20.4	18.6	18.9	17.7	14.5	15.4	21.1	17.5
<i>5-11 years</i>	27.9	27.3	24.9	27.0	20.2	26.6	24.5	25.9	22.9	24.1	25.6	24.2	25.1	26.2	25.4
<i>12-17 years</i>	19.6	19.2	20.3	22.3	18.3	23.8	16.0	15.1	16.7	17.2	21.3	18.8	22.9	15.2	19.4
<i>18-64 years</i>	34.3	33.3	35.2	32.3	46.2	31.8	37.0	36.4	40.1	37.9	33.0	39.4	34.7	36.2	35.8
<i>≥65</i>	2.7	2.1	2.0	2.6	0.9	1.6	1.3	2.2	1.7	2.0	2.4	3.1	1.9	1.2	2.0
Subgroups															
<i>Adolescents (10-19)</i>	32.5	30.8	31.9	28	37.3	25.5	23.7	35.8	28.3	26.9	32.6	31.1	34.8	25.6	30.9
<i>WRA (15-49)</i>	23.6	21.8	22.3	28.8	20.5	21.6	19.9	20.9	21.5	21.5	21.3	24.6	22.3	20.5	22.1

Source: Refugee FSNA, December 2020

Arrival time in Uganda

Only 59.1% of refugee households interviewed arrived in Uganda at the same time with a substantial majority in West Nile. Conversely, other refugee households arrived in Uganda in piecemeal or phases. The higher proportion in West Nile could be attributed to the high influx of refugees experienced in West Nile in between 2016 and 2018 while arrivals in the Southwest are spread over a longer period. Majority of refugees (61.6%) arrived in Uganda more than 3 years ago, while 21.9% and 8.7% arrived in Uganda between 2-3 years and 1-2 years respectively. Only 5.1% had arrived between January 2020 and December 2020, a low influx attributed to the closure of borders due to COVID-19 restrictions.

Table 6: Refugee Arrival Time

Location	N	Arrive at same time	>3 years	2-3 years	1-2 years	<1 year	Don't know	Other
<i>All</i>	6838	59.1	61.6	21.9	8.7	5.1	0.5	2.2
<i>Adjumani</i>	449	91.8	84.2	13.1	1.3	0.7	0.2	0.4
<i>Bidibidi</i>	568	69.3	88.3	4.2	0.1	0.6	0.9	5.8
<i>Imvepi</i>	586	69.7	45.8	38.6	6.3	8.5	0.3	0.6
<i>Kampala</i>	329	51.1	52.4	23.5	16.6	5.1	0.0	2.5
<i>Kiryandongo</i>	541	50.4	82.7	4.4	1.9	4.1	1.6	5.3
<i>Kyaka II</i>	508	36.8	25.3	41.1	27.4	5.6	0.0	0.7
<i>Kyangwali</i>	446	37.2	39.5	36.9	15.7	4.5	1.4	2.0
<i>Lobule</i>	255	68.6	82.2	1.3	0.0	2.6	0.7	13.2
<i>Nakivale</i>	567	54.0	62.6	11.2	9.8	14.7	1.3	0.5
<i>Oruchinga</i>	398	22.6	82.2	5.6	5.6	5.6	1.1	0.0
<i>Palabek</i>	601	86.2	32.8	45.9	16.0	5.3	0.0	0.0
<i>Palorinya</i>	515	71.0	71.4	23.1	0.9	3.5	0.3	0.8
<i>Rhino Camp</i>	588	67.2	45.4	25.4	21.4	6.4	0.0	1.4
<i>Rwamwanja</i>	488	37.9	84.8	3.9	1.8	3.4	1.1	5.0

Source: Refugee FSNA, December 2020

Relationship to household head

The study found that intra-household, 53.5% of the individuals were children (sons:27.6%, daughters: 25.9%), 15.4% household heads, spouses (7.1%), and others (16%).

Table 7: Relationship to Household Head

Location	N	HH Head	Spouse	Son	Daughter	Mother	Father	Brother	Sister	Other
<i>All</i>	42546	15.4	7.1	27.6	25.9	2.4	1.0	2.4	2.1	16.0
<i>Adjumani</i>	3090	14.4	3.6	26.9	25.0	1.8	0.7	2.2	2.3	23.2
<i>Bidibidi</i>	4118	12.3	4.9	26.6	25.4	3.5	2.1	3.4	3.1	18.6
<i>Imvepi</i>	4119	13.0	7.0	24.4	23.1	1.5	0.5	3.1	3.1	24.3
<i>Kampala</i>	1560	18.8	6.8	27.0	26.8	0.6	0.2	3.4	3.1	13.4
<i>Kiryandongo</i>	4315	13.0	2.5	25.8	21.6	5.1	1.1	3.6	3.8	23.4
<i>Kyaka II</i>	2576	20.3	11.2	30.7	30.0	0.3	0.1	0.9	0.8	5.6
<i>Kyangwali</i>	2177	20.7	9.9	23.3	27.9	3.0	2.3	0.8	0.7	11.4
<i>Lobule</i>	1641	14.4	4.0	27.8	27.8	2.3	1.2	1.0	0.9	20.5
<i>Nakivale</i>	3188	17.4	11.0	31.5	28.4	1.1	0.6	1.2	0.7	8.1
<i>Oruchinga</i>	1965	20.4	11.8	30.2	29.3	0.3	0.2	0.9	0.3	6.7
<i>Palabek</i>	3365	15.0	5.9	27.2	24.5	5.8	2.3	3.5	3.2	12.6
<i>Palorinya</i>	3039	15.8	6.6	29.9	26.8	2.1	1.4	1.7	1.8	13.8
<i>Rhino Camp</i>	4417	12.0	7.2	25.4	23.4	2.7	0.9	2.9	2.3	23.1
<i>Rwamwanja</i>	2976	17.5	11.9	33.1	30.2	0.4	0.1	1.4	0.7	4.8

Source: Refugee FSNA, December 2020

Education attainment of household heads

About 40.6% of household heads did not have any formal education. Of the household heads with a formal education, majority only had primary school education and no education at 41.6% and 40.6% respectively. Only 13.3% and 3.4% had secondary and tertiary education. Kampala had the largest proportion of households with higher education levels while Kyangwali had the highest proportion (64.3%) of household heads with no formal education.

Table 8: Highest Education Level of Household Heads

Location	N	None	Primary	Lower Secondary	Upper Secondary	Tertiary	Don't Know
<i>All</i>	6524	40.6	41.6	11.0	3.3	3.4	0.1
<i>Adjumani</i>	444	43.4	40.6	10.5	4.0	1.5	0.0
<i>Bidibidi</i>	509	22.2	57.7	16.2	1.0	2.4	0.6
<i>Imvepi</i>	532	28.2	56.0	14.2	0.4	1.1	0.0
<i>Kampala</i>	293	42.5	13.7	18.0	9.7	16.1	0.0
<i>Kiryandongo</i>	556	47.3	35.2	14.1	1.0	2.4	0.0
<i>Kyaka II</i>	524	44.8	39.4	6.1	2.9	6.8	0.0
<i>Kyangwali</i>	448	64.3	30.5	3.1	1.5	0.6	0.0
<i>Lobule</i>	237	40.5	48.9	8.4	2.1	0.0	0.0
<i>Nakivale</i>	555	48.4	34.4	9.8	3.7	3.8	0.0
<i>Oruchinga</i>	401	32.9	51.9	7.0	3.7	4.5	0.0
<i>Palabek</i>	504	36.5	48.7	8.0	4.4	2.3	0.0
<i>Palorinya</i>	479	39.7	41.9	13.2	3.4	1.5	0.2
<i>Rhino Camp</i>	524	37.2	42.3	15.5	2.9	2.1	0.0
<i>Rwamwanja</i>	517	42.0	34.7	9.6	8.2	5.5	0.0

Involvement in agriculture and livelihoods

About 40.5% and 17.9% of households were involved in agriculture and other economic activities respectively. More households in settlements were involved in food production with only 1.9% in Kampala involved in Agriculture. South West locations and Kampala dominated the involvement in livelihoods outside agricultural activities. Involvement in agriculture and livelihoods was higher among household heads, a possible indicator that household essential needs largely depend on household heads.

Table 9: Involvement of Households in Agriculture and Economic Activities

Location	All Households Members			Household Heads		
	N	Agric Activity	Economic activity	N	Agric Activity	Economic activity
<i>All</i>	31871	40.5	17.9	6517	60.2	41.4
<i>Adjumani</i>	2374	23.4	11.4	444	38.6	33.9
<i>Bidibidi</i>	2989	48.7	13.6	508	74.0	31.7
<i>Imvepi</i>	3068	27.6	9.9	532	47.1	25.0
<i>Kampala</i>	1241	1.9	25.3	293	3.1	52.5
<i>Kiryandongo</i>	3295	59.9	17.2	554	81.4	38.9
<i>Kyaka II</i>	1823	44.9	27.2	524	64.1	57.6
<i>Kyangwali</i>	1534	52.5	14.4	448	68.3	30.4
<i>Lobule</i>	1248	55.5	10.5	235	82.1	28.9
<i>Nakivale</i>	2411	34.2	25.1	555	50.6	53.1
<i>Oruchinga</i>	1449	55.8	31.8	401	77.1	60.6
<i>Palabek</i>	2506	37.3	13.6	504	57.5	38.2
<i>Palorinya</i>	2375	41.8	19.9	478	60.6	41.6
<i>Rhino Camp</i>	3416	33.6	17.0	523	53.3	30.4
<i>Rwamwanja</i>	2141	48.2	24.7	517	73.4	56.0

Source: Refugee FSNA, December 2020

The study found significant positive correlations between the involvement in economic activities and education level ($p < 0.05$), and the involvement in economic activities and age ($P < 0.01$). The positive correlation between livelihoods and education level meant that households with higher education attainment were more likely to be involved in economic activities. It also meant that households were more likely to be involved in economic activities with old age. The study found a significant negative correlation between involvement in agriculture and education attainment and a significant positive correlation between involvement in Agriculture and age. Households at higher education levels were less likely to be involved in agriculture, while older households were more likely to be involved in agriculture.

Mortality

The Crude Mortality Rate (CMR)⁵ across all locations was 0.08 deaths/1000/month, and the Under Five Mortality Rate (U5MR) was 0.26 deaths/1000/month. The mortality rate was highest in Kyaka II with CMR of 0.26 deaths per 1000 per month and U5MR of 0.7 deaths per 1000 U5 children per month.

Table 10: Crude Mortality Rate and Under Five Mortality Rate

Location	N (all)	Total Deaths	CMR (1000/month)	N (U5)	U5 Deaths	U5MR (1000/month)
<i>All</i>	36,303	40	0.08	6,200	19	0.26
<i>Adjumani</i>	2,848	2	0.06	432	0	0.00
<i>Bidibidi</i>	3,922	7	0.15	705	3	0.35
<i>Imvepi</i>	3,861	5	0.11	680	3	0.37
<i>Lobule</i>	1,634	0	0.00	256	0	0.00
<i>Kampala</i>	1,586	0	0.00	229	0	0.00
<i>Kiryandongo</i>	3,736	0	0.00	605	0	0.00
<i>Kyaka II</i>	2,249	7	0.26	474	4	0.70
<i>Kyangwali</i>	2,064	2	0.08	421	1	0.20
<i>Nakivale</i>	3,137	2	0.05	579	1	0.14
<i>Oruchinga</i>	1,963	1	0.04	371	1	0.22
<i>Palabek</i>	2,437	4	0.14	439	2	0.38
<i>Palorinya</i>	2,715	2	0.06	392	0	0.00
<i>Rwamwanja</i>	2,880	3	0.09	617	3	0.40
<i>Rhino Camp</i>	4,119	5	0.10	639	1	0.13

Source: Refugee FSNA, December 2020

Of the 68 deaths reported in the 365-day recall period preceding the nutrition survey, only 40 were validated to have happened in Uganda and within the recall period. The invalidated deaths included those that happened in South Sudan and DRC, and those that happened before 2020. Of the 40 deaths, 75% were due to illnesses, 10% due to trauma/injury, 10% due to other causes, and 5% due to unknown causes. The other causes of death reported included still births and premature births. The study found that 65% of deaths happened at health facilities, 27.5% at home, and 7.5% in other locations. Other locations included a pond (drowning), and the bush. Locations with the highest proportion of deaths that happened at home included Bidibidi (57.1%), Palabek (50%) and Palorinya (50%). Because the Uganda Refugee Response is not in an emergency phase, we adopted not to use calculate mortalities per day.

⁵ Measuring Mortality, Nutritional Status and Food Security in Crisis Situations: The Smart Protocol, UNHCR, Jan 2005

Table 11: Cause of death and location of death

		CAUSE OF DEATH				LOCATION OF DEATH		
<i>Location</i>	<i>N</i>	<i>Illness</i>	<i>Trauma/ Injury</i>	<i>Other</i>	<i>Unknown</i>	<i>Health Facility</i>	<i>Home</i>	<i>Other</i>
<i>All</i>	40	75.0	10.0	10.0	5.0	65.0	27.5	7.5
<i>Adjumani</i>	2	100.0	0.0	0.0	0.0	100.0	0.0	0.0
<i>Bidibidi</i>	7	57.1	28.6	14.3	0.0	42.9	57.1	0.0
<i>Imvepi</i>	5	40.0	20.0	20.0	20.0	60.0	20.0	20.0
<i>Kyaka II</i>	7	57.1	14.3	14.3	14.3	42.9	28.6	28.6
<i>Kyangwali</i>	2	100.0	0.0	0.0	0.0	100.0	0.0	0.0
<i>Nakivale</i>	2	100.0	0.0	0.0	0.0	100.0	0.0	0.0
<i>Oruchinga</i>	1	100.0	0.0	0.0	0.0	100.0	0.0	0.0
<i>Palabek</i>	4	75.0	0.0	25.0	0.0	50.0	50.0	0.0
<i>Palorinya</i>	2	100.0	0.0	0.0	0.0	50.0	50.0	0.0
<i>Rhino Camp</i>	5	100.0	0.0	0.0	0.0	100.0	0.0	0.0
<i>Rwamwanja</i>	3	100.0	0.0	0.0	0.0	66.7	33.3	0.0

Source: Refugee FSNA, December 2020

CHILD HEALTH AND NUTRITION

Table 12: Distribution of age and sex of sample

	Boys		Girls		Total		Ratio
AGE (mo)	no.	%	no.	%	no.	%	Boy:girl
6-17	591	48.1	637	51.9	1228	22.2	0.9
18-29	692	50.4	682	49.6	1374	24.8	1.0
30-41	609	49.1	632	50.9	1241	22.4	1.0
42-53	614	50.1	611	49.9	1225	22.1	1.0
54-59	222	46.6	254	53.4	476	8.6	0.9
Total	2728	49.2	2816	50.8	5544	100.0	1.0

Global Acute Malnutrition

Acute malnutrition by Weight for Height Z-Scores (WHZ)

Global Acute Malnutrition (GAM) is Low Weight for Height (WFH) based on the 2006 WHO child growth standards for children below 5 years. GAM by weight for height z-scores (WHZ) reduced from 9.5% in Oct 2017 to 5.1% in Dec 2020. Regional variations between South-West and West Nile are significant. South-West had a weighted GAM of 1.8% while West Nile estimated at 6.9%. West Nile made the most significant GAM reduction (improvement) except Kiryandongo which increased from 7.5% in Oct 2017 to 8.7% in Dec 2020. Palabek made the most significant drop from 12.3% (Oct 2017) to 8.7% (Dec 2020). Adjumani, Bidibidi, Lobule, Kampala, Palabek, Palorinya, and Rhino Camp crossed from High⁶ to Medium⁶, and from Medium⁶ to Low⁶. South West maintained Low⁶ GAM. The SAM prevalence in Kiryandongo was the highest at 2.1% (>2%), a major public health major concern.

Five out of 14 locations had Medium⁶ GAM levels, while 9 of the 14 locations had Low⁶ GAM levels. Improvement in GAM can be attributable to; strengthened health systems to effect early detection, treatment and follow-up, skilled health workers, strengthened community engagement, stable nutrition commodity pipeline, and routine nutrition surveillance and health information systems.

Table 13: Prevalence of acute malnutrition based on weight-for-height z-scores (and/or oedema)

Location	GAM prevalence (WHZ <-2 with oedema)				In need of treatment 2021 (Burden) ⁷		
	N	GAM <-2 WHZ, oedema	MAM <-2 >=-3 WHZ, no oedema	SAM <-3 WHZ, oedema	Total Burden	MAM	SAM
All	5415	5.1	3.9	1.1	24,565	18,891	5,674
Adjumani	290	8.3	6.9	1.4	5,474	4,551	923
Bidibidi	549	6.7	5.3	1.5	4,674	3,698	977
Imvepi	559	4.3	3.4	0.9	1,111	878	233
Lobule	173	3.5	3.5	0.0	79	79	-
Kampala	191	3.7	2.6	1.0	681	478	202
Kiryandongo	425	8.7	6.6	2.1	2,627	1,993	634
Kyaka II	434	1.2	0.9	0.2	584	438	146
Kyangwali	374	1.1	0.8	0.3	691	502	188
Nakivale	495	2.2	1.0	1.2	1,258	572	686
Oruchinga	284	2.1	1.8	0.4	76	65	11
Palabek	353	8.2	5.9	2.3	1,676	1,206	470
Palorinya	283	5.3	4.9	0.4	2,017	1,865	152
Rhino Camp	524	6.9	5.7	1.1	2,704	2,234	470
Rwamwanja	499	2.2	0.8	1.4	913	332	581

⁶WHO-UNICEF (2018) Classification of Public Health Significance for U5 Children: Global Acute Malnutrition <2.5% (very low), 2.5 - <5% (Low), 5 - <10% (Medium), 10 - <14% (High), ≥15% (Very High).

⁷ Burden = NPK. N = number children U5, P = prevalence of acute malnutrition, and K = incident correction factor of 2.6

By age categories, the highest burden of moderate acute malnutrition was aged between 6 and 17 months, and the highest burden of severe acute malnutrition (oedema) was in children aged between 30 and 41 months, closely followed by those aged 18-29 months. No case of uncomplicated severe acute malnutrition (non-oedematous) was identified via WHZ.

Table 14: Prevalence of acute malnutrition by age, based on weight-for-height z-scores and/or oedema

Age (mo)	Total no.	Severe wasting (<-3 z-score)		Moderate wasting (>= -3 and <-2 z-score)		Normal (>= -2 z score)		Oedema	
		No.	%	No.	%	No.	%	No.	%
6-17	1192	0	0	60	5	1128	94.6	4	0.3
18-29	1339	0	0	41	3.1	1288	96.2	10	0.7
30-41	1213	0	0	39	3.2	1161	95.7	13	1.1
42-53	1207	0	0	42	3.5	1161	96.2	4	0.3
54-59	464	0	0	17	3.7	441	95	6	1.3
Total	5415	0	0	199	3.7	5179	95.6	37	0.7

Source: Refugee FSNA, December 2020

Acute malnutrition by middle-upper arm circumference (MUAC)

Acute malnutrition by MUAC was relatively lower compared to acute malnutrition by WHZ for the same locations except for Rwamwanja (4.1%), Kyaka II (3.4%), Kyangwali (3.9%), Nakivale (2.8%), and Lobule (4%) – all locations with majority DRC refugees with GAM by MUAC was higher than GAM by WHZ. Only Adjumani (5.2%) exceeded GAM by MUAC of 5% ($\geq 5\%$).

Table 15: Prevalence of acute malnutrition based on MUAC cut off's (and/or oedema)

Location	GAM Prevalence (%), MUAC<125mm & or oedema				In need of treatment 2021 (Burden) ⁸		
	N	GAM <125mm and/or oedema	MAM <125>=115 mm, no oedema	SAM <115mm & or oedema	Total Burden	MAM	SAM
All	5543	3.29	2.15	1.14	17,641	11,340	6,301
Adjumani	290	5.2	4.1	1.0	3,429	2,704	725
Bidibidi	553	1.8	0.9	0.9	1,256	628	628
Imvepi	571	1.8	1.1	0.7	465	284	181
Lobule	177	4.0	2.8	1.1	91	63	27
Kampala	194	2.1	0.5	1.5	386	92	294
Kiryandongo	429	4.9	3.5	1.4	1,479	1,057	423
Kyaka II	445	3.4	2.2	1.1	1,655	1,071	584
Kyangwali	384	3.9	3.1	0.8	2,449	1,947	502
Nakivale	509	2.8	1.4	1.4	1,602	801	801
Oruchinga	297	2.0	1.0	1.0	73	36	36
Palabek	359	3.6	0.8	2.8	736	163	572
Palorinya	284	2.8	2.1	0.7	1,066	799	266
Rhino Camp	530	3.2	2.1	1.1	1,254	823	431
Rwamwanja	518	4.1	2.1	1.9	1,701	871	830

Source: Refugee FSNA, December 2020

By age categories, the biggest burden of malnutrition by MUAC is prevalent among children aged 6 to 17 months, followed by 18-29 months for moderate malnutrition and uncomplicated severe

⁸ Burden = NPK. N = number children U5, P = prevalence of acute malnutrition, and K = incident correction factor of 2.6

malnutrition. Only a few cases above 29 months were identified. All cases of uncomplicated severe malnutrition cases were identified via MUAC.

Table 16: Prevalence of acute malnutrition by age, based on MUAC cut off's and/or oedema

		Severe wasting		Moderate wasting		Normal		Oedema	
		(< 115 mm)		(>= 115 mm and < 125 mm)		(> = 125 mm)			
Age (mo)	Total no.	No.	%	No.	%	No.	%	No.	%
6-17	1227	20	1.6	71	5.8	1133	92.3	4	0.3
18-29	1374	7	0.5	22	1.6	1335	97.2	10	0.7
30-41	1241	3	0.2	7	0.6	1218	98.1	13	1
42-53	1225	2	0.2	4	0.3	1215	99.2	4	0.3
54-59	476	0	0	3	0.6	467	98.1	6	1.3
Total	5543	32	0.6	107	1.9	5368	96.8	37	0.7

Source: Refugee FSNA, December 2020

Selective Feeding Programmes

Coverage of the enrollment into selective feeding programmes enrolment was far below the sphere standards for rural settings ($\geq 50\%$) in all locations. There is no TSFP services in Kampala. The study found that many children enrolled into selective feeding programmes did not have acute malnutrition at the time of the data collection. This can be explained by the fact that the treatment protocol for acute malnutrition (IMAM) provides for a two monitoring visits after the client is cured before they are discharged. This helps to avert any relapses for successful treatment outcomes.

Table 17: Coverage of selective feeding programs

Location	Coverage (%)			Children U5 enrolled	
	TFP (OTC & ITC)	TSFP (incl. at-risk cut-offs)	TSFP (standard cut-offs)	TFP	TSFP
Adjumani	50.0	20.6	25.0	2	17
Bidibidi	21.4	15.0	28.0	17	52
Imvepi	10.0	9.4	14.3	1	5
Kampala	0.0	0.0	0.0	0	0
Kiryandongo	8.3	8.5	4.9	2	13
Kyaka II	11.1	4.8	0.0	2	1
Kyangwali	33.3	19.2	25.0	5	9
Lobule	0.0	18.2	25.0	3	18
Nakivale	9.1	5.0	8.3	3	5
Oruchinga	10.0	10.0	11.1	1	0
Palabek	21.4	18.2	18.2	14	13
Palorinya	25.0	20.7	23.8	3	25
Rhino Camp	14.3	13.6	15.4	5	2
Rwamwanja	7.7	16.7	23.8	2	15

Source: Refugee FSNA, December 2020

Stunting

Stunting is Low Height for Age (HFA) based on the 2006 WHO child growth standards for children below 5 years. Stunting also termed as chronic malnutrition significantly varied across the regions.

Stunting was “Very High⁹” in South West settlements and Medium to Low in West Nile locations. Kyaka II (48.7%), Rwamwanja (45.2%), Kyangwali (38.1%), and Nakivale (31.8%) had the highest stunting prevalence of any location. The stunting prevalence threshold in Palorinya and Oruchinga was “High”. The rest of the settlements had “Medium” and “Low” stunting rates, as seen in Kiryandongo and Kampala. Between 2017 and 2020, Kampala is the only location where stunting reduced significantly from “Medium” to “Low” prevalence thresholds. The current stunting trends in West Nile, South West and Kampala can be attributed to (1) Generational food insecurity among South West settlements prior to the 2018 blanket 100% food rations. Majority of stunted children are between 2 and 5 years when food assistance was based on length of stay in Uganda. Families that had stayed longer mostly relied on own food production (monotonous diets) for their dietary needs. (2) refugee situation analysis indicates that stunting is more prevalent among the Congolese refugees than South Sudanese refugees. The tall stature of South Sudanese is likely to suppress the effect of stunting even if stunting was present. (3) sub-optimal delivery of stunting interventions. It should be noted that improved delivery of stunting interventions will not immediately remedy the situation since effects of stunting are irreversible beyond 2 years. We are likely to continue to see stunting in areas with high prevalence until it tapers off and reduces with a newer population of less stunted children 6-59 months.

Table 18: Prevalence of stunting

Location	STUNTING 2020 (HFA)			
	N	Total Stunting (%) (<-2 z-score)	Moderate Stunting (%) ($<-2 \geq -3$ z-score)	Severe Stunting (%) (<-3 z-score)
Adjumani	287	11.5	9.1	2.4
Bidibidi	536	12.1	10.6	1.5
Imvepi	531	18.3	14.9	3.4
Kampala	171	9.4	7.6	1.8
Lobule	172	19.2	13.4	5.8
Kiryandongo	424	7.5	6.4	1.2
Kyaka II	411	48.7	28.5	20.2
Kyangwali	362	38.1	21.8	16.3
Nakivale	491	31.8	21	10.8
Oruchinga	271	28.4	20.3	8.1
Palabek	347	24.2	16.4	7.8
Palorinya	284	12.0	9.9	2.1
Rhino Camp	518	12.7	10.6	2.1
Rwamwanja	489	45.2	24.5	20.7

Source: Refugee FSNA, December 2020

Underweight

Underweight represents Low Weight for Age (WFA) based on the 2006 WHO child growth standards for children below 5 years. Stunting is a composite indicator for both acute and chronic malnutrition. Leading to 2020, only Palabek had Medium¹⁰ underweight but in 2020, four of the 14 settlements had Medium Underweight among children below 5 years - an increment. GAM and stunting contributed to

⁹WHO-UNICEF (2018) Classification of Public Health Significance for U5 Children: Stunting $<2.5\%$ (very low), $2.5 - <10\%$ (Low), $10 - <20\%$ (Medium), $20 - <30\%$ (High), $\geq 30\%$ (Very High)

¹⁰WHO-UNICEF (2018) Classification of Public Health Significance for U5 Children: Underweight $<10\%$ (Low), $10 - <20\%$ (Medium), $20 - <30\%$ (High), $\geq 30\%$ (Very High)

the underweight in the respective locations. It can be observed that the four locations i.e., Kyaka II, Lobule, Palabek, and Rwamwanja had higher thresholds in either GAM or Stunting or both. All other locations have Low Underweight.

Overweight

Overweight is weight higher than what is considered as a healthy weight for a given height (WFH). If unchecked, overweight is a precursor to obesity in the different grades. Overweight in children is measured by the weight for height z-scores (WHZ) based on the 2006 WHO child growth standards. The data shows an increasing rate of overweight in locations with lower GAM. Locations with Low to very Low GAM rates had Medium¹¹ to High⁹ Overweight e.g., Kyaka II and Kampala with GAM rates of 1.2% and 3.7% had respective Overweight rates of 10.1% and 6.8%. Kyaka II has Medium Underweight, High Overweight, and Very High Stunting, which demonstrates a case for nutritional transition in the Uganda refugee response. All locations in West Nile had Low⁹ and Very Low⁹ Overweight.

Table 19: Prevalence of Underweight and Overweight

LOCATION	2020 UNDERWEIGHT (WFA) (%)				2020 OVERWEIGHT (WHZ) (%)		
	N	Total Underweight (<-2 Z-score)	Moderate Underweight (<-2 ≥-3 z-score)	Severe Underweight (<-3 z-score)	N	Overweight (>2 Z-score)	Severe Overweight (>3 Z-score)
<i>Adjumani</i>	289	5.9	5.2	0.7	290	1.0	0.0
<i>Bidibidi</i>	546	7.5	7.3	0.2	549	2.0	0.0
<i>Imvepi</i>	557	7.0	6.1	0.9	559	3.8	0.0
<i>Lobule</i>	177	11.9	10.2	1.7	173	4.6	0.0
<i>Kampala</i>	183	4.9	4.9	0.0	191	6.8	0.0
<i>Kiryandongo</i>	425	4.2	3.8	0.5	427	3.0	0.0
<i>Kyaka II</i>	430	10.7	8.8	1.9	434	10.1	0.9
<i>Kyangwali</i>	375	7.2	5.6	1.6	374	5.6	0.5
<i>Nakivale</i>	499	4.4	3.6	0.8	495	6.1	0.6
<i>Oruchinga</i>	291	6.9	6.2	0.7	284	4.2	0.0
<i>Palabek</i>	351	11.4	8.5	2.8	353	2.3	0.0
<i>Palorinya</i>	284	6.7	5.3	1.4	283	3.9	0.0
<i>Rhino Camp</i>	525	3.8	3.6	0.2	524	3.2	0.0
<i>Rwamwanja</i>	504	12.3	10.5	1.8	499	6.6	0.6

Source: Refugee FSNA, December 2020

Anemia

The December 2020 nutrition survey found a sustained upward trend of Anemia in children 6-59 months from 50.7% in 2014 and 45.0% in 2017 to 55.4% in Dec 2020 - the highest anemia prevalence recorded since 2014. West Nile (61.9%) had the highest anemia while South West had 47.5%.

In 2020, anemia easily became the leading public health nutrition concern that should be mitigated with utmost priority. West Nile refugee settlements had a weighted anemia prevalence of 61.9% increased from 56.9% in Jan 2020. While Lobule had the highest prevalence at 79.2%, Bidibidi faces the biggest burden of anemia at 73.8% among children proportional to the refugee population. With approximately

¹¹ WHO-UNICEF (2018) Classification of Public Health Significance for U5 Children: Overweight <2.5 (Very Low), 2.5- <5% (Low), 5- <10% (Medium), 10 - <15%, ≥15% (Very high)

16% of the 233,959¹² between 0 and 4 years, Bidibidi has the highest anemia burden of any refugee location in Uganda. Adjumani (57.5%) and Palabek (62.9%) were closely behind. In South West settlements, the weighted prevalence is 47.48% significantly lower than that in West Nile while but still High¹³. Of the 5 locations in South West, Nakivale (37.6%) and Oruchinga (32.6%) had Medium Anemia while Kyangwali (59%), Kyaka II (47.5%) and Rwamwanja (46.1%) had the highest prevalence. Trend analysis indicates that Nakivale and Oruchinga have maintained Medium anemia levels for the most part of the last 5 years. At 24.9%, Kampala had the most significant reduction from 36.6% in October 2017. Of all the anemic children, 56.2% of them were aged 24-59 months while 32.5% of them were aged 6 to 23 months and accounted for 30.5% and 17.3% respectively among all children screened for anemia.

Table 20: Prevalence (%) of Anaemia Among Children 6-59 months

<i>PREVALENCE (%) OF ANAEMIA AMONG CHILDREN 6-59 MONTHS</i>						
Location	N	Severe Anaemia (Hb <7 g/dL)	Moderate Anaemia (Hb 7-9 g/dL)	Mild Anaemia (Hb 9-11g/dL)	Total Anaemia (Hb <11 g/dL)	No Anaemia (Hb ≥11 g/dL)
<i>Overall</i>	6212	1.6	27.8	23.6	55.4	44.6
<i>Adjumani</i>	336	0.6	28.1	28.8	57.5	42.5
<i>Bidibidi</i>	607	2.1	48.3	23.4	73.8	26.2
<i>Imvepi</i>	609	0.5	19.5	27.2	47.2	52.7
<i>Kampala</i>	204	5.2	7.5	12.2	24.9	75.1
<i>Kiryandongo</i>	514	2.0	30.3	20.1	52.4	47.6
<i>Kyaka II</i>	489	2.2	21.2	24.1	47.5	52.4
<i>Kyangwali</i>	412	2.1	26.0	30.9	59.0	41.0
<i>Lobule</i>	202	3.0	49.0	27.2	79.2	20.8
<i>Nakivale</i>	530	1.2	18.1	18.3	37.6	62.4
<i>Oruchinga</i>	331	0.3	15.1	17.2	32.6	67.4
<i>Palabek</i>	487	1.6	40.6	20.7	62.9	37.2
<i>Palorinya</i>	362	2.2	30.7	24.9	57.8	42.2
<i>Rhino Camp</i>	566	1.0	26.0	29.7	56.7	43.2
<i>Rwamwanja</i>	563	1.0	23.9	21.2	46.1	53.9
<i>< 6 months</i>	593	15.2	11.3	7.4	11.3	9.5
<i>6-23 months</i>	1846	32.3	33.5	31.7	32.5	26.6
<i>24-59 months</i>	3758	52.5	55.2	60.9	56.2	64.0

Source: Refugee FSNA, December 2020

The increasing anemia trends reported in December 2020 is attributed to dietary factors and infections. In the period of November 2019 to January 2020¹⁴, the incidence rate of Malaria (confirmed) and Malaria (suspected) among children <5 years was 78.6% (58,553 cases) and 1.2% (900 cases) respectively. The incidence rate increased to 84.7% (65,156 cases) and 8.8% (6794 cases) for Malaria (confirmed) and Malaria (suspected) in the period of October 2020 to December 2020. Malaria has been linked to megaloblastic anemia. In the months of Nov 2019 to Jan 2020, UNHCR Health Information System data indicated that the incidence of worm infections increased from 1.9% (2196 cases) and to

¹² UNHCR-OPM Refugee Settlement Statistics, Jan 2021

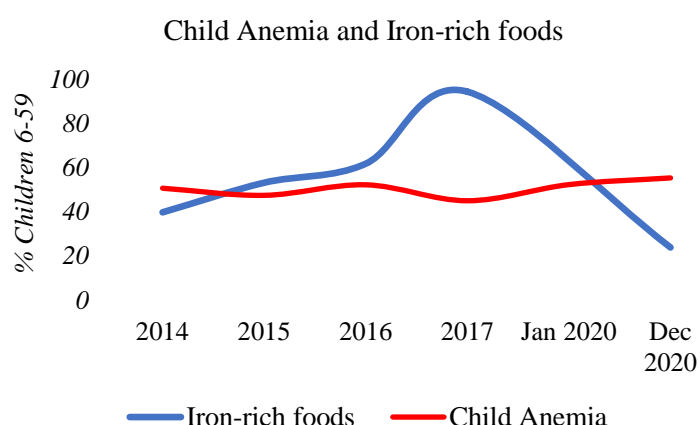
¹³ The Management of Nutrition in Major Emergencies (2000), WHO, UNHCR, WFP, IFRC. Anemia: ≥40% (High), 20-39% (Medium), 5-19% (Low).

¹⁴ UNHCR Uganda Health Information System (HIS)

3.3% (2,503 cases) a possible contributing factor to the increase in Anemia between the Jan and Dec 2020 FSNA.

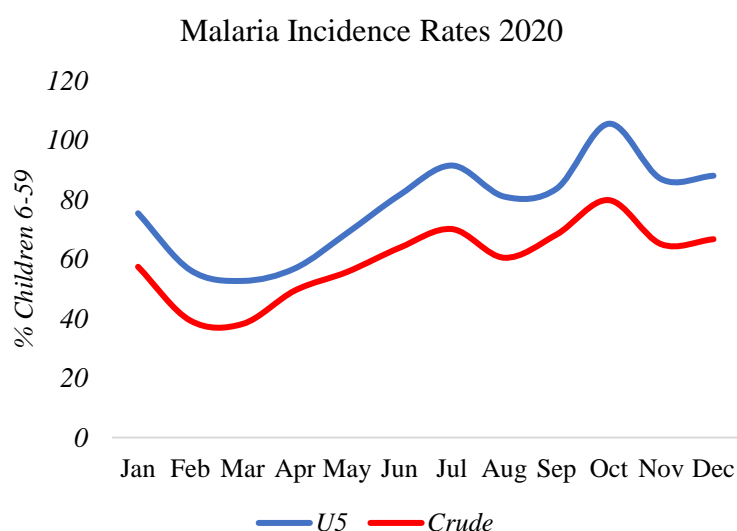
The minimum dietary diversity (MDD) at 22.1% for complimentary feeding (≥ 4 food groups) was low. Consumption of iron-rich foods (23.9%) was very low. This includes organ meat (0.6%) and flesh meat (4.3%). While Vitamin C is crucial to the absorption of non-haem iron, consumption of vitamin C rich foods e.g., fruits (13.8%) and vegetables (31.6%) was low. With 77.9% of children < 2 years mostly consuming 1-3 food groups, most households mostly on grains (80.7%), tubers (34.5%), and legumes (66.5%). The high consumption of plant-based diets among refugees, and the low consumption of vitamin C rich foods renders most of the dietary non-haem iron unavailable for body use. Figure below shows an inverse relationship between child Anemia and consumption of iron-rich foods

Figure 10: Trends of Child Anemia and consumption of Iron-rich foods



Source: Refugee FSNA, December 2020

Figure 11: Incidence of Malaria in 2020



Source: Refugee FSNA, December 2020

General Food Assistance (GFA) ration cuts from 100% to 70% in December 2020 (to 60% in March 2021 and anticipated future cuts) only exacerbated infrequent minimum meal frequency and diversity as part of the coping strategies to survive on a minimum. Refugees sell part of their in-kind food to vary

their diets. They also directly purchase various foods with the cash food assistance received. Reduction in monthly rations and the removal of Super Cereal Plus (CSB++) from the food basket have had a net effect on reducing dietary diversity, hence, a contributing factor to the increasing anemia. Removal of CSB++ from the GFA food basket was due to WFP funding constraints.

Diarrhea

Diarrhea is among the 5 commonest child morbidities, only second to Malaria (UNHCR Health Information System). The study found that 87.3% of the 7418 children in the survey did not have an episode of diarrhea or did not know, while 12.7% had had a diarrhea episode in the two weeks preceding the data collection date. Palabek had the highest prevalence of diarrhea at 22%, followed by Nakivale (16.6%), Lobule (16.1%), Rhino Camp (15.6%) and Rwamwanja (14.7%). Kampala recorded the lowest diarrhea prevalence at 4%. Across periods, the diarrhea prevalence increased from 9.1% in January 2020 to 12.7% in December 2020. Of all the children reported with an episode of diarrhea, 49.6% of them were aged 24-59 months, while 41.5% of them were aged 6-59 months. Only 8.9% were aged below 6 months. Regional variations were insignificant. The diarrhea prevalence in Palabek is significantly higher than other locations and the possible contributing factors include (1) Only 39.6% of the 55% of the households had a handwashing stations observed within the dwelling had water, 39.7% of the households didn't have soap or presented it in more than 1 minute. (2) sub-optimal childcare practices. The study found that open defecation was relatively high (11.9%) in Palabek, which could link to the high diarrhea rates in the settlement. A 2019 KAP survey in Palabek revealed that household hygiene practices were poor and were linked to high diarrhea rates. A 2020 KAP survey¹⁵ for Nakivale and Oruchinga found that only 50% of caregivers washed their hands after cleaning the baby's bottom, 54% of caregivers washed their hands after handling garbage, 34% washed their hands after handling raw food, and 7% found it difficult to wash their hands before feeding a child or eating.

Table 21: Two Week Point Prevalence of Diarrhea

<i>TWO WEEK POINT PREVALENCE OF DIARRHEA (%)</i>					
	Yes (Jan 20) (%)	N	Yes (Dec 20) (%)	No (%)	Don't Know (%)
<i>Total</i>		7418	12.7	84.7	2.6
<i>Adjumani</i>	3.3	479	7.6	87.6	4.8
<i>Bidibidi</i>	8.6	738	13.5	83.4	3.1
<i>Imvepi</i>	4	736	10.5	87.0	2.6
<i>Lobule</i>	6.5	261	16.1	80.5	3.4
<i>Kampala</i>	-	219	4.0	95.6	0.3
<i>Kiryandongo</i>	1.7	708	6.6	90.2	3.2
<i>Kyaka II</i>	12.8	540	12.0	87.0	1.0
<i>Kyangwali</i>	19.3	431	14.0	85.5	0.5
<i>Nakivale</i>	13.5	586	16.6	79.7	3.7
<i>Oruchinga</i>	9.8	371	10.8	87.6	1.6
<i>Palabek</i>	13.8	602	22.0	75.2	2.8
<i>Palorinya</i>	19.6	429	8.6	86.4	5.0
<i>Rhino Camp</i>	11.7	696	15.6	83.4	1.0
<i>Rwamwanja</i>	8.4	622	14.7	82.9	2.4
<i>< 6 months</i>	-	767	8.9	9.9	34.0
<i>6-23 months</i>	-	2095	41.5	26.7	15.7
<i>24-59 months</i>	-	4481	49.6	63.4	50.3

Source: Refugee FSNA, December 2020

¹⁵ IYCF Knowledge, Attitudes and Practices (KAP) and Family Planning Assessment in Nakivale/Oruchinga, Kyaka II, Rwamwanja, and Kyangwali Refugee Settlements (2020), MTI

Treatment of diarrhea

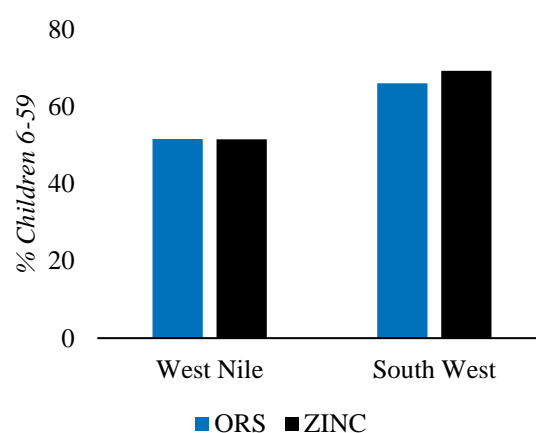
Of the children that had had diarrhea in the 2 weeks preceding the nutrition survey, only 57% of them had used ORS while 58.6% of the same group had used zinc for treatment. Kyaka II (82.3%), Oruchinga (67.5%), Nakivale (68%) have the highest use of ORS for treatment of diarrhea. In West Nile, Adjumani (64.4%) and Bidibidi (63.8%) reported the highest use of ORS for treatment of diarrhea. Palabek with the highest diarrhea prevalence (22%) accounts for only 49.1% of those that use ORS for treatment – an indication of poor health seeking behavior. Oruchinga (72.5%) and Nakivale (71.8%) reported the highest use of Zinc for treatment of diarrhea while the trend looks like that of ORS.

Table 22: Treatment of Diarrhea

TREATMENT OF DIARRHEA (%)			
Location	N	ORS Yes	ZINC Yes
Total	942	57	58.6
Adjumani	36	63.4	38
Bidibidi	100	63.8	59.7
Imvepi	77	48.1	49.1
Kampala	9	55.5	38.4
Kiryandongo	47	52.6	61.8
Kyaka II	65	82.3	66.2
Kyangwali	60	55.5	78.1
Lobule	42	50	52.4
Nakivale	97	68	71.8
Oruchinga	40	67.5	72.5
Palabek	132	49.1	46.3
Palorinya	37	39.9	44.3
Rhino Camp	108	46.9	61.3
Rwamwanja	92	57.3	58.4
< 6 months	83	7.8	8
6-23 months	391	43.5	44.1
24-59 months	467	48.7	47.9

Source: Refugee FSNA, December 2020

Figure 12: Treatment of Diarrhea



Measles Vaccination Coverage

The study found that in December 2020, the measles vaccination coverage was at 95.9%, hence, meeting the MOH target of $\geq 95\%$. Children vaccinated for measles and with EPI cards were 66.3% while those vaccinated for measles and recalled were 29.6%. Only 4.1% didn't neither remembered nor knew their vaccination status. Oruchinga had the highest total coverage at 98.1% while Adjumani had the lowest measles coverage total coverage at 93.1%. For children vaccinated for measles and with EPI cards, the study found that Palabek had the lowest coverage at 47.4% while Kyangwali had the highest coverage at 83.3%. The deficit for EPI cards in Palabek and other locations reporting high for recall could be attributed to the failure of health workers to record or issue records of vaccination.

Table 23: Measles Vaccination (%)

<i>Location</i>	<i>N</i>	<i>Yes, card</i>	<i>Yes, recall</i>	<i>Yes, total</i>	<i>No or DK</i>
<i>Total</i>	6345	66.3	29.6	95.9	4.1
<i>Adjumani</i>	395	57.9	35.2	93.1	6.9
<i>Bidibidi</i>	636	75.1	21.8	96.9	3.1
<i>Imvepi</i>	660	65.7	31.1	96.9	3.1
<i>Kampala</i>	185	65.6	28.2	93.8	6.2
<i>Kiryandongo</i>	609	61.8	31.4	93.2	6.8
<i>Kyaka II</i>	454	65.3	32.0	97.2	2.8
<i>Kyangwali</i>	371	83.3	15.1	98.4	1.6
<i>Lobule</i>	221	68.8	29.0	97.7	2.3
<i>Nakivale</i>	498	66.8	26.6	93.4	6.6
<i>Oruchinga</i>	320	80.3	17.8	98.1	1.9
<i>Palabek</i>	497	47.4	48.1	95.5	4.5
<i>Palorinya</i>	351	75.5	22.2	97.8	2.2
<i>Rhino Camp</i>	624	51.2	43.3	94.5	5.5
<i>Rwamwanja</i>	523	76.1	21.3	97.4	2.6
<i>< 6 months</i>	60	0.8	1.1	0.9	1.9
<i>6-23 months</i>	1786	33.5	16.4	25.0	28.4
<i>24-59 months</i>	4487	65.7	82.5	74.1	69.7

Vitamin A Supplementation Coverage

Vitamin A deficiency (VAD) results from low dietary intake of vit. A to adequately meet physiological needs. VAD also increases with incidences of childhood illnesses like diarrhea and measles. VAD causes night blindness and lowers the body immunity to fight common illnesses. The study found that 70.4% had received Vit. A in the last 6 months, below national target¹⁶. While 15.4% had cards, 55% relied on recall. Palabek (51.8%) had the lowest Vit. A supplementation coverage while Kyangwali (84.7%) has the highest. By age, 68% were 24-59 months, and 27% were 6 and 23 months. Gaps in recording of vit. A supplementation might explain the significant lack of cards and gaps in recording.

Table 24: Vitamin A supplementation (%)

<i>Location</i>	<i>N</i>	<i>Yes, with card</i>	<i>Yes, recall</i>	<i>Yes, Total</i>	<i>No or DK</i>
<i>Total</i>	7418	15.4	55.0	70.4	29.6
<i>Adjumani</i>	479	15.6	43.7	59.4	40.6
<i>Bidibidi</i>	738	13.7	65.3	79.0	21.0
<i>Imvepi</i>	736	11.8	62.0	73.8	26.2
<i>Kampala</i>	219	36.0	42.1	78.1	21.9
<i>Kiryandongo</i>	708	16.9	49.3	66.3	33.7
<i>Kyaka II</i>	540	18.0	45.6	63.6	36.4
<i>Kyangwali</i>	431	12.0	72.7	84.7	15.3
<i>Lobule</i>	261	9.6	62.8	72.4	27.6
<i>Nakivale</i>	586	17.9	55.4	73.3	26.7
<i>Oruchinga</i>	371	14.0	59.6	73.6	26.4
<i>Palabek</i>	602	15.5	36.3	51.8	48.2
<i>Palorinya</i>	429	10.3	68.8	79.1	20.9
<i>Rhino Camp</i>	696	15.6	47.8	63.4	36.6
<i>Rwamwanja</i>	622	16.5	60.7	77.2	22.8
<i>< 6 months</i>	768	40.7	3.9	22.3	6.7
<i>6-23 months</i>	2095	15.3	37.3	26.3	18.3
<i>24-59 months</i>	4539	44.0	58.8	51.4	75.0

¹⁶ MOH National Vitamin A coverage target, UNHCR SENS V3 target $\geq 90\%$

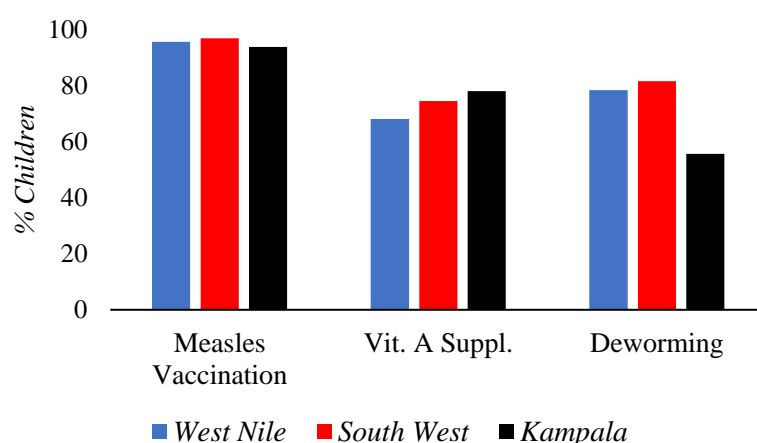
Deworming

Soil-transmitted helminth infections are among the most common infections in humans especially among children. They are caused by a group of parasites commonly referred to as worms, including roundworms and hookworms. Worm infections can impair nutritional status and are strongly linked to anemia (internal bleeding and loss of iron), diarrhea and impairment of nutrition intake, digestion, and malabsorption. The nutrition survey found that the deworming coverage for children 12-59 months was 78.1% - above the $\geq 75\%$ national deworming target. Relative to population size, Bidibidi had the highest coverage of 84.2%, performing better than any other settlement. Kampala (55.7%), Kiryandongo (64.4%), Adjumani (68.1%) performed below the national target. Coverage of deworming was highest among children aged 24-59 months. Given that all but three settlements have critical levels of anemia, it is highly recommended that all settlements strive for not just reaching the national target but much higher deworming coverage targets as part of the wider anemia reduction strategy.

Table 25: Deworming Coverage (12-59 months)

<i>DEWORMING COVERAGE (12-59 MONTHS) (%)</i>				
<i>Location</i>	<i>N</i>	<i>Yes (%)</i>	<i>No (%)</i>	<i>Don't know (%)</i>
<i>Total</i>	6042	78.1	17.2	4.7
<i>Adjumani</i>	373	68.1	22.4	9.6
<i>Bidibidi</i>	615	84.2	13.2	2.6
<i>Imvepi</i>	634	81.8	13.8	4.4
<i>Kampala</i>	179	55.7	35.4	8.8
<i>Kiryandongo</i>	583	64.4	27.9	7.6
<i>Kyaka II</i>	425	86.9	11.4	1.7
<i>Kyangwali</i>	352	78.8	17.4	3.8
<i>Lobule</i>	211	83.9	12.8	3.3
<i>Nakivale</i>	470	75.6	18.7	5.6
<i>Oruchinga</i>	296	90.2	7.1	2.7
<i>Palabek</i>	474	80.2	17.2	2.6
<i>Palorinya</i>	334	89.1	6.4	4.5
<i>Rhino Camp</i>	602	75.4	18.1	6.4
<i>Rwamwanja</i>	494	76.3	20.3	3.5
<i>< 6 months</i>	55	0.80	1.1	1.80
<i>6-23 months</i>	1502	25.3	25.0	18.7
<i>24-59 months</i>	4472		74.0	
		73.9		79.5

Figure 13: Child Health (EPI, Growth Monitoring)



Source: Refugee FSNA, December 2020

Infant and Young Child Feeding (IYCF)

The nutrition survey assessed infant and young child feeding practices among children 0 and 23 months. This critical window of time is part of the 1000-day window for optimal feeding and care practices to ensure optimal growth and development and to avert irreversible damage. The World Health Organization and UNICEF recommend initiation of breastfeeding within one hour of the baby's birth, exclusive breastfeeding for the first six months of the baby's life and continued breastfeeding up to 2 years of age and beyond with adequate and appropriate complementary food starting from 6 months.

The study found that 89.3% of the children 0-23 months had ever breastfed, while 74.4% of children had optimally been initiated to breastfeeding within 1 hour of birth - a drop from 98% and 80% in October 2017 and January 2020 respectively. Rwamwanja recorded the highest timely initiation of breastfeeding within 1 hour at 84.4% while Kyangwali had the lowest at 58%. About 73% of the children were aged between 6-23 months. The contributing factors to the reduction in rates of timely initiation of breastfeeding include the reduced community MIYCAN engagement activities during the COVID-19 pandemic lockdown which led to increased suboptimal childcare practices during the same time.

Table 26: Ever breastfed and Timely Initiation of Breast feeding

<i>Location</i>	<i>EVER BREASTFED (%)</i>		<i>TIMELY INITIATION OF BREASTFEEDING (%)</i>			
	<i>N</i>	<i>Yes</i>	<i>N</i>	<i>1 - 23 hrs</i>	<i><1 hour</i>	<i>> 24 hours</i>
<i>Total</i>	2588	89.3	2248	18.9	74.4	2.8
<i>Adjumani</i>	162	75.1	119	22.9	75.3	1.8
<i>Bidibidi</i>	237	88.1	204	21.0	69.4	8.4
<i>Imvepi</i>	221	95.4	210	20.5	77.3	0.0
<i>Kampala</i>	86	81.7	70	15.6	75.8	7.0
<i>Kiryandongo</i>	249	90.3	218	20.9	72.3	0.0
<i>Kyaka II</i>	195	96.6	183	10.6	82.6	2.3
<i>Kyangwali</i>	158	97.4	151	28.5	58.0	0.8
<i>Lobule</i>	89	84.3	71	31.0	64.8	0.0
<i>Nakivale</i>	229	92.4	212	10.4	81.1	1.8
<i>Oruchinga</i>	152	96.7	144	13.2	81.3	1.4
<i>Palabek</i>	215	80.7	153	31.1	66.1	1.0
<i>Palorinya</i>	155	79.6	120	11.9	68.7	17.8
<i>Rhino Camp</i>	205	90.5	184	24.3	72.6	1.1
<i>Rwamwanja</i>	236	91.4	210	11.4	84.4	0.9
<i>< 6 months</i>	659	22.7	509	21.8	22.9	31.7
<i>6-23 months</i>	1801	72.4	1625	73.0	72.2	65.0
<i>24-59 months</i>	124	4.9	111	5.2	4.9	3.3

Source: Refugee FSNA, December 2020

Exclusive breastfeeding

For children below 6 months, only 62.3% were reported to be exclusively breastfeeding; a consistent downtrend from 90.7% in 2014. Rwamwanja had the highest exclusive breastfeeding (EBF) at 91.4% while Kiryandongo had the lowest at 36.2%. South West had significantly higher EBF rates than West Nile. Reasons for the regional variations include (1) the Palabek barrier analysis (2019) found that most caregivers focus on food production and livelihoods while ignoring optimal care practices including EBF. (2) the study findings are consistent with the 2020 IYCF KAP survey in South West which found

that 91% were aware of the importance and the duration of EBF. Childcare practices are predicably low in Kampala because care givers allocate more time to livelihoods.

Continued breastfeeding

Continued breastfeeding at 1 year and at two years was at 88.9% and 73.8% respectively; a gradual drop from 90.1% in 2015. Imvepi reported 100% of all children 6-23 months in the sample to be breastfeeding at 1 year (12-15 months) while Kampala reported the lowest at 57.1%. For continued breastfeeding at 2 years (20-23 months), Palabek recorded the highest at 94.4% while Kampala recorded the lowest at 9.1%. The low levels in Kampala could be attributed to the difference in care practices between urban and rural refugees where the former is highly engaged in livelihood activities and tend to leave their children at home.

Table 27: Breastfeeding (0-23 months)

BREASTFEEDING (0-23 MONTHS) (%)

<i>Locations</i>	<i>N</i>	<i>Exclusive BF (<6 months)</i>	<i>N</i>	<i>Continued BF at 1 year (12-15 months)</i>	<i>N</i>	<i>Continued BF at 2 years (20-23 months)</i>
<i>All</i>	696	62.3	405	88.9	256	73.8
<i>Adjumani</i>	59	42.3	17	82.4	17	58.8
<i>Bidibidi</i>	68	56.0	43	95.3	25	84.0
<i>Imvepi</i>	46	84.0	30	100.0	35	85.7
<i>Kampala</i>	25	49.2	7	57.1	11	9.1
<i>Kiryandongo</i>	70	36.2	75	94.7	13	84.6
<i>Kyaka II</i>	57	87.3	20	80.0	16	68.8
<i>Kyangwali</i>	39	87.1	27	96.3	14	92.9
<i>Lobule</i>	22	45.5	15	80.0	7	71.4
<i>Nakivale</i>	55	80.5	40	77.5	30	50.0
<i>Oruchinga</i>	34	70.6	16	87.5	14	64.3
<i>Palabek</i>	72	60.7	19	94.4	18	73.7
<i>Palorinya</i>	63	44.4	25	92.0	8	87.5
<i>Rhino Camp</i>	37	41.7	35	97.1	32	84.4
<i>Rwamwanja</i>	50	91.4	36	83.3	16	75.0

Source: Refugee FSNA, December 2020

Complimentary feeding

The study found that 70% of children 6-8 months had timely introduction of solid, semi-solid and soft complimentary foods. This is a drop from 80.5% and 75% in October 2017 and January 2020 respectively. Palabek had the highest rates at 94.4% while Palorinya and Lobule had the lowest rates at 50%. West Nile settlements had higher rates of timely introduction of CF than South West. Kampala reported 80% children 6-8 months had timely introduction of solid, semi-solid and soft complimentary foods. It should be noted that majority of locations had small sample sizes due to the narrow sample space for this indicator.

Table 28: Introduction of solid, semi -solid or soft foods (6-8 months)

<i>INTRODUCTION OF SOLID, SEMI-SOLID OR SOFT FOODS (6-8 MONTHS) (%)</i>			
<i>Location</i>	<i>N</i>	<i>Yes (%)</i>	<i>No (%)</i>
<i>Total</i>	210	70.0	30.0
<i>Adjumani</i>	9	77.8	22.2
<i>Bidibidi</i>	19	63.2	36.8
<i>Imvepi</i>	16	93.8	6.3
<i>Kampala</i>	5	80.0	20.0
<i>Kiryandongo</i>	18	55.6	44.4
<i>Kyaka II</i>	17	76.5	23.5
<i>Kyangwali</i>	11	72.7	27.3
<i>Lobule</i>	10	50.0	50.0
<i>Nakivale</i>	20	65.0	35.0
<i>Oruchinga</i>	10	70.0	30.0
<i>Palabek</i>	18	94.4	5.6
<i>Palorinya</i>	4	50.0	50.0
<i>Rhino Camp</i>	22	63.6	36.4
<i>Rwamwanja</i>	31	64.5	35.5

Consumption of iron-rich foods was at the lowest across all locations compared to the previous years. The low intake of iron rich foods could be a contributing factor to the increasing anemia across the refugee operation. Bidibidi (35.3%) had the highest consumption of iron-rich foods while Palorinya (7.5%) had the lowest. Typical refugee diets are mostly plant-based and highly monotonous as expounded further in the MDD section. Bottle feeding (8.2%) and infant formula consumption rates (0.4%) were low across all locations and lower than the previous years. The low consumption of infant formula can be attributed to the implementation and strong messaging around marketing of breastmilk substitutes. Reduction in bottle-feeding rates can be attributed to the key messaging on the protection, promotion, and support of breastfeeding in MIYCAN programs. The consumption of lipid-based nutrient supplements (LNS) was 1.5%. LNS include commodities used in treatment programs in the management of acute malnutrition.

Table 29: Iron Rich Foods (6-23 mo), LNS (6-23mo), Bottle Feeding (0-23 mo) and Infant Formula (<6mo)

<i>Location</i>	<i>Consumption of Iron Rich Foods (6-23 Months)</i>		<i>Lipid Based Nutrient Supplement (LNS) (6-23months)</i>		<i>Bottle Feeding (0-23 Months)</i>		<i>Infant Formula (<6 Months)</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
<i>Total</i>	1951	23.9	1951	1.5	3015	8.2	1141	0.4
<i>Adjumani</i>	111	31.8	111	0.0	208	4.0	85	1.2
<i>Bidibidi</i>	173	35.3	173	3.2	241	14.2	111	0.0
<i>Imvepi</i>	198	30.3	198	0.0	261	9.7	79	0.0
<i>Kampala</i>	61	23.7	61	0.0	90	37.0	34	0.0
<i>Kiryandongo</i>	181	14.7	181	3.0	303	5.2	149	2.0
<i>Kyaka II</i>	138	31.3	138	2.0	195	6.6	79	0.0
<i>Kyangwali</i>	125	27.8	125	1.6	168	10.0	67	0.0
<i>Lobule</i>	65	33.8	65	4.6	89	9.0	38	0.0
<i>Nakivale</i>	179	13.3	179	0.9	274	12.2	100	0.0
<i>Oruchinga</i>	124	12.9	124	0.0	194	3.6	51	0.0
<i>Palabek</i>	143	19.5	143	2.3	253	0.2	97	0.0
<i>Palorinya</i>	92	7.5	92	0.0	191	3.1	89	0.0
<i>Rhino Camp</i>	176	28.3	176	2.4	307	5.9	75	1.3
<i>Rwamwanja</i>	185	24.3	185	0.6	240	11.1	87	0.0

Source: Refugee FSNA, December 2020

Minimum Dietary Diversity Child (MDD-C)

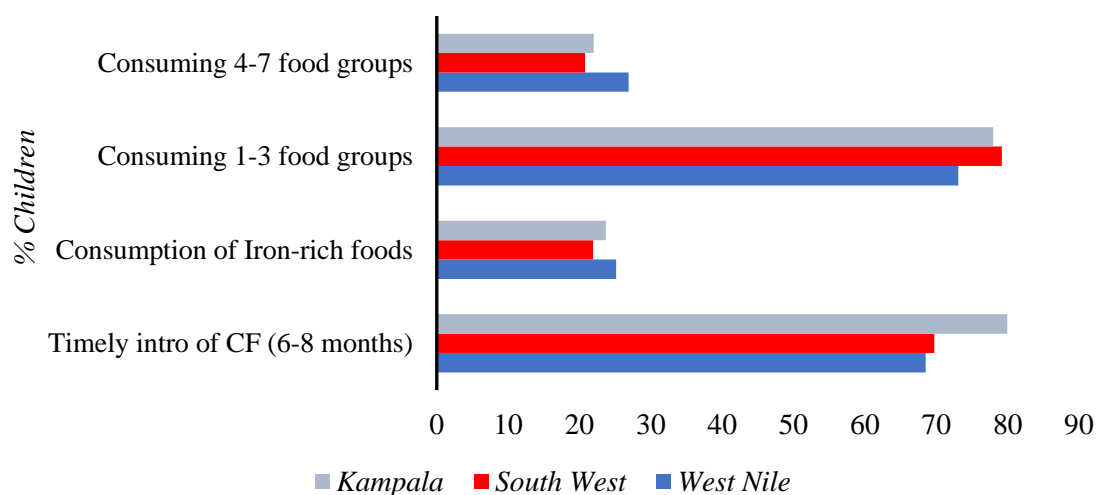
The study found that the child minimum dietary diversity (MDD) was low, with only 22.1% children 6-23 months reported to have consumed 4-7 food groups and 77.9% consuming 1-3 food groups. This trend is consistent with the low consumption of iron-rich foods reported above. Imvepi (36%) had the highest MDD (4-7 food groups) while Palorinya (7.8%) had the lowest. In terms of food groups, 80.7% reported consumption of grains, 66.5% legumes, 51.6% green leafy vegetables, 34.5% tubers and 31.6% other vegetables. Consumption rates of eggs, flesh meat and organ meat were 6.5%, 4.3%, and 0.6% respectively. The low consumption of iron-rich foods is because iron is mostly bioavailable in animal-based sources (haem iron) which are costly to sustain (poor economic access). Plant-based iron sources (non-haem iron) are rich in inhibitors and require complementary consumption of vitamin c rich foods to increase iron bioavailability. The study found the consumption of Vitamin C to be low.

Table 30: Child Minimum Dietary Diversity

Location	N	1-3 food groups	4-7 food groups
Total	1951	77.9	22.1
Adjumani	111	77.0	23.0
Bidibidi	173	66.8	33.2
Imvepi	198	64.0	36.0
Kampala	61	82.0	18.0
Kiryandongo	181	80.2	19.8
Kyaka II	138	82.9	17.1
Kyangwali	125	89.4	10.6
Lobule	65	76.9	23.1
Nakivale	179	83.7	16.3
Oruchinga	124	76.6	23.4
Palabek	143	82.7	17.3
Palorinya	92	92.2	7.8
Rhino Camp	176	78.1	21.9
Rwamwanja	185	73.6	26.4
6-11 months	562	31.2	20.4
12-23 months	1390	68.8	79.6

Source: Refugee FSNA, December 2020

Figure 14: Child optimal feeding practices by region



Source: Refugee FSNA, December 2020

Table 31: Food Groups Consumed (children 6-23 month) (%)

Location	N	Grains	Yellow Orange Inside	Tubers	Green Leafy	Ripe Fruit	Other Vegs	Organ Meat	Flesh Meats	Eggs	Fish	Legumes	Milk Products	Veg Oils	Sugary Foods	Condiments	MNPs
<i>Total</i>	1750	80.7	14.4	34.5	51.6	13.8	31.6	0.6	4.3	6.5	20.7	66.5	8.5	74.3	19.4	23.0	3.4
<i>Adjumani</i>	100	85.8	17.5	28.7	39.8	9.5	25.6	0.0	0.0	5.0	33.7	63.6	17.4	85.7	34.3	32.7	2.3
<i>Bidibidi</i>	158	80.6	30.7	48.0	57.7	21.3	40.0	2.7	8.3	21.1	30.7	61.3	8.0	82.5	23.5	30.6	7.3
<i>Imvepi</i>	190	79.8	15.0	37.5	60.1	7.1	39.8	0.0	4.7	6.0	29.9	81.9	7.2	93.2	29.1	26.7	4.6
<i>Kampala</i>	57	72.4	11.7	14.9	43.5	18.5	30.0	2.3	11.8	8.7	9.0	44.1	31.2	68.6	15.7	23.6	6.8
<i>Kiryandongo</i>	128	83.2	9.0	23.8	54.8	17.2	38.0	0.0	2.9	3.8	14.8	51.0	22.3	66.8	19.7	27.5	2.6
<i>Kyaka II</i>	129	80.3	8.7	42.7	52.6	22.3	19.9	1.0	3.5	2.4	20.9	76.2	5.1	70.1	3.6	8.0	8.3
<i>Kyangwali</i>	116	84.9	5.6	40.1	37.1	1.4	21.1	0.0	2.1	7.5	27.4	60.5	3.5	74.1	13.2	11.4	1.1
<i>Lobule</i>	53	88.7	24.5	49.1	54.7	18.9	39.6	0.0	9.4	9.4	28.3	62.3	1.9	69.8	20.8	26.4	5.7
<i>Nakivale</i>	162	73.4	13.7	25.8	51.6	12.1	26.0	0.0	2.2	3.4	11.7	67.9	10.0	66.1	20.7	28.2	0.8
<i>Oruchinga</i>	116	73.3	5.2	37.1	59.5	25.9	32.8	2.6	3.4	1.7	8.6	85.3	9.5	76.7	14.7	20.7	0.9
<i>Palabek</i>	127	87.8	21.4	23.9	58.8	13.6	29.8	0.4	2.5	2.2	18.7	65.2	0.0	76.8	22.8	33.2	1.1
<i>Palorinya</i>	87	93.8	13.3	29.5	42.5	2.1	11.7	0.0	2.4	1.1	5.5	53.7	4.7	55.1	18.0	8.9	0.0
<i>Rhino Camp</i>	158	69.1	15.0	35.8	51.9	6.8	39.4	0.7	6.9	7.3	18.9	58.0	3.2	71.5	19.7	26.4	6.2
<i>Rwamwanja</i>	169	85.4	11.0	37.9	45.2	19.2	36.8	0.0	4.5	8.3	22.6	75.0	6.0	68.2	12.5	13.6	0.4

Source: Refugee FSNA, December 2020

MATERNAL HEALTH AND NUTRITION

Anemia Women of Reproductive Age

The weighted prevalence of anaemia in non-pregnant women of reproductive age (15-49 years) across the 14 locations was high (41.8%). This is an increase from 31.7% and 35.2% in October 2017 and January 2020 respectively. Palorinya (56.5%) had the highest total anemia followed by Palabek (53.2%) and Adjumani (50.3%). Kampala (21.2%), Oruchinga (25.1%), and Imvepi (28.7%) had the lowest total anemia rates. Eight of the 14 locations had total anemia below 40% while West Nile (44.6%) reported higher anemia rates than South West (36.4%). Among WRA age groups, 58.9% of all the total anemia was recorded among WRA aged 15-29 years, 29.7% among WRA 30-39 years, and 11.4% among WRA 40-49 years.

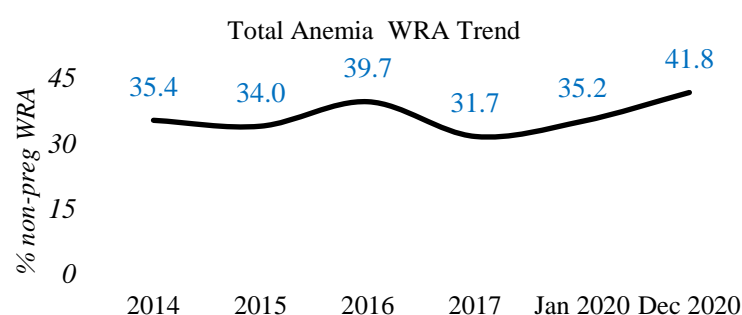
Contributing factors to the increasing anemia rates in the settlements include poor dietary diversity, malaria, high parity with spacing less than 2 years, and other morbidities, intestinal worm infestation (helminths)

Table 32: Anaemia Prevalence (%) Among Non-Pregnant Women of Reproductive Age (15-49)

<i>ANAEMIA WOMEN OF REPRODUCTIVE AGE (15-49) (%), NON-PREGNANT</i>						
<i>Location</i>	<i>N</i>	<i>Severe (Hb <8 g/dL)</i>	<i>Moderate (Hb 8-11 g/dL)</i>	<i>Mild (Hb <11- 12g/dL)</i>	<i>Total (Hb <11 g/dL)</i>	<i>No anaemia (Hb >12 g/dL)</i>
<i>Total</i>	4155	0.81	19.73	21.26	41.78	58.20
<i>Adjumani</i>	271	0.6	25.9	23.9	50.3	49.7
<i>Bidibidi</i>	420	1.1	25.4	22.7	49.2	50.8
<i>Imvepi</i>	442	0.0	10.1	18.6	28.7	71.3
<i>Kampala</i>	223	0.0	5.8	15.4	21.2	78.8
<i>Kiryandongo</i>	320	0.3	20.7	18.2	39.2	60.8
<i>Kyaka II</i>	246	0.0	12.3	23.1	35.4	64.6
<i>Kyangwali</i>	198	0.5	26.4	19.0	45.9	54.1
<i>Lobule</i>	189	0.5	20.1	28.0	48.7	51.3
<i>Nakivale</i>	318	0.2	15.6	16.6	32.4	67.6
<i>Oruchinga</i>	211	0.0	7.1	18.0	25.1	74.9
<i>Palabek</i>	303	0.5	20.0	32.7	53.2	46.8
<i>Palorinya</i>	347	3.5	28.8	24.2	56.5	43.5
<i>Rhino Camp</i>	402	0.6	13.0	21.1	34.8	65.2
<i>Rwamwanja</i>	264	1.8	13.3	16.7	31.7	68.3
<i>15-29 years</i>	2445	61.3	56.7	58.7	58.9	59.5
<i>30-39 years</i>	1210	29.0	31.9	28.2	29.7	28.6
<i>40-49 years</i>	501	9.7	11.4	13.1	11.4	11.9

Source: Refugee FSNA, December 2020

Figure 15: Total Anemia (%) among WRA trend



Source: Refugee FSNA, December 2020

Adult Malnutrition

Pregnant and Lactating Women (PLWs)

The study found that total malnutrition in PLWs was 4.6%, slightly higher than the 3.3% in 2017. Severe malnutrition and moderate malnutrition were 0.8% and 3.8% respectively. Nakivale (11.5%), Palabek (6.3%) and Kyaka II (5.7%) had the highest total malnutrition - the only locations above 5%. Kampala, Adjumani, and Lobule registered no malnutrition among PLWs, while Palorinya (2.6%) had the lowest rates. Malnutrition in Nakivale and Kyaka II was expected to be lower given the low GAM rates among children 6-59 months. It should be noted that due to the narrow sample space for PLWs, locations with 0% malnutrition may not translate to *lack of malnutrition* among PLWs. The study found that 47.8% of the count were pregnant and 52.2% were breastfeeding. By age category of PLWs, 65.2% were aged 15-29 years, 32.2% aged 30-39 years, and 2.6% aged 40-49 years.

Table 33: Prevalence of Malnutrition (%) by MUAC Among Pregnant and Lactation Women (15-49)

MALNUTRITION PREGNANT AND LACTATING WOMEN (%) (15-49) (MUAC)				
Location	N	Total Malnutrition (<23cm)	Severe Malnutrition (<21cm)	Moderate Malnutrition (≥21cm <23cm)
All	1215	4.6	0.8	3.8
Adjumani	57	0.0	0.0	0.0
Bidibidi	132	3.9	0.0	3.9
Imvepi	112	4.7	0.0	4.7
Kampala	36	0.0	0.0	0.0
Kiryandongo	62	3.3	0.0	3.3
Kyaka II	111	5.7	0.0	5.7
Kyangwali	107	4.9	2.9	2.0
Lobule	32	0.0	0.0	0.0
Nakivale	107	11.5	4.2	7.3
Oruchinga	72	4.3	0.0	4.3
Palabek	101	6.3	2.1	4.2
Palorinya	78	2.6	0.0	2.6
Rhino Camp	100	4.2	0.0	4.2
Rwamwanja	108	3.8	0.0	3.8
18-29 years	756	65.2	25.0	66.1
30-39 years	374	32.2	75.0	31.9
40-49 years	30	2.6	0.0	2.0

Source: Refugee FSNA, December 2020

Non PLW women of reproductive age

The study revealed that 66.1% of non-PLW of reproductive age were normal based on the body to mass index (BMI, 18.5 to <25 kg/m²). The study also revealed that 10.2% of them were underweight, 16.8% overweight and 7% obese. The highest rates of underweight were reported in Adjumani (17%), Lobule (16.3%), Kiryandongo (16.1%), Palabek (15.9%), Rhino Camp (15.8%), and Palorinya (14.6%) – all in West Nile. South West locations recorded the highest levels of overweight i.e. Kyaka II (29.6%), Oruchinga (24.2%), Kyangwali (22.7%), Nakivale (21.4%). Overall, Kampala had the highest levels of overweight and obesity at 31.8% and 28.3% -significantly higher than any other location. Across age groups, 48.9% of all underweight exists among women aged 20-29 years, 30.7% among women 30-39, and 20.4% among women 40-49 years. Most of the overweight exists in women 30-39 years - 42.1% overweight and 48.4% obese. Because of fewer numbers in WRA 40-49 years, the study found that this age group had the lowest rates of malnutrition across the different levels of severity. The Uganda refugee response doesn't currently implement treatment programs targeting undernutrition among non PLW WRA. Underweight leads to poor delivery outcomes e.g. low birthweight babies and complicated deliveries, heightened risk of morbidities e.g. anemia, poor body development outcomes among teenagers e.g. delayed menarche and irregular menstrual cycles.

Table 34: Adult Body to Mass Index (BMI) (%) - Women of Reproductive Age (20-49 years)

<i>ADULT BODY TO MASS INDEX (BMI) (%), WRA 20-49 YEARS</i>					
<i>Location</i>	<i>N</i>	<i>Underweight (<18.5 kg/m²)</i>	<i>Normal (18.5 to <25 kg/m²)</i>	<i>Overweight (25 to <30 kg/m²)</i>	<i>Obesity (>30 kg/m²)</i>
<i>Total</i>	4513	10.2	66.1	16.8	7.0
<i>Adjumani</i>	310	17.0	69.9	10.8	2.3
<i>Bidibidi</i>	471	13.1	70.6	10.9	5.3
<i>Imvepi</i>	440	9.8	80.8	7.1	2.3
<i>Kampala</i>	265	6.7	33.2	31.8	28.3
<i>Kiryandongo</i>	339	16.1	65.7	12.8	5.4
<i>Kyaka II</i>	375	1.7	59.4	29.6	9.3
<i>Kyangwali</i>	322	2.8	64.2	22.7	10.3
<i>Lobule</i>	172	16.3	64.5	14.5	4.7
<i>Nakivale</i>	231	5.5	62.2	21.4	10.8
<i>Oruchinga</i>	207	3.9	64.3	24.2	7.7
<i>Palabek</i>	367	15.9	75.6	7.1	1.3
<i>Palorinya</i>	302	14.6	69.5	8.5	7.4
<i>Rhino Camp</i>	351	15.8	68.9	13.7	1.6
<i>Rwamwanja</i>	362	2.2	61.2	28.7	7.9
<i>20-29 years</i>	2152	48.9	51.0	40.4	31.8
<i>30-39 years</i>	1687	30.7	36.0	42.1	48.4
<i>40-49 years</i>	676	20.4	13.0	17.5	19.7

Source: Refugee FSNA, December 2020

Women Minimum Dietary Diversity (MDD-W)

The study found that only 28.9% of women consumed 5 out of 7 food groups¹⁷. Cereals, white roots, tubers, and plantains were consumed by 98.7% of the respondents, followed by pulses and legumes

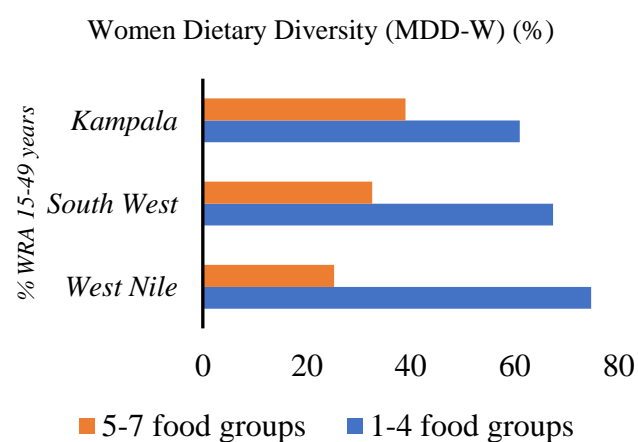
¹⁷ The Minimum dietary diversity for women (MDD-W) is based on seven food groups. The missing food groups were eggs, other vegetables, and other fruits. Information all these foods was collected but aggregated with foods in the same groups.

(79.7%), nuts and seeds (51.6%) and fruits and vegetables 50.1%. Flesh foods (meat, poultry, and fish) were only consumed by 19.8%. Diets of refugee women are largely plant-based.

Table 35: Women Minimum Dietary Diversity (%)

<i>MDD-W</i>			
<i>Location</i>	<i>N</i>	1-4 food groups	5-7 food groups
<i>All</i>	2223	71.1	28.9
<i>Adjumani</i>	118	84.4	15.6
<i>Bidibidi</i>	218	59.2	40.8
<i>Imvepi</i>	238	59.1	40.9
<i>Kampala</i>	49	61.0	39.0
<i>Kiryandongo</i>	185	83.3	16.7
<i>Kyaka II</i>	179	73.0	27.0
<i>Kyangwali</i>	162	69.8	30.2
<i>Lobule</i>	66	59.1	40.9
<i>Nakivale</i>	167	72.7	27.3
<i>Oruchinga</i>	131	65.6	34.4
<i>Palabek</i>	177	84.6	15.4
<i>Palorinya</i>	123	88.6	11.4
<i>Rhino Camp</i>	206	79.5	20.5
<i>Rwamwanja</i>	204	56.0	44.0

Figure 16: Women Minimum Dietary Diversity



Source: Refugee FSNA, December 2020

Table 36: Proportion of food groups consumed by women (multiple response)

<i>FOOD GROUPS</i>								
<i>Location</i>	<i>N</i>	Grains, White roots, Tubers, Plantains	Pulses, Legumes	Nuts, Seeds	Dairy	Meat, Poultry, Fish	Dark, Green, Leafys	Other Vit A rich FV
<i>All</i>	2223	98.7	79.7	51.6	7.0	19.8	50.1	50.1
<i>Adjumani</i>	118	97.1	79.4	32.9	16.4	22.7	43.4	43.4
<i>Bidibidi</i>	218	99.1	75.1	59.1	5.2	32.4	57.3	57.3
<i>Imvepi</i>	238	99.1	94.5	55.9	2.9	27.7	59.1	59.1
<i>Kampala</i>	49	100.0	61.0	45.1	47.4	42.4	58.4	58.4
<i>Kiryandongo</i>	185	99.2	50.4	28.4	11.2	8.7	45.3	45.3
<i>Kyaka II</i>	179	99.0	80.1	61.1	2.0	20.0	53.8	53.8
<i>Kyangwali</i>	162	99.1	83.0	63.6	2.5	19.0	42.2	42.2
<i>Lobule</i>	66	98.5	86.4	66.7	1.5	34.8	54.5	54.5
<i>Nakivale</i>	167	96.7	87.1	61.3	11.2	10.3	47.5	47.5
<i>Oruchinga</i>	131	99.2	94.7	52.7	9.9	10.7	56.5	56.5
<i>Palabek</i>	177	99.2	76.9	42.6	1.9	10.4	49.5	49.5
<i>Palorinya</i>	123	100.0	76.8	28.8	0.0	7.6	32.7	32.7
<i>Rhino Camp</i>	206	96.9	68.3	45.9	2.5	23.4	42.9	42.9
<i>Rwamwanja</i>	204	99.7	93.8	68.3	12.8	21.0	56.5	56.5

Source: Refugee FSNA, December 2020

Physiological Status

The study found that 7% of all women of reproductive age (15-49%) respondents were aware that they were pregnant, and 25.2% of them were breastfeeding (exclusive and continued breastfeeding). Kyangwali (13.7%) and Kyaka II (11.1%) had pregnancy rates higher than 10%, also the highest of any location. Kiryandongo (2.7%) and Adjumani (3.4%) recorded the lowest pregnancy rates. Kyangwali (36.1%), Rwamwanja (33.2%), Kyaka II (32.9%) recorded the highest breastfeeding rates. The study found that 67.9% of all eligible PLWs (pregnant women, lactating women with child <6 months) were enrolled into the maternal child health and nutrition program (MCHN). Imvepi (81.8%) and Bidibidi (79.9%) had the highest MCHN enrollment rates while Kampala (3.2%) had the lowest rate. The low MCHN enrollment rates in Kampala can attributed to the absence of the program in Kampala, and while 3.2% in Kampala reported to have received MHCN services, these services can be traced back to respective refugee settlements of registration where some urban refugees routinely return to access different services e.g., general food assistance and MCHN. Among settlements, Oruchinga (50%) had the lowest MCHN enrolment rate.

Table 37: Physiological Status of Women of Reproductive Age (15-49 years)

<i>WRA PHYSIOLOGICAL STATUS (15-49)</i>					
<i>Location</i>	<i>N</i>	<i>Pregnant</i>	<i>Breastfeeding</i>	<i>N</i>	<i>MCHN Enrolment</i>
<i>All</i>	9146	7.0	25.2	1414	67.9
<i>Adjumani</i>	703	3.4	17.1	67	74.1
<i>Bidibidi</i>	902	5.8	25.3	135	79.9
<i>Imvepi</i>	908	7.2	26.8	124	81.8
<i>Kampala</i>	460	4.9	11.2	49	3.2
<i>Kiryandongo</i>	888	2.7	21.8	81	66.4
<i>Kyaka II</i>	551	11.1	32.9	119	79.6
<i>Kyangwali</i>	456	13.7	36.1	116	76.9
<i>Lobule</i>	341	6.7	20.5	37	62.2
<i>Nakivale</i>	625	8.1	27.8	118	55.1
<i>Oruchinga</i>	424	9.2	31.6	92	50.0
<i>Palabek</i>	693	5.8	27.4	121	68.6
<i>Palorinya</i>	716	7.2	18.5	104	73.6
<i>Rhino Camp</i>	855	7.6	25.2	127	58.9
<i>Rwamwanja</i>	623	9.8	33.2	125	74.7
<i>15-29 years</i>	5822	66.4	62.5	933	66.2
<i>30-39 years</i>	2350	30.5	32.9	442	31.7
<i>40-49 years</i>	974	3.1	4.6	39	2.1

Source: Refugee FSNA, December 2020

ANC

Access to quality Antenatal Care (ANC) is important for optimal pregnancy outcomes for both the mother and baby and helps in identifying pregnancy related complications and to provide timely and appropriate actions. Women of reproductive age (15-49 years) were asked if they were enrolled for antenatal care for the current pregnancy and historical pregnancy for those with children below 6 months. The study found that 77.2% of pregnant women had enrolled for ANC, 56.8% in the first trimester and 43.2% after the first trimester.

The study also sought to establish the Iron folic acid supplementation coverage during ANC attendance. Pregnancy leads to increased demands for iron and folic acid, which if not taken, exposes the mother

and baby to a higher risk of micronutrient deficiency anemia and neural birth defects respectively. Imvepi (85.7%), Rwamwanja (83.4%), Bidibidi (82.4%), Kyaka II (80.7%), and Rhino Camp (80.5%) had the highest ANC enrolment rates for the current pregnancies while Kampala (57.6%), Oruchinga (64.1) and Kyangwali (65%) had the lowest. Overall, West Nile locations had higher ANC enrolment rates compared to locations in South West. The study found that 73.5% of pregnant women had received iron-folic acid (IFA) pills during the ANC. Lobule (87%), Rwamwanja (86.3%) and Kiryandongo (85.3%) had the highest IFA supplementation rates while Kampala (61.9%) and Oruchinga (64.1%) had the lowest. Overall, 74% had attended ANC 1-3 times, 24.1% of pregnant women had attended ANC 4-7 times and only 2% had attended over 8 visits. The respondents were still pregnant, and some due for delivery in a couple of months, which partly explains why not many had attended ANC 8+ times.

Table 38: Antenatal Care (current pregnancy)

<i>ANTENATAL CARE (CURRENT PREGNANCY)</i>								
<i>Location</i>	ENROL		First ANC visit		IFA	Number of ANC visits		
	N		1st trimester	After 1st trimester		1-3 times	4-7 times	≥8 times
<i>All</i>	643	77.2	56.8	43.2	73.5	74.0	24.1	2.0
<i>Adjumani</i>	24	78.8	80.6	19.4	78.8	78.6	19.0	2.3
<i>Bidibidi</i>	52	82.4	51.6	48.4	73.7	64.7	33.6	1.7
<i>Imvepi</i>	66	85.7	70.9	29.1	70.5	64.3	35.7	0.0
<i>Kampala</i>	23	57.6	68.7	31.3	61.9	80.3	19.7	0.0
<i>Kiryandongo</i>	24	79.7	54.9	45.1	85.3	82.2	17.8	0.0
<i>Kyaka II</i>	61	80.7	49.4	50.6	78.9	76.5	23.5	0.0
<i>Kyangwali</i>	63	65.0	44.9	55.1	66.4	76.4	21.3	2.3
<i>Lobule</i>	23	82.6	43.5	56.5	87.0	69.6	30.4	0.0
<i>Nakivale</i>	51	75.3	51.7	48.3	71.1	80.6	19.4	0.0
<i>Oruchinga</i>	39	64.1	53.8	46.2	64.1	87.2	12.8	0.0
<i>Palabek</i>	40	77.8	80.7	19.3	77.8	72.1	18.6	9.3
<i>Palorinya</i>	51	75.9	65.3	34.7	65.7	82.3	16.6	1.1
<i>Rhino Camp</i>	65	80.5	70.0	30.0	70.2	64.8	30.0	5.2
<i>Rwamwanja</i>	61	83.4	27.1	72.9	86.3	71.6	24.9	3.5

Source: Refugee FSNA, December 2020

To give a clearer picture on this, ANC visits for full term pregnancies were assessed using the historical ANC. The study found that 93.7% had enrolled for ANC, with majority of locations above 90%. Kampala had the lowest enrolment at 74.9%. 69.9% and 10% of respondents had attended ANC 4-7 times and 8+ times respectively.

Table 39: Historical ANC (WRA with Children < 6 months) (%)

<i>Location</i>	<i>N</i>	<i>ENROL</i>	<i>1-3 times</i>	<i>4-7 times</i>	<i>≥8 times</i>
<i>All</i>	2267	93.7	20.1	69.9	10.0
<i>Adjumani</i>	118	98.9	19.8	75.5	4.7
<i>Bidibidi</i>	223	89.9	8.3	66.9	24.8
<i>Imvepi</i>	242	96.1	7.3	76.7	16.0
<i>Kampala</i>	52	74.9	32.9	65.7	1.4
<i>Kiryandongo</i>	192	90.3	35.4	52.5	12.1
<i>Kyaka II</i>	180	97.5	25.6	72.4	2.0
<i>Kyangwali</i>	164	93.5	18.9	79.4	1.7
<i>Lobule</i>	69	100	11.8	72.1	16.2
<i>Nakivale</i>	170	93.5	20.1	72.1	7.7
<i>Oruchinga</i>	134	96.3	17.8	77.5	4.7
<i>Palabek</i>	186	93.1	25.1	68.4	6.5
<i>Palorinya</i>	126	93.1	34.1	62.6	3.2
<i>Rhino Camp</i>	210	92.3	21.8	58.3	19.9
<i>Rwamwanja</i>	203	95.8	17.6	77.4	4.9

Family planning

The study assessed the family planning practices among women of reproductive age and found that 14.7% of the respondent WRA had ever used a family planning method. The highest rates of family planning use were reported in Oruchinga (35.4%), Rwamwanja (27.7%), Lobule (22.9%), Nakivale (21.4%), and Kyaka II (21%). Locations that reported the lowest rates were Kampala (4.9%), Adjumani (5.7%), and Kiryandongo (8.1%). The study found that Depo Provera and implants were the most preferred family planning methods at 43.2% and 38.4% respectively. The least preferred methods were progestogen-only pills (POPs) (1.2%), intra uterine device (IUDs) (3.3%), and combined oral contraceptives (COCs) (4.8%). Only 4.6% of respondents reported that they preferred other family planning methods. Kyangwali (79%) and Kiryandongo (72.1%) reported the highest use of Depo Provera while Rhino Camp (64.5%) and Imvepi (61%) reported the highest rates for the use of implants.

Table 40: Most Preferred Family Planning Methods (%)

<i>Location</i>	<i>Ever used FP</i>		<i>Most preferred FP method</i>							
	<i>N</i>	<i>Yes</i>	<i>N</i>	<i>COCs</i>	<i>Condoms</i>	<i>Depo Provera</i>	<i>Implant</i>	<i>IUD</i>	<i>POPs</i>	<i>Other</i>
<i>All</i>	9146	14.7	1332	4.8	4.5	43.2	38.4	3.3	1.2	4.6
<i>Adjumani</i>	703	5.7	40	2.6	33.7	32.3	29.9	0.0	1.4	0.0
<i>Bidibidi</i>	902	15.9	143	4.8	2.5	28.3	54.7	4.1	0.0	5.6
<i>Imvepi</i>	908	12.7	115	9.5	0.0	24.0	61.0	2.6	1.8	1.2
<i>Kampala</i>	460	4.9	19	9.6	2.7	42.6	28.6	2.5	0.0	14.0
<i>Kiryandongo</i>	888	8.1	71	0.0	0.0	72.1	20.3	2.4	3.3	1.9
<i>Kyaka II</i>	551	21.0	115	6.5	4.5	56.2	23.5	3.8	1.6	4.0
<i>Kyangwali</i>	456	8.9	40	0.0	0.0	79.0	18.2	0.0	0.0	2.9
<i>Lobule</i>	341	22.9	77	5.2	2.6	27.3	58.4	6.5	0.0	0.0
<i>Nakivale</i>	625	21.4	133	6.6	4.1	66.7	17.4	1.7	0.0	3.4
<i>Oruchinga</i>	424	35.4	150	5.3	6.7	52.0	28.0	4.7	0.7	2.7
<i>Palabek</i>	693	14.1	95	4.2	12.9	28.2	48.4	0.0	0.0	6.2
<i>Palorinya</i>	716	9.5	64	1.4	6.5	5.6	41.2	0.0	6.4	38.9
<i>Rhino Camp</i>	855	11.4	97	3.2	3.5	18.0	64.5	6.5	3.1	1.2
<i>Rwamwanja</i>	623	27.7	172	4.0	0.0	59.8	30.2	4.7	0.4	1.0

Source: Refugee FSNA, December 2020

The data indicates that there was more preference to short term family planning methods than long-term. The study found that the two commonest reasons for preference of family planning methods were: (1) the method was easy to use, (2) method had less side effects and were reported by 35.3% and 31% of the respondents respectively. Minimal spousal support to adapt long term family planning methods is a possible contributing factor to the low uptake. There is increasing scaleup on sensitization and use of Depo Provera across the refugee response given the future opportunities around the use of self-injectables. Ministry of Health recently rolled out the Self Inject SC Depo Provera that has made it possible to scale up uptake especially at community level. Depo Provera is also easily ‘concealed’ and therefore an easy choice for mothers whose partners are not supportive. The study found that only 16.3% preferred family planning methods that lasted longer in the body

Table 41: Reasons for Preference of Family Planning Method (%)

<i>REASONS FOR PREFERENCE OF FP METHOD</i>							
<i>Location</i>	<i>N</i>	<i>Easy to use</i>	<i>Readily available</i>	<i>Less side effects</i>	<i>Not easy to identify in use</i>	<i>Takes longer in body</i>	<i>Other</i>
<i>All</i>	1347	35.3	7.3	31.0	3.9	16.3	6.3
<i>Adjumani</i>	40	58.7	0.0	26.4	4.8	2.8	7.3
<i>Bidibidi</i>	143	37.5	3.3	24.7	7.0	18.3	9.2
<i>Imvepi</i>	115	42.6	3.4	18.7	2.5	29.5	3.2
<i>Kampala</i>	23	29.9	10.5	26.9	3.4	2.1	27.2
<i>Kiryandongo</i>	71	16.7	16.9	49.5	1.4	14.6	0.9
<i>Kyaka II</i>	116	42.3	13.8	23.1	3.0	13.8	4.1
<i>Kyangwali</i>	40	44.7	3.5	41.7	0.0	10.1	0.0
<i>Lobule</i>	78	35.9	0.0	19.2	1.3	34.6	9.0
<i>Nakivale</i>	134	36.0	9.3	38.2	2.3	8.9	5.3
<i>Oruchinga</i>	150	37.3	10.7	27.3	2.7	12.7	9.3
<i>Palabek</i>	98	41.4	0.8	38.1	4.5	10.5	4.8
<i>Palorinya</i>	68	17.8	1.5	48.0	7.2	18.8	6.6
<i>Rhino Camp</i>	97	35.9	6.5	23.2	8.6	18.7	7.1
<i>Rwamwanja</i>	173	25.1	12.0	37.3	3.5	16.4	5.6

Source: Refugee FSNA, December 2020

On barriers to Family Planning, 43.6% had *other reasons* and 22.1% didn’t know about Family Planning in Palorinya (35.2%), Bidibidi (32.7%), Lobule (31.6%), and Palabek (30.2%). While 10% reported that their culture did not allow them to practice family planning, Adjumani recorded the highest cultural barrier rates at 37.6%. Nine-point six percent (9.6%) cited the need to still have children as the reason for not using family planning, and these were majorly located in, Kyangwali (14.7%) and Rwamwanja (14.5%). It should be noted that Kyangwali also had the highest pregnancy rate of any location at 13.7%. There is need for a family planning KAP survey to explore further the other barriers (43.6%) to the uptake of family planning.

Table 42: Reasons for not using Family Planning (%)

<i>REASONS FOR NOT USING FAMILY PLANNING</i>									
<i>Location</i>	<i>N</i>	<i>Don't know about FP</i>	<i>Don't know where to access it</i>	<i>My culture doesn't permit FP</i>	<i>Not available at facility</i>	<i>Other</i>	<i>Partner against FP</i>	<i>Side effect of FP</i>	<i>Still want to have children</i>
<i>All</i>	7798	22.1	0.8	10.0	0.2	43.6	5.3	8.4	9.6
<i>Adjumani</i>	663	17.2	0.0	37.6	0.5	30.5	3.8	3.7	6.8
<i>Bidibidi</i>	759	32.7	0.4	11.1	0.0	37.5	3.4	5.2	9.6
<i>Imvepi</i>	793	20.5	0.2	2.3	0.2	60.7	4.6	4.6	6.9
<i>Kampala</i>	438	21.7	1.7	14.6	0.0	39.1	3.4	6.1	13.3
<i>Kiryandongo</i>	816	23.7	0.3	7.3	0.1	47.4	6.4	10.6	4.2
<i>Kyaka II</i>	436	8.4	0.5	1.5	0.0	58.3	4.2	16.8	10.3
<i>Kyangwali</i>	415	22.8	0.2	6.7	0.0	28.9	13.5	13.3	14.7
<i>Lobule</i>	263	31.6	0.4	6.8	0.4	43.0	0.8	5.7	11.4
<i>Nakivale</i>	491	8.9	1.3	12.9	0.0	51.4	3.2	9.8	12.4
<i>Oruchinga</i>	274	9.5	0.0	4.7	0.0	50.7	6.6	18.6	9.9
<i>Palabek</i>	593	30.2	1.0	12.2	0.3	34.1	6.6	4.0	11.6
<i>Palorinya</i>	648	35.4	2.3	8.1	0.1	23.7	7.0	13.6	9.7
<i>Rhino Camp</i>	758	23.1	1.5	4.2	0.4	50.7	5.7	5.6	8.7
<i>Rwamwanja</i>	451	9.0	0.2	4.6	0.4	57.3	3.9	10.1	14.5

Source: Refugee FSNA, December 2020

WASH

WASH is directly linked to health and nutrition outcomes: many diseases are caused by pathogens that are ingested with drinking water. They circulate due to improper treatment and disposal of excreta and are propagated by inadequate handwashing and lack of good hygiene practices. Diarrhoeal diseases and skin infections are the main diseases that follow these pathways. Therefore, it is important to consider the WASH outcomes when analysing health and nutrition status of the persons of concern to UNHCR. In the 2020 FSNA, the main aim of assessing the WASH module was to determine access to, and use of, improved water and sanitation and hygiene facilities.

The main drinking water sources were the public tap/ standpipe (51.3%) and hand pumps/ boreholes (34.6%) whereas the least used water source was the tanker trucks (0.3%). UNHCR phased out water trucking in late 2019, which explains the low use of trucked water. This study finding was consistent with the recent FSNA in January 2020 in which the majority (50%) of households used the public/ standpipe (UBOS et al, 2020) compared to boreholes. Settlement specific analyses in this study indicate that protected boreholes were the principal source of drinking water in the South-West settlements (41.4%) whereas the public taps/ standpipes were the principal sources of drinking water in the West Nile settlements (61.0%)

In 2019 and throughout 2020, there were deliberate efforts by UNHCR through its WASH partners, including consortiums, Development partners and the government of Uganda through the Ministry of Water and Environment (MoWE) to rehabilitate and motorize water systems including boreholes in all the settlements in a bid to increase water access and coverage. Many boreholes were rehabilitated and motorized by WASH stakeholders (Ojeo, 2020).

WATER ACCESS

Principle Source of Drinking Water

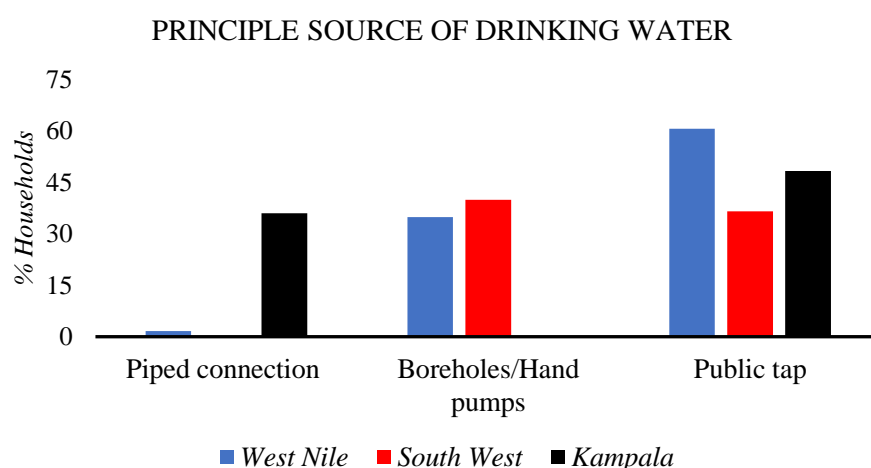
While majority (42.9%) of the respondents employed no method to make water safe for drinking, only 30.3% and 16.1% boiled or let the water to settle at the bottom respectively. The use of no method was highest in Kiryandongo (58.8%), Palorinya (52.7%) and Kyangwali (50.2%). Boiling was highly employed in Kampala (86.2%). The proportion of respondents that boiled water prior to drinking increased from 17.2% in January 2020 to 30.3% by December 2020. Water treatment results in this study were not different from the January 2020 study results in which majority of the respondents (76.3%) never treated their water prior to drinking it. However, this proportion reduced to 42.9% by December 2020 owing to strengthened efforts in behaviour change communication by the WASH partners unto the POC.

Table 43: Principal Source of Drinking Water (%)

<i>PRINCIPLE SOURCE OF DRINKING WATER (%)</i>															
<i>Location</i>	<i>N</i>	Bottled, sachets	Don't know	Hand pumps boreholes	Other	Piped connect	Protected hand dug-well	Protect spring	Public tap/ standpipe	Rain water collection	Surface water	Tanker trucks	Unprotect hand-dug well	Unprotect spring	Water seller /kiosks
<i>All</i>	3641	0.4	0.1	34.6	0.2	3.5	1.4	0.6	51.3	0.6	2.6	0.3	2.2	1.1	1.0
<i>Adjumani</i>	222	0.4	0.0	55.1	0.6	3.3	0.0	0.0	40.6	0.0	0.0	0.0	0.0	0.0	0.0
<i>Bidibidi</i>	300	0.0	0.6	17.2	0.6	0.6	0.0	0.0	79.5	0.0	0.1	0.6	0.8	0.0	0.0
<i>Imvepi</i>	314	0.0	0.0	2.0	0.0	0.0	0.0	0.0	95.7	1.1	0.5	0.2	0.2	0.2	0.0
<i>Kampala</i>	193	1.4	0.0	0.0	0.0	37.8	1.9	1.0	46.6	4.3	0.0	0.0	2.1	0.6	4.3
<i>Kiryandongo</i>	300	0.3	0.0	33.2	0.0	0.0	1.5	0.0	61.8	0.3	0.6	0.6	0.0	0.3	1.4
<i>Kyaka II</i>	259	0.0	0.2	38.2	0.0	0.0	4.6	2.3	31.0	0.3	8.5	0.5	8.1	6.2	0.0
<i>Kyangwali</i>	228	0.0	0.0	37.0	0.0	0.0	8.5	1.8	23.1	0.0	10.9	1.7	14.3	2.8	0.0
<i>Lobule</i>	125	0.0	0.0	80.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0	0.0	0.0	0.8	0.0
<i>Nakivale</i>	306	1.7	0.2	13.3	0.6	0.0	0.0	0.0	70.7	0.4	5.6	0.5	3.8	0.0	3.0
<i>Oruchinga</i>	201	0.0	0.0	56.2	0.0	0.0	0.0	0.5	34.3	0.5	6.0	0.0	0.5	2.0	0.0
<i>Palabek</i>	289	0.3	0.8	52.4	0.0	7.1	0.0	0.0	37.5	0.5	0.5	0.2	0.0	0.7	0.0
<i>Palorinya</i>	308	0.3	0.0	34.0	0.3	0.4	0.2	0.2	63.1	0.8	0.5	0.2	0.0	0.0	0.0
<i>Rhino Camp</i>	323	0.8	0.1	3.4	0.3	0.3	1.1	0.0	90.7	0.3	0.4	0.0	0.0	0.3	2.3
<i>Rwamwanja</i>	273	0.0	0.0	62.4	0.8	0.0	1.8	2.3	24.4	0.0	3.4	0.0	0.8	1.2	2.8

Source: Refugee FSNA, December 2020

Figure 17: Principal source of drinking water by region, Refugee FSNA, Dec 2020



Travel Time to Water Source

Overall, 41.0% of households reported time to water source being <15minutes, an increase compared to only 12.9% in January 2020. The proportion of households that took over 30 minutes was 38.7% which was an increase compared to 24.6% of respondents in the January 2020 FSNA survey. Settlements with longest time to water source were Nakivale (56.3%), Oruchinga (55.4%), Kyangwali (53.9%) and Rwamwanja (53.0%). Three settlements reported highest proportions of time to water source of more than 1 hour compared to other time periods i.e. Nakivale (42.4%), Palorinya (30.1%), Rwamwanja (28.1%). Population increase due to influxes are contributing factors to this problem coupled with reduced water points. For example, in Nakivale, some boreholes broke down and were never repaired, while others were closed due to high iron levels. Consortium Integrated WASH projects in 2020 in Response to DRC and South Sudan refugee influxes in all settlements led to gradual improvements in WASH indicators. There has been increased access to safe and clean water, coupled with reduced time taken by POCs to collect water for home use.

Table 44: Travel Time to Water Source (%), Refugee FSNA, Dec 2020

TRAVEL TIME TO WATER SOURCE (%)						
<i>Location</i>	Total	<15 mins	15-29 mins	30-59 mins	≥1 hr.	≥30 mins
<i>All</i>	3516	41.0	20.3	20.4	18.3	38.7
<i>Adjumani</i>	222	35.3	13.1	23.3	28.4	51.6
<i>Bidibidi</i>	300	67.3	20.5	7.7	4.4	12.2
<i>Imvepi</i>	300	51.2	23.5	15.5	9.8	25.3
<i>Kampala</i>	193	88.7	7.2	3.7	0.4	4.1
<i>Kiryandongo</i>	296	42.5	25.0	20.8	11.7	32.6
<i>Kyaka II</i>	259	36.7	22.3	26.8	14.2	41.0
<i>Kyangwali</i>	228	22.2	24.0	35.1	18.8	53.9
<i>Lobule</i>	125	61.6	20.8	10.4	7.2	17.6
<i>Nakivale</i>	301	33.1	10.5	13.9	42.4	56.3
<i>Oruchinga</i>	195	14.9	29.7	37.9	17.4	55.4
<i>Palabek</i>	289	26.9	26.6	25.8	20.7	46.5
<i>Palorinya</i>	308	28.8	19.9	21.2	30.1	51.3
<i>Rhino Camp</i>	233	51.0	20.3	18.6	10.1	28.7
<i>Rwamwanja</i>	267	28.0	19.0	24.9	28.1	53.0

Water Quality and Quantity

Overall, the proportion of households using an improved drinking water source was 91.4% (below Sphere target of $\geq 95\%$) with regional averages of 97.5% in West Nile settlements and 82.5% in South West settlements. All settlements in West Nile were above the recommended sphere standards of $\geq 95\%$ water access from an improved source, while none of the settlements in South West achieved the sphere target. Since 2016, there has been a reduction in proportion of households with access to improved drinking water source i.e., from 97.3% in 2016, 87.12% in 2017, 93.5% in January 2020 down to 91.4% in December 2020. The downward trend since 2016 is attributed to population increases in the region.

The low proportion in South West settlements is attributed to the 2019/2020 DRC Refugee influx in the region. Settlements with new arrival refugees had proportions of less than 90% e.g., Nakivale (84.1%), Kyangwali (70.4%) and Kyaka (76.1%) indicating a possible impact of water access on new arrivals.

Table 45: Protected Water Sources

PROTECTED WATER SOURCES							
Location	Total	Handpumps /boreholes	Piped connection	Protected hand-dug well	Protected spring	Public tap /standpipe	All protected
All	3641	34.6	3.5	1.4	0.6	51.3	91.4
Adjumani	222	55.1	3.3	0.0	0.0	40.6	99.0
Bidibidi	300	17.2	0.6	0.0	0.0	79.5	97.3
Imvepi	314	2.0	0.0	0.0	0.0	95.7	97.7
Kampala	193	0.0	37.8	1.9	1.0	46.6	87.3
Kiryandongo	300	33.2	0.0	1.5	0.0	61.8	96.5
Kyaka II	259	38.2	0.0	4.6	2.3	31.0	76.1
Kyangwali	228	37.0	0.0	8.5	1.8	23.1	70.4
Lobule	125	80.0	0.0	0.0	0.0	19.2	99.2
Nakivale	306	13.3	0.0	0.0	0.0	70.7	84.0
Oruchinga	201	56.2	0.0	0.0	0.5	34.3	91.0
Palabek	289	52.4	7.1	0.0	0.0	37.5	97.0
Palorinya	308	34.0	0.4	0.2	0.2	63.1	97.9
Rhino Camp	323	3.4	0.3	1.1	0.0	90.7	95.5
Rwamwanja	273	62.4	0.0	1.8	2.3	24.4	90.9

Source: Refugee FSNA, December 2020

Figure 18: Main water Treatment Prior to Drinking, Refugee FSNA, Dec 2020

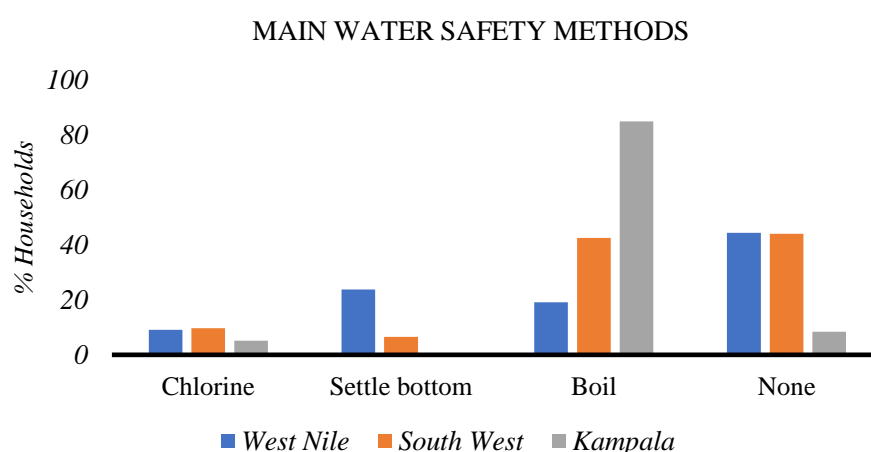


Table 46: Water Treatment Prior to Drinking

<i>WATER SAFETY METHODS</i>										
<i>Location</i>	N	None	Boil	Settle Bottom	Chlorine	Cloth	Filter Composite	Solar Disinfect	Other Method	Don't Know
<i>All</i>	3516	42.9	30.3	16.1	9.1	1.4	1.5	0.4	3.2	1.1
<i>Adjumani</i>	222	39.8	17.8	31.1	12.2	3.0	2.4	2.6	2.0	3.4
<i>Bidibidi</i>	300	33.6	11.7	28.2	27.0	0.8	1.0	0.7	2.5	0.6
<i>Imvepi</i>	300	48.7	14.4	25.7	3.4	0.8	3.8	0.0	9.9	1.3
<i>Kampala</i>	193	9.7	86.2	0.7	2.6	0.3	0.0	0.0	7.0	0.6
<i>Kiryandongo</i>	296	58.8	31.6	4.8	2.7	1.5	0.0	0.0	0.7	0.9
<i>Kyaka II</i>	259	48.1	32.8	5.4	17.8	0.2	1.9	0.0	2.9	2.1
<i>Kyangwali</i>	228	50.2	33.2	9.8	3.0	1.2	1.4	2.7	0.1	0.2
<i>Lobule</i>	125	35.2	29.6	30.4	7.2	2.4	0.0	0.0	0.0	0.0
<i>Nakivale</i>	301	38.5	46.6	5.1	10.8	0.8	0.0	0.0	0.2	0.0
<i>Oruchinga</i>	195	42.6	42.6	5.6	11.8	0.0	0.5	0.0	3.6	0.0
<i>Palabek</i>	289	46.3	12.2	31.3	4.2	4.7	1.3	0.0	0.7	2.6
<i>Palorinya</i>	308	52.7	17.3	27.4	0.3	0.3	1.0	0.0	1.6	1.3
<i>Rhino Camp</i>	233	45.7	12.5	11.6	16.1	1.9	2.5	0.0	12.4	0.9
<i>Rwamwanja</i>	267	35.7	55.9	6.3	8.1	1.6	4.2	0.4	2.1	0.4

Source: Refugee FSNA, December 2020

Water Satisfaction

Satisfaction regarding water supply in the settlement was 58.9% with 30.3% of the respondents being unsatisfied and 10.8% partially satisfied. The satisfaction level was highest in the West Nile settlements (69.3%) and lowest in South West settlements (43.6%). The main reasons for the dissatisfaction were 1) long waiting queue (24.7%) mainly in Adjumani (43.5%), Rwamwanja (39.8%), Nakivale (34.6%) and Kiryandongo (30.1%) 2) irregular water supply (19.2%) in Bidibidi (59.1%) and Imvepi (58.1%); 3) bad quality (19.1%) in Kyaka II (62.3%), Oruchinga (35.0%) and Kyangwali (26.7%) and 4) long distance (13.8%) in Lobule (29.2%), Kyangwali (22.5%), Palabek (21.6%) and Adjumani (20.4%).

Table 47: Water Satisfaction

WATER SATISFACTION														
Location	Level of dissatisfaction				Reasons for dissatisfaction									
	N	No	Partially	Yes	N	Bad quality	Bad taste	Don't know	Have to pay	Irregular supply	Long distance	Long waiting queue	Not enough	Others Specify
All	3516	30.3	10.8	58.9	1445	19.1	3.1	0.1	6.3	19.2	13.8	24.7	9.7	4.1
Adjumani	222	16.8	11.0	72.1	62	1.8	1.6	0.0	4.3	18.1	20.4	43.5	6.2	4.1
Bidibidi	300	11.9	10.0	78.1	66	7.0	0.0	0.0	0.0	59.1	9.9	17.5	4.1	2.3
Imvepi	300	21.7	5.1	73.2	80	1.6	2.5	0.0	0.0	58.1	9.8	7.4	10.9	9.7
Kampala	193	20.0	17.4	62.6	72	14.9	1.2	0.0	48.5	30.6	1.8	0.0	0.0	3.1
Kiryandongo	296	39.1	8.9	52.0	142	8.5	1.2	0.0	4.1	13.9	17.9	30.1	22.8	1.4
Kyaka II	259	41.6	14.3	44.1	145	62.3	2.8	0.0	1.3	7.7	6.7	13.2	2.6	3.4
Kyangwali	228	54.6	7.2	38.2	141	26.7	6.3	0.1	3.7	13.4	22.5	24.4	2.7	0.0
Lobule	125	14.4	4.8	80.8	24	4.2	0.0	0.0	0.0	4.2	29.2	20.8	29.2	12.5
Nakivale	301	64.7	7.3	27.9	217	15.7	2.9	0.0	6.1	15.5	13.3	34.6	11.6	0.4
Oruchinga	195	26.2	14.9	59.0	80	35.0	10.0	0.0	3.8	7.5	7.5	26.3	2.5	7.5
Palabek	289	14.4	12.1	73.5	77	22.0	2.8	1.0	3.8	12.3	21.6	21.8	1.9	12.8
Palorinya	308	14.4	20.9	64.7	109	14.1	5.7	0.0	0.0	21.4	13.6	22.7	14.8	7.6
Rhino Camp	233	33.3	6.8	59.8	94	1.6	0.1	0.0	2.6	23.6	18.6	20.4	25.6	7.5
Rwamwanja	267	42.4	8.6	48.9	136	15.4	2.3	0.0	13.6	10.0	9.8	39.8	6.9	2.3

Source: Refugee FSNA, December 2020

WATER UTILIZATION

Daily water consumption

Overall, 42.0% of the households met the WHO water consumption standard of ≥ 20 litres per person per day which was an increase from 41.0% in January 2020 FSNA survey. 22.1% of households reported average liters of water per person per day of less than 10 l/p/d (highest in Nakivale (39.7%), Kampala (38.4%) and Rwamwanja (36.2%). The average liters of water per person per day was 15.6 litres (≥ 15 l/p/d sphere target), with only three (3) settlements achieving average liters of water per person per day of ≥ 20 l/p/d namely, Adjumani (20L), Kiryandongo (20L) and Palorinya 20L). In comparison to the January 2020 study, there was a reduction in the average liters of water per person per day from 19.4% in January 2020 down to 15.8% in December 2020.

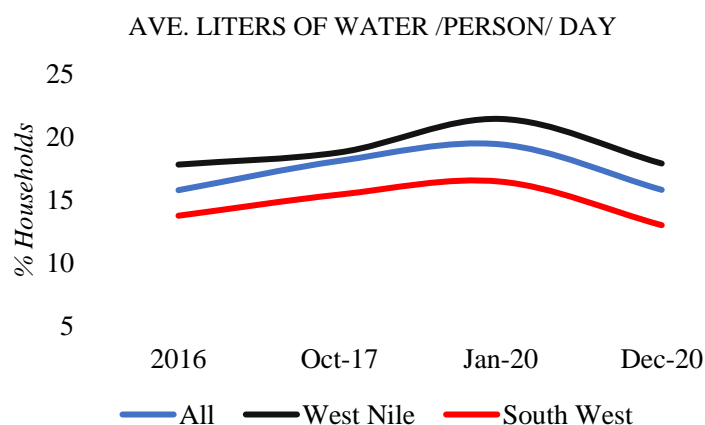
Table 48: Daily Water Consumption

WATER PER PERSON PER DAY

Location	N	<10L	10-14.9L	15-19.9L	≥ 20 L
All	3642	22.1	24.5	11.5	42.0
Adjumani	222	17.1	16.4	11.2	55.3
Bidibidi	300	22.7	24.7	10.4	42.2
Imvepi	314	15.6	28.6	16.8	39.0
Kampala	193	38.4	17.9	7.1	36.6
Kiryandongo	300	12.9	21.4	11.6	54.1
Kyaka II	259	26.7	26.3	8.6	38.5
Kyangwali	228	6.3	23.4	21.5	48.8
Lobule	125	22.4	20.0	12.8	44.8
Nakivale	307	39.7	28.5	8.6	23.3
Oruchinga	201	25.4	29.9	10.4	34.3
Palabek	289	20.2	22.1	8.9	48.8
Palorinya	308	10.7	25.7	11.2	52.4
Rhino Camp	323	19.3	20.8	11.8	48.2
Rwamwanja	273	36.2	32.4	9.8	21.6

Emergency: ≥ 15 litres, Post-emergency: ≥ 20 litres

Figure 19: Trend analysis of average liters of water per person per day



Trends indicate that West Nile has high average l/p/d of water compared to the South West. In 2017, the average l/p/d of water in West Nile slightly reduced owing to the South Sudanese Refugee influx. There is an overall increasing trend in the average l/p/d of ≥ 20 ltrs/p/d (WHO) since 2016 up to December 2020. The improvements are attributed to Consortium Integrated WASH projects in 2020 especially in Response to COVID-19 pandemic linked to increased access to safe and clean water.

While the 20L jerrycan was reported as the least covered water storage container used (51.8%), it accounted for 94.6% of all water collection and storage containers, followed by 10L jerry cans (15.3%), and the 5L jerry cans (10.8%). Buckets included the UNHCR standard CRIs accounted for 5.6%. The proportion of households storing drinking water in narrow necked containers was $\geq 90\%$ in all settlements. The study found that 92.6% of households had water storage capacity of 20-50 liters.

Table 49: Household Water Storage Capacity

<i>Location</i>	<i>N</i>	<i><10L</i>	<i>10-19.9L</i>	<i>20-49.9L</i>	<i>50-99.9L</i>	<i>$\geq 100L$</i>
<i>Total</i>	3642	1.7	2.8	92.6	1.9	1.0
<i>Adjumani</i>	222	0.0	0.5	97.4	2.1	0.0
<i>Bidibidi</i>	300	0.4	2.2	91.9	4.9	0.7
<i>Imvepi</i>	314	0.5	3.6	95.4	0.6	0.0
<i>Kampala</i>	193	4.3	11.3	80.1	1.0	3.4
<i>Kiryandongo</i>	300	0.0	2.6	94.4	0.7	2.3
<i>Kyaka II</i>	259	1.9	2.9	95.1	0.0	0.0
<i>Kyangwali</i>	228	0.0	3.4	93.0	2.8	0.9
<i>Lobule</i>	125	1.6	0.8	92.8	4.0	0.8
<i>Nakivale</i>	307	1.0	1.3	94.2	1.7	1.8
<i>Oruchinga</i>	201	4.0	3.5	90.5	1.0	1.0
<i>Palabek</i>	289	5.8	5.8	83.6	4.2	0.6
<i>Palorinya</i>	308	1.6	1.1	96.0	0.0	1.3
<i>Rhino Camp</i>	323	3.1	0.4	91.9	4.1	0.5
<i>Rwamwanja</i>	273	0.0	2.0	96.7	0.6	0.7

Table 50: Most Common Water Collection and Storage Containers

MOST COMMON CONTAINERS FOR WATER COLLECTION AND STORAGE

<i>Location</i>	<i>N</i>	<i>Jerrycan 20L</i>	<i>Bucket</i>	<i>Basin</i>	<i>Bottle</i>	<i>Saucepan</i>	<i>Drum</i>	<i>Other</i>	<i>Jerrycan 5L</i>	<i>Jerrycan 10L</i>
<i>All</i>	3641	94.6	5.6	2.0	0.2	0.5	1.2	0.9	10.8	15.3
<i>Adjumani</i>	222	99.5	3.6	0.1	0.0	0.0	1.1	0.0	7.6	12.1
<i>Bidibidi</i>	300	95.2	28.1	7.5	0.0	2.6	0.2	0.3	16.4	11.1
<i>Imvepi</i>	314	95.2	4.5	0.9	0.0	0.0	0.4	0.3	11.1	9.3
<i>Kampala</i>	193	76.3	4.8	0.9	1.2	0.9	1.6	9.1	5.9	21.1
<i>Kiryandongo</i>	300	97.0	2.8	0.4	0.4	0.3	2.0	0.8	2.8	27.9
<i>Kyaka II</i>	259	94.7	3.6	0.4	0.0	0.0	0.0	0.0	23.3	14.5
<i>Kyangwali</i>	228	96.6	1.6	0.1	0.0	1.1	2.6	0.0	5.0	17.0
<i>Lobule</i>	125	96.8	12.8	16.8	0.0	0.8	1.6	0.8	17.6	28.8
<i>Nakivale</i>	306	97.6	3.1	1.8	0.0	1.1	1.8	0.5	5.6	10.1
<i>Oruchinga</i>	201	92.5	1.0	0.5	0.5	0.5	1.0	1.0	23.4	20.4
<i>Palabek</i>	289	87.6	7.5	1.6	0.0	0.0	0.6	0.2	16.1	11.9
<i>Palorinya</i>	308	97.2	0.9	0.3	0.4	0.2	1.0	0.7	4.6	8.2
<i>Rhino Camp</i>	323	96.1	2.4	2.3	0.3	0.0	2.9	1.5	9.4	5.3
<i>Rwamwanja</i>	273	97.7	2.2	1.3	0.0	0.0	0.7	0.0	8.7	29.7

Table 51: Availability of Covered water Containers

<i>COVERED WATER CONTAINER</i>										
<i>Location</i>	<i>N</i>	<i>Jerrycan 20L</i>	<i>Jerrycan 10L</i>	<i>Jerrycan 5L</i>	<i>Bucket</i>	<i>Basin</i>	<i>Bottle</i>	<i>Saucepan</i>	<i>Drum</i>	<i>Other</i>
<i>All</i>	7141	51.8	92.2	94.5	97.2	99.0	99.9	99.7	99.4	99.5
<i>Adjumani</i>	453	51.3	94.1	96.3	98.2	100.0	100.0	100.0	99.4	100.0
<i>Bidibidi</i>	580	50.8	94.3	91.6	85.5	96.1	100.0	98.7	99.9	99.8
<i>Imvepi</i>	587	49.1	95.0	94.1	97.6	99.5	100.0	100.0	99.8	99.8
<i>Kampala</i>	335	56.0	87.9	96.6	97.2	99.5	99.3	99.5	99.1	94.8
<i>Kiryandongo</i>	594	51.0	85.9	98.6	98.6	99.8	99.8	99.9	99.0	99.6
<i>Kyaka II</i>	539	54.5	93.0	88.8	98.3	99.8	100.0	100.0	100.0	100.0
<i>Kyangwali</i>	466	52.6	91.6	97.5	99.2	100.0	100.0	99.5	98.7	100.0
<i>Lobule</i>	257	52.9	86.0	91.4	93.8	91.8	100.0	99.6	99.2	99.6
<i>Nakivale</i>	607	50.8	94.9	97.2	98.4	99.1	100.0	99.4	99.1	99.8
<i>Oruchinga</i>	416	55.3	90.1	88.7	99.5	99.8	99.8	99.8	99.5	99.5
<i>Palabek</i>	601	57.9	94.3	92.3	96.4	99.2	100.0	100.0	99.7	99.9
<i>Palorinya</i>	547	45.2	95.4	97.4	99.5	99.8	99.8	99.9	99.4	99.6
<i>Rhino Camp</i>	630	50.7	97.3	95.2	98.8	98.8	99.8	100.0	98.5	99.2
<i>Rwamwanja</i>	529	49.7	84.7	95.5	98.9	99.4	100.0	100.0	99.6	100.0

Source: Refugee FSNA, December 2020

SANITATION

The study found that 93.5% of households used household or communal latrines or flush toilets for fecal disposal. Of those, 77.8% reported using household latrines, 13.4% using communal latrines (13.4%) and 2.3% using flush toilets. Flush toilets constituted 42.6% of fecal disposal in Kampala. Open defecation accounted for 3.7% of all fecal disposal. All settlements except 2 namely, Kiryandongo (81.4%) and Palabek (83.0%) were above the WHO sanitation target ($\geq 85\%$) regarding percentage of households reporting defecating in a toilet. The overall household latrine coverage of 77.8% was below the WHO recommended standard of $\geq 85\%$ but an increase from 67.4% in January 2020 FSNA survey. The improvement is attributed to increased sensitization on proper faecal disposal, and partner support in construction of household latrines e.g., provision of poles and dome shaped concrete slabs. Only 3 of the 14 locations (21.4%) were above the WHO latrine coverage target i.e., Bidibidi (90.8%) Palorinya (93.1%) and Imvepi (89.8%). Open defecation was highest in Kiryandongo (14.4%) and Palabek (11.9%) whereas communal latrine use was highest in Kampala (24.6%), Kiryandongo (17.6%), Oruchinga, (16.9%), Rwamwanja (14.9%), Adjumani (14.8%) and Rhino camp (14.7%)

Table 52: Fecal Disposal Methods (%)

FECAL DISPOSAL METHODS (%)									
Location	N	Household latrine	Communal latrine	Flush Toilet	Total latrines & toilets	Open defecation	Plastic bag	Bucket toilet	Other
<i>All</i>	3641	77.8	13.4	2.3	93.5	3.7	0.0	0.1	2.6
<i>Adjumani</i>	222	80.4	14.8	0.0	95.2	3.2	0.0	0.0	1.6
<i>Bidibidi</i>	300	90.8	7.0	0.3	98.1	0.0	0.2	0.0	1.7
<i>Imvepi</i>	314	89.8	7.8	0.0	97.6	0.6	0.0	0.0	1.8
<i>Kampala</i>	193	32.2	24.6	42.6	99.4	0.0	0.0	0.7	0.0
<i>Kiryandongo</i>	300	63.8	17.6	0.0	81.4	14.4	0.0	0.0	4.2
<i>Kyaka II</i>	259	76.6	12.5	0.0	89.1	5.6	0.0	0.0	5.2
<i>Kyangwali</i>	228	79.9	13.2	0.0	93.1	2.7	0.0	0.0	4.2
<i>Lobule</i>	125	84.0	10.4	0.0	94.4	3.2	0.0	0.0	2.4
<i>Nakivale</i>	306	76.1	18.9	0.2	95.2	2.3	0.4	0.0	2.2
<i>Oruchinga</i>	201	77.6	16.9	0.0	94.5	1.5	0.0	0.0	4.0
<i>Palabek</i>	289	70.4	12.6	0.0	83.0	11.9	0.0	0.0	5.0
<i>Palorinya</i>	308	93.1	5.2	0.0	98.3	0.8	0.0	0.0	0.8
<i>Rhino Camp</i>	323	82.2	14.7	0.0	96.9	1.1	0.0	0.0	2.0
<i>Rwamwanja</i>	273	79.8	14.9	0.3	95.0	2.9	0.0	0.4	1.7

Source: Refugee FSNA, December 2020

Unlike the January FSNA in which Lobule (15.3%), Kyangwali (14.9%), Kyaka (14.8%) and Adjumani (14.3%) reported the highest proportions (>14%) of open defecation, Kiryandongo (14.4%) and Palabek (11.9%) had high rates. Contributing factors for the reduction in proportions and locations practicing open defecation reduced in December 2020 study are strengthened sanitation and hygiene interventions including community sensitization.

Deliberate efforts by WASH partners such as supporting construction of pit latrines were strengthened especially during Refugee influxes and this helped to increase latrine coverage.

HYGIENE

Overall, 59.1% of the households had hand washing stations observed. However, only 56.4% of the overall observed hand washing stations had water in them while only 68.2% of the households had soap at hand washing stations. The percentage of households with soap at hand washing stations was far below the WHO recommended standard of $\geq 90\%$. Only 4 settlements out of 14 locations had proportion of soap availability >75% namely, Rwamwanja (87.5%), Nakivale (82.10%), Kampala (78.8%) and Imvepi (78.4%). One location had proportion of soap availability <50% (Palorinya (47.6%)). The study results show that soap availability at hand washing station is still below the WHO recommended standard of $\geq 90\%$. The proportion improved from 47% in January 2020 to 68.2% in Dec 2020.

Table 53: Observed hand washing station and water availability at hand washing station.

HANDWASHING

	<i>Observed Hand Washing Station (%)</i>					<i>Water Availability (%)</i>			<i>Soap Availability (%)</i>		
<i>Location</i>	N	Not permit to see	Not on dwelling	Observed	Other reason (specify)	N	Water available	Water not available	N	presented after one minute/no soap	Presented within one minute
<i>All</i>	3516	4.3	31.1	59.1	5.5	2146	56.4	43.6	3641	31.8	68.2
<i>Adjumani</i>	222	6.5	20.5	66.4	6.6	147	36.2	63.8	222	38.8	61.2
<i>Bidibidi</i>	300	1.2	20.3	78.5	0.0	235	73.4	26.6	300	27.5	72.5
<i>Imvepi</i>	300	0.2	21.2	73.2	5.4	219	52.4	47.6	314	21.6	78.4
<i>Kampala</i>	193	18.0	20.7	57.0	4.3	110	91.8	8.2	193	21.2	78.8
<i>Kiryandongo</i>	296	10.0	29.8	59.5	0.8	184	52.0	48.0	300	36.6	63.4
<i>Kyaka II</i>	259	1.8	51.1	35.6	11.5	92	47.5	52.5	259	41.3	58.7
<i>Kyangwali</i>	228	1.0	43.9	54.9	0.2	125	48.1	51.9	228	34.6	65.4
<i>Lobule</i>	125	8.0	21.6	68.8	1.6	86	81.4	18.6	125	34.4	65.6
<i>Nakivale</i>	301	1.9	47.0	46.8	4.3	167	54.6	45.4	306	17.9	82.1
<i>Oruchinga</i>	195	0.5	22.6	62.1	14.9	134	56.7	43.3	201	34.8	65.2
<i>Palabek</i>	289	9.6	25.0	55.0	10.5	159	39.6	60.4	289	39.7	60.3
<i>Palorinya</i>	308	2.9	40.2	54.1	2.8	187	57.4	42.6	308	52.4	47.6
<i>Rhino Camp</i>	233	1.7	32.4	59.2	6.7	138	59.9	40.1	323	32.8	67.2
<i>Rwamwanja</i>	267	2.2	29.0	60.7	8.1	162	49.2	50.8	273	12.5	87.5

Source: Refugee FSNA, December 2020

LONG-LASTING INSECTSIDE TREATED MOSQUITO NETS

This section focused on assessment of household ownership, access, and utilization of mosquito nets, with emphasis on Long-Lasting Insecticide Treated Mosquito Nets (LLITNs or ITNs). Module on access and utilization of ITNs provides the health sector with data to estimate the level of household protection from malaria. Malaria is a leading cause of morbidity and mortality especially in children <5 years. In 2019, MoH reported a 40% increase (1 million to 1.4 million cases) in Malaria prevalence from June 2018 to June 2019. This rise was attributed to among other reasons, poor use of mosquito nets, refugee influx and prolonged rains. Throughout 2020, malaria was the leading cause of morbidity and mortality in all refugee settlements.

According to the UNHCR Health Information Systems (HIS), the crude morbidity rate from malaria increased from 36% in 2019 to 39.0% in 2020.

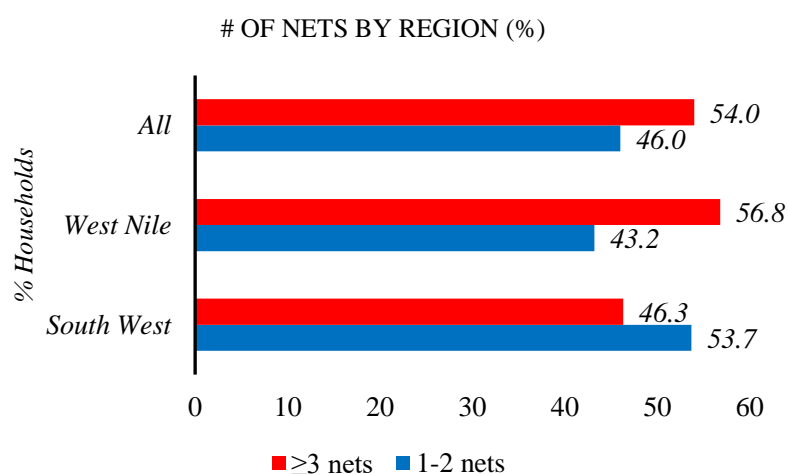
MOSQUITO NET ACCESS

Household Ownership

Study results showed that 75.7% of households owned ITNs, an increase from 50.7% in January 2020. While below the WHO target of >80%, West Nile settlements (80.7%) managed to hit the target compared to South West (77.1%) settlements. 54.0% of the households owned more than 3 nets and 46.0% owned 1-2 nets. Ownership of ≥ 3 nets was highest in West Nile (56.8%) versus 54% in South West.

Overall ownership of ITN was lowest in Kyaka (27.1%) and Kampala (43.8%) and highest (>90%) in Lobule, Imvepi, Rwamwanja, Oruchinga and Adjumani. Ownership of ≥ 3 nets was highest in West Nile settlements (56.8%) while ownership of 1-2 nets was highest in South West (53.7%)

Figure 20: Mosquito Net ownership by region (%)



Source: Refugee FSNA, December 2020

The average number of ITN per household was 3 nets and varied from 1.7 nets (in Kyaka) to 3.9 nets (Adjumani – Lobule). The average number of nets per household improved from 1.8 nets in January 2020 to 3.0 nets in December 2020. The study found a positive correlation (0.501) between household size and the number of LITN in the household, and this relationship meant that the bigger the household size, the higher the number of mosquito nets per household. Households that reported more ITNs had

more household members. Ownership of 3-4 nets (48.1%) was higher in settlements that had been covered by the MoH ITN Under the Net campaign and lower in settlements that were yet to be covered. These included Kyaka, Rhino camp, Palorinya, Palabek and Kampala. Nakivale more than tripled its average number of ITN while Bidibidi, Imvepi and Rwamwanja doubled their average number of mosquito nets because mosquito net distribution by MOH had just been concluded. West Nile had higher average household sizes than South West - a possible reason for higher average ITNs per households as seen Adjumani and Bidibidi for highest proportion of households owning ≥ 3 nets. Lobule, despite having low population had the highest proportion of households owning ≥ 3 nets which can be attributed to own purchase. The study did not look at source of mosquito nets.

Table 54: Household ITN Ownership (%)

<i>HOUSEHOLD ITN OWNERSHIP (%)</i>					
<i>Location</i>	<i>Proportion of HH owning ITN</i>		<i>Number of nets owned</i>		
	<i>N</i>	<i>%</i>	<i>N</i>	<i>1-2 nets</i>	<i>≥ 3 nets</i>
<i>All</i>	3545	75.7	2693	46.0	54.0
<i>Adjumani</i>	221	91.0	201	33.9	66.1
<i>Bidibidi</i>	303	82.6	250	29.2	70.8
<i>Imvepi</i>	306	98.9	303	26.0	74.0
<i>Kampala</i>	178	43.8	78	82.4	17.6
<i>Kiryandongo</i>	297	79.9	240	27.4	72.6
<i>Kyaka II</i>	260	27.1	71	85.4	14.6
<i>Kyangwali</i>	228	82.9	189	62.0	38.0
<i>Lobule</i>	126	99.2	125	20.0	80.0
<i>Nakivale</i>	305	84.9	259	53.1	46.9
<i>Oruchinga</i>	202	94.6	191	59.2	40.8
<i>Palabek</i>	274	64.8	178	60.1	39.9
<i>Palorinya</i>	262	61.9	162	64.8	35.2
<i>Rhino Camp</i>	309	57.4	185	61.0	39.0
<i>Rwamwanja</i>	273	95.8	261	42.4	57.6

Source: Refugee FSNA, December 2020

Trend analyses of household mosquito net ownership since October 2017 suggests a steady improvement in household ownership of mosquito nets of any type. Results further suggest that household ownership of ITN in Kyaka II remained incredibly low (27.1%) and reducing ownership of ITN in Palabek (*from 68.2% in January 2020 to 64.8% in December 2020*). A similar comparison indicates a significant increase in ITN ownership in Nakivale (up by 69.5%), a reduction in ownership in Palabek (down by 3.4%), and static ownership in Kyaka II (up by 3%). Results of the mass distribution from the “under the net” campaign indicated a distribution rate of 83% and 100% in Nakivale and Oruchinga respectively (Okeng UNHCR, 2020) and 95% coverage in Rwamwanja which explain the increased ownership of ITN.

Trend analysis data indicates that West Nile has consistently had higher mosquito net ownership of both any type and ITN than South West. From 2016 to December 2020, West Nile maintained a higher average ITN ownership per household compared to South West. Overall, both regions showed an increase in ITN ownership from 1 and 0.9 ITNs for West Nile and South West respectively in 2016 to 3.2 and 2.4 ITNs per household in West Nile and South West respectively.

Figure 21: Mosquito net type trend analysis by region (%)

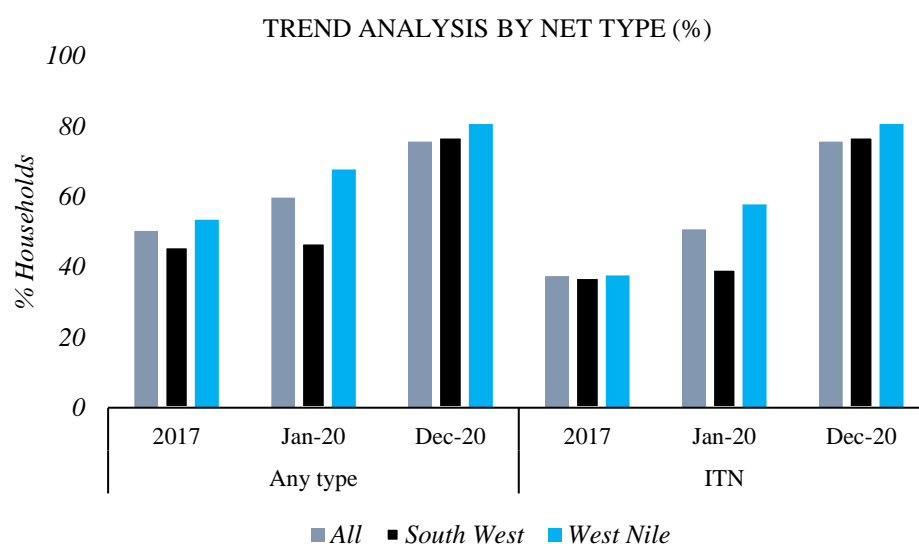
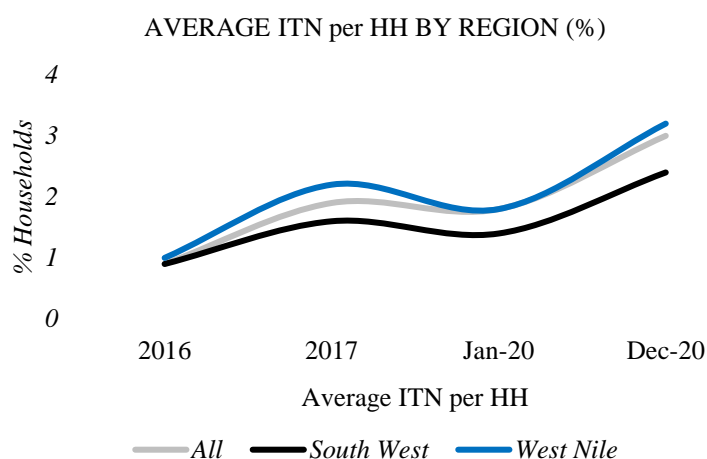


Figure 22: Trend analysis of Average ITN per Household by Region (%)



Source: Refugee FSNA, December 2020

ITN Condition

The study found that 74.7% of ITNs in all locations were in good condition, 17.6% and 7.6% in fair and bad conditions respectively. Lobule (96.4%) had the biggest proportion of ITNs in good condition. Considering population size, Adjumani (88.8%) had the largest proportion of ITNs in good condition while Palorinya (28.1%) had the lowest rates of ITNs in good condition. Palorinya (38.2%) and Rhino Camp (33.3%) had the highest proportion of ITNs in poor state. It should be noted that ITN distribution hadn't been concluded or even started in some locations by the time of the survey. The higher rates of ITNs in good condition (74.7%) are mostly attributed to the *Under the Net* campaign at the time of

the nutrition survey, while locations that were awaiting the distribution reported higher rates of ITNs in poor and fair state i.e. Kyaka, Palorinya, Palabek and Kampala

Table 55: Observed condition of mosquito nets owned by households (%)

<i>ITN CONDITION (%)</i>				
Location	N	Good	Fair	Poor
<i>All</i>	14808	74.7	17.7	7.6
<i>Adjumani</i>	1194	88.8	8.3	2.9
<i>Bidibidi</i>	1578	66.0	24.9	9.1
<i>Imvepi</i>	2075	86.3	12.1	1.6
<i>Kampala</i>	262	78.2	17.2	4.6
<i>Kiryandongo</i>	1553	83.7	14.3	2.0
<i>Kyaka II</i>	289	58.8	20.4	20.8
<i>Kyangwali</i>	868	77.4	21.1	1.5
<i>Lobule</i>	721	96.4	3.3	0.3
<i>Nakivale</i>	1349	85.7	12.4	1.9
<i>Oruchinga</i>	953	82.3	17.5	0.1
<i>Palabek</i>	719	59.7	27.5	12.8
<i>Palorinya</i>	746	28.1	33.6	38.2
<i>Rhino Camp</i>	1089	34.9	31.8	33.3
<i>Rwamwanja</i>	1392	82.7	15.9	1.4

Source: Refugee FSNA, December 2020

MOSQUITO NET UTILIZATION

Mosquito net sharing

The average number of persons per net was 3 and ranged from 2.6 people per net (Rhino camp, Imvepi) and 3.2 people per net in Rwamwanja, which falls short of the maximum of two persons per net (WHO, universal net coverage). Trend analysis shows that the overall average number of persons per net also reduced from 3.5 persons per net in October 2017 to 3 persons per net in December 2020– an improvement. The universal coverage also stood at 32.1%.

Mosquito net distribution follows a 1 net for every 2 individuals universal coverage approach for all households.

The study found that 76.3% of household shared nets, with the highest proportion in Rwamwanja (90.0%) and lowest proportion in Rhino camp (48.6%). Interestingly, more households in Rhino camp reported not sharing nets (51.4%) than any other settlement, possibly attributed to own purchase. The mosquito nets were mainly shared by 3-4 people (64.9%), highest in Kyaka (82.4%), Rwamwanja (79.0%), Bidibidi (76.2%) and lowest in Kampala (44.0%), Rhino camp (45.5%) and Imvepi (47.0%). The proportion of universal coverage (net sharing by 2 people only) was 32.1%, with the highest proportion in Imvepi (53.0%) and Rhino camp (52.7%), and lowest in Kyaka (15.1%) and Rwamwanja (17.7%). Only a minimal proportion of households (3.0%) reported net sharing by 5 or more people.

The recent distribution of ITN by MOH can explain the above findings. Locations that had recently received nets reported reduced number of people per net compared to locations where distribution had not taken place.

Table 56: Mosquito Net Sharing (%)

MOSQUITO NET SHARING (%)

<i>Location</i>	<i>N</i>	<i>2 (Universal Coverage)</i>	<i>3-4</i>	<i>≥ 5</i>	<i>Average/ Net</i>
<i>Overall</i>	10836	32.1	64.9	3.0	3.0
<i>Adjumani</i>	930	28.1	65.9	6.0	3.0
<i>Bidibidi</i>	1010	20.9	76.2	2.9	3.1
<i>Imvepi</i>	1429	53.0	47.0	0.0	2.6
<i>Kampala</i>	191	48.2	44.0	7.8	2.8
<i>Kiryandongo</i>	1121	40.2	57.4	2.4	2.8
<i>Kyaka II</i>	238	15.1	82.4	2.5	3.1
<i>Kyangwali</i>	694	35.7	61.5	2.8	2.9
<i>Lobule</i>	502	27.9	70.1	2.0	3.0
<i>Nakivale</i>	1114	24.9	70.6	4.5	3.1
<i>Oruchinga</i>	794	29.7	68.0	2.3	3.0
<i>Palabek</i>	550	28.5	66.0	5.5	3.0
<i>Palorinya</i>	509	23.8	73.7	2.5	3.0
<i>Rhino Camp</i>	527	52.7	45.4	1.9	2.6
<i>Rwamwanja</i>	1227	17.7	79.0	3.3	3.2

Source: Refugee FSNA, December 2020

Preceding the study, the proportion of individuals that had slept in ITNs the night before was only 69.5%. Imvepi (92.9%), Oruchinga (91.4%), Lobule (89.2%), Rwamwanja (87.0%) and Kiryandongo (81.1%) had the highest proportion (>80%), while Kyaka (22.9%) and Kampala (29.9%) had the lowest. The total proportion of pregnant women and children aged 0-59 years that had slept in the net the night before the survey were only 40.9% and 72.0% respectively. This shows an increase in comparison to 2017 FSNA results where total utilization was 24.0%, and utilization among pregnant women and children 0-59 months was 55.8% and 36.8% respectively (UNHCR, 2017). Net distribution had not commenced in Kyaka and Kampala by the time of the study.

Table 57: Proportion of HH members that Slept under ITN the night before (%)*HH MEMBERS SLEPT UNDER ITN PREVIOUS NIGHT (%)*

<i>Location</i>	N	All	N	Pregnant	N	<5 years
<i>Overall</i>	21295	69.5	760	40.9	3699	72.0
<i>Adjumani</i>	1512	79.0	36	55.6	230	82.6
<i>Bidibidi</i>	2185	72.2	65	32.3	393	75.6
<i>Imvepi</i>	2234	92.9	93	61.3	382	93.7
<i>Kampala</i>	876	29.9	26	34.6	124	31.4
<i>Kiryandongo</i>	1916	81.1	33	12.1	323	81.1
<i>Kyaka II</i>	1263	22.9	72	16.7	260	24.6
<i>Kyangwali</i>	1091	79.6	52	38.5	223	80.3
<i>Lobule</i>	808	89.2	29	62.1	123	95.1
<i>Nakivale</i>	1795	75.2	57	45.6	337	78.0
<i>Oruchinga</i>	1043	91.4	40	50.0	201	93.0
<i>Palabek</i>	1351	53.2	42	30.9	250	56.8
<i>Palorinya</i>	1509	49.4	65	32.3	198	52.0
<i>Rhino Camp</i>	2112	51.6	75	37.3	322	50.6
<i>Rwamwanja</i>	1600	87.0	75	56.0	329	90.0

Source: Refugee FSNA, December 2020

The improvement in ITN ownership, access, and utilization since October 2017 suggests increase in investment in malaria preventive interventions by the health sector led by MoH. Data collection was implemented in December 2020 when MoH had rolled out the national mosquito net distribution campaign in which refugee hosting districts were prioritized. A mop up was conducted to ensure that all eligible households received the mosquito nets. To complement MoH, UNHCR through her health and nutrition partners supports mosquito net distribution as part of the routine health services targeting different groups e.g., pregnant women attending ANC. These activities are possible contributing factors to the improved trends.

FOOD SECURITY

Food security exists when all people, at all time, have physical, social, and economic access to sufficient, safe, and nutritious food which meets their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996)¹⁸. Results of the food security status of settlement-based and Kampala-based refugee households are presented following the four dimensions of availability, accessibility, utilization, and stability.

FOOD AVAILABILITY

Food availability occurs when adequate amount of food is available on a consistent basis from food produced, purchased, or received from other sources. Key factors that influence food availability include access to land for agricultural production, level of crop production and ownership of livestock.

General Food Assistance (GFA)

Access

Overall, access to general food assistance (GFA) provided by WFP was 89.7%. Settlements such as Imvepi and Kyangwali reported 100% access to GFA while Kampala reported the lowest access to GFA with only 27.1% with access to GFA. Greater than 80% GFA access was reported in Adjumani, Bidibidi, Kiryandongo, Kyaka II, Lobule, Nakivale, Oruchinga, Palabek, Palorinya, Rhino camp and Rwamwanja. Most notably, a bimonthly GFA modality was adopted in some locations to mitigate the spread of COVID-19 pandemic. However, this was dependent on WFP's food assistance commodity pipeline. Overall, a greater percentage (71.7%) reportedly received double rations. It was only in Palabek (72.0%), Oruchinga (90.3%), Nakivale (96.5%), Kiryandongo (73.9%) and Kampala (72.1%) that had most respondents receiving single distributions.

Table 58: Access to GFA (%), Refugee FSNA, December 2020

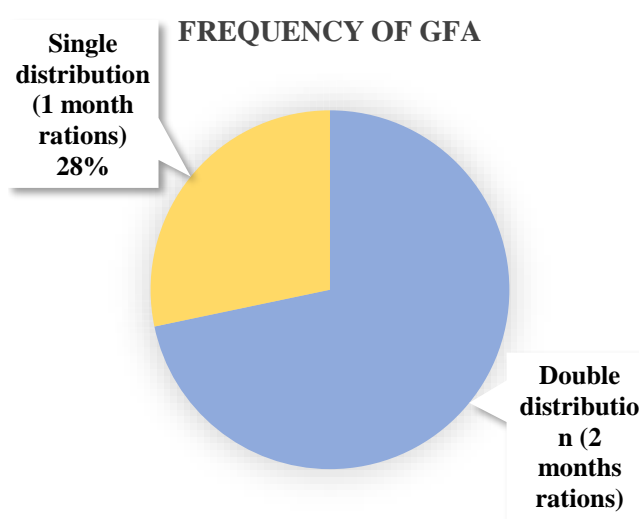
Location	N	Don't Know	No	Yes
<i>All</i>	3632	0.3	10.0	89.7
<i>Adjumani</i>	231	0.0	16.7	83.3
<i>Bidibidi</i>	305	0.0	2.0	98.0
<i>Imvepi</i>	309	0.0	0.0	100.0
<i>Kampala</i>	188	0.6	72.3	27.1
<i>Kiryandongo</i>	300	0.0	1.6	98.4
<i>Kyaka II</i>	260	0.2	3.0	96.8
<i>Kyangwali</i>	228	0.0	0.0	100.0
<i>Lobule</i>	126	0.0	11.1	88.9
<i>Nakivale</i>	308	0.0	18.7	81.3
<i>Oruchinga</i>	202	0.0	8.4	91.6
<i>Palabek</i>	294	0.0	4.3	95.7
<i>Palorinya</i>	283	1.0	6.7	92.3
<i>Rhino Camp</i>	324	2.3	6.8	90.9
<i>Rwamwanja</i>	273	0.0	9.6	90.4

¹⁸ World Food Summit 1996, Rome. Declaration on World Food Security.

Frequency of General Food Distribution

Upon registration, refugee households are issued with a ration card to enable them access food assistance at designate Final Distribution Points (FDPs) in their respective settlements. The General Food Distribution (GFD) in the settlements embraces four principles: (a) Fairness: where refugee households receive the same food composition and quantities. (b) Accountability: food distributions are monitored; household food lists are verified, and the food quantities and ration are monitored; (c) Transparency: populations are informed of the food ration and composition and duration; and (d) Gender: the general food distribution considers gender relations and roles with a focus on children and women.

Figure 23: Overall Frequency of GFA (%)



Modality of General Food Assistance

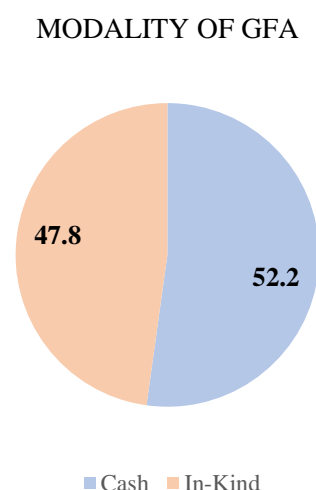
General food assistance was provided as cash food assistance under Cash Based Transfers (CBT) or as in-kind food assistance depending on market functionality in each location. Overall, cash food assistance was 52.2% while the in-kind food assistance followed closely at 47.8%. Regionally, cash food assistance was the major or almost the only food assistance modality in South West compared to West Nile. Certain groups like new arrivals remain on in-kind food assistance. Cash food assistance was dominant in Rwamwanja (98.5%), Oruchinga (97.3%), Nakivale (94.3%), Lobule (90.2%), Kyangwali (99.8%), Kyaka (99.8%) and Kampala (92.2%) while the In-kind food assistance was highest in Palabek (99.8%), Bidibidi (97.1%), Palorinya (96.9%) and Imvepi (96.1%).

Table 59: Modality of GFA (%)

MODALITY OF GFA			
Location	N	Cash	In-Kind
All	3257	52.2	47.8
Adjumani	192	50.7	49.3
Bidibidi	299	2.9	97.1
Imvepi	309	3.9	96.1
Kampala	51	92.2	7.8
Kiryandongo	296	68.2	31.8
Kyaka II	252	99.8	0.2
Kyangwali	228	99.8	0.2
Lobule	112	90.2	9.8
Nakivale	250	94.3	5.7
Oruchinga	185	97.3	2.7
Palabek	281	0.2	99.8
Palorinya	261	3.1	96.9
Rhino Camp	294	29.4	70.6
Rwamwanja	246	98.5	1.5

Source: Refugee FSNA, December 2020

Figure 24: Overall Modality of GFA (%)



CBT programmes afford beneficiaries the dignity and opportunity of choice to select the food that they need the most, while also boosting the local market economy which profits the wider community. In areas where food is available in the local market, cash transfers will enable WFP to provide food

assistance more efficiently by shortening delivery lead times and costs for transport and storage. The appropriateness of implementing CBT in the selected areas was determined through an integrated analysis of needs, market capacities, cost-effectiveness, and external capacity.

Duration of General Food Assistance

The study looked at the duration of both in-kind cash-based food assistance based on the previous general food distribution/cash assistance cycles across the settlements. The question was only directed to households that had received the previous GFD cycle. Due to the GFA adaptations to COVID-19, some settlements had received double rations at the time of the assessment, which explains why some households reported duration of more than 30 days which is hardly the case in past assessments and Post Distribution Monitoring (PDMs) with average duration around 22 days.

Table 60: Duration of In-kind Food Assistance (%)

Location	N	7 Days	8-14 Days	14-21 Days	22-30 Days	>30 Days	Ave. duration corrected for 1-month cycle (days)
<i>All</i>	1460	16.4	5.4	11.4	23.4	43.4	14.8
<i>Adjumani</i>	100	4	1	16	41	38	17.0
<i>Bidibidi</i>	296	13.5	1.4	2.4	21.6	61.2	18.7
<i>Imvepi</i>	306	5.2	5.6	7.2	14.1	68	18.5
<i>Lobule</i>	11	27.3	18.2	9.1	45.5	0	8.9*
<i>Kampala</i>	4	25	0	25	50	0	14.4*
<i>Kiryandongo</i>	67	13.4	10.5	28.4	43.3	4.5	13.9
<i>Kyaka II</i>	1	100	0	0	0	0	-
<i>Kyangwali</i>	2	0	50	50	0	0	12.5*
<i>Nakivale</i>	12	16.7	33.3	8.3	25	16.7	14.7*
<i>Oruchinga</i>	5	20	20	20	0	40	15*
<i>Palabek</i>	235	31.5	9.4	23.4	28.9	6.8	16.0
<i>Palorinya</i>	227	33	4.4	8.8	11	42.7	13.7
<i>Rhino Camp</i>	190	6.3	4.2	11.6	31.6	46.3	18.0
<i>Rwamwanja</i>	4	0	25	25	50	0	11.1*

Source: Refugee FSNA, December 2020

In-kind

Overall, 43.4% reported duration of more than 30 days accounting for the highest in-kind assistance duration percentage and the lowest reported duration was 8-14 days at 5.4%. The longer duration (>30 days) was consistent with receipt of double distribution. Settlements that were due to receive their in-kind assistance at the time of the assessment reported the lowest duration as seen in the table. Adjusting all settlements to 1-month GFD cycle, the average duration of in-kind food was 14.8 days, with Bidibidi (18.7 days) and Palorinya (13.7 days) with the highest and lowest respectively for majority in-kind receiving settlements. Double distribution was adapted to mitigate the spread of COVID-19 pandemic.

Cash

Duration of cash assistance varied across the different settlements because of the varied distribution dates/cycles. Overall, 20.3% reported duration of 7 days while 17.8% reported that the cash would last more than 30 days. In-kind dominant settlements like Palabek recorded 0% under cash duration responses. Adjusting all locations to 1 month, the average duration of cash food assistance was 12.3 days, slightly shorter than the duration for in-kind.

Table 61: Duration of Cash assistance (%)

Locations	N	7 Days	8-14 Days	14-21 Days	22-30 Days	>30 Days	Ave. duration corrected for 1-month GFA cycle (days)
<i>All</i>	1598	20.3	19.4	22.1	20.4	17.8	12.3
<i>Adjumani</i>	88	8.0	8.0	30.7	29.6	23.9	14.9*
<i>Bidibidi</i>	5	60.0	0.0	20.0	20.0	0.0	7.2*
<i>Imvepi</i>	4	0.0	0.0	0.0	0.0	100.0	20.7*
<i>Lobule</i>	100	4.0	5.0	10.0	35.0	46.0	18.1
<i>Kampala</i>	47	57.5	10.6	6.4	10.6	14.9	10.3*
<i>Kiryandongo</i>	165	12.7	22.4	32.1	26.7	6.1	16.0
<i>Kyaka II</i>	233	34.8	24.0	13.7	21.9	5.6	8.7
<i>Kyangwali</i>	208	6.7	7.7	16.8	28.4	40.4	16.4
<i>Nakivale</i>	226	23.9	35.0	34.5	6.6	0.0	13.7
<i>Oruchinga</i>	172	37.8	29.7	21.5	8.1	2.9	12.0
<i>Palabek</i>	0	0.0	0.0	0.0	0.0	0.0	0.0*
<i>Palorinya</i>	5	80.0	20.0	0.0	0.0	0.0	3.2*
<i>Rhino Camp</i>	108	5.6	5.6	6.5	23.2	59.3	17.6*
<i>Rwamwanja</i>	237	15.6	20.3	30.0	21.1	13.1	11.0

Source: Refugee FSNA, December 2020

Note:

For both assistance modalities, locations with significantly low counts fall in locations where almost 100% of GFA is of either modality. The few counts are for the exceptional groups

Responses for Kampala were linked to the 3-month food assistance (in-kind and cash) extended to Kampala urban refugees during the COVID-19 lockdown.

Reasons for not getting General Food Assistance

Overall, of the individuals who reported not getting food assistance, 33.3% said they were not registered, 11.2% said they were registered but determined not eligible while 14.7% didn't know the reasons why they did not get assistance. Palorinya (93.0%), Palabek (86.2%) and Rwamwanja (68.7%) had the highest percentage of individuals who missed out on the food assistance due to not being registered. Majority in Lobule (92.9%) and Adjumani (65.9%) reported that the ration cards were not given even when they were eligible. Overall, 22.9% respondents said they were not getting food assistance due to other reasons such as long distances to the food assistance points, being urban refugees, other engagements, and lost attestation/ ration cards.

Table 62: Reasons for not receiving GFA (%)

REASONS FOR NOT RECEIVING GFA (%)							
Location	N	Not registered	Ration not given if eligible	card even	Registered, determined not eligible	Other	Don't know
All	351	33.3	18.0		11.2	22.9	14.7
Adjumani	38	26.2	65.9		7.8	0.0	0.0
Bidibidi	6	38.3	12.2		23.9	0.0	25.6
Kampala	136	7.2	8.1		20.0	30.3	34.4
Kiryandongo	5	49.9	50.1		0.0	0.0	0.0
Kyaka II	8	27.5	6.0		0.0	66.5	0.0
Lobule	14	0.0	92.9		7.1	0.0	0.0
Nakivale	56	58.0	5.4		8.4	28.1	0.1
Oruchinga	17	52.9	23.5		5.9	17.6	0.0
Palabek	4	86.2	13.8		0.0	0.0	0.0
Palorinya	18	93.0	3.3		3.7	0.0	0.0
Rhino Camp	22	46.1	8.0		0.0	40.8	5.1
Rwamwanja	26	68.7	0.0		0.0	23.5	7.8

Source: Refugee FSNA, December 2020

GFA cash assistance expenditure

Overall, 95.8% of the HHs spent GFA cash on buying food items, 26.6% on debt repayments and 24.5% HHs spent on household and personal hygiene items. Also 22.0% of HHs reportedly spent on health care. All settlements with exception of Palorinya reported > 80% GFA cash assistance expenditure on food. In Palorinya only 20.0% of HHs spent the GFA cash on food with the majority of HHs (59.1%) spending the GFA cash spent on transport and communications, and investment in small scale businesses. Key to note is that GFA cash is unrestricted and unconditional, therefore, refugees have the choice to spend it as they see fit. This benefits the local economy when refugees pay for essential goods and services.

Table 63: General Food Assistance Cash Expenditure (%)

Location	N	Food (%)	Water (%)	Hygiene (%)	Healthcare (%)	Utilities (%)	Energy (%)	Livelihoods (%)	Debt (%)	Savings (%)	Education (%)	Other (%)	Don't Know
<i>Overall</i>	1690	95.8	9.6	24.5	22.0	10.8	21.8	5.7	26.6	5.5	7.0	4.7	0.2
<i>Adjumani</i>	95	94.7	2.6	28.4	23.4	12.6	28.9	7.9	10.0	10.3	10.9	11.7	1.0
<i>Bidibidi</i>	8	100.0	39.5	87.1	76.2	0.0	0.0	23.8	12.9	0.0	0.0	0.0	0.0
<i>Imvepi</i>	12	93.5	0.0	93.5	93.5	64.4	35.3	35.3	6.1	0.0	0.0	12.6	0.0
<i>Kampala</i>	47	84.7	17.2	14.6	10.4	58.3	12.5	2.1	22.3	7.0	0.0	0.0	0.0
<i>Kiryandongo</i>	197	96.4	9.9	24.0	31.6	3.2	21.9	1.8	10.7	3.0	18.9	4.4	0.0
<i>Kyaka II</i>	252	97.6	3.3	27.0	15.0	12.0	20.7	5.4	60.3	4.4	1.8	5.7	0.0
<i>Kyangwali</i>	228	96.9	7.1	17.2	20.2	1.3	6.4	1.4	5.7	0.3	0.6	1.1	0.0
<i>Lobule</i>	101	92.1	12.9	55.4	72.3	23.8	27.7	24.8	16.8	17.8	30.7	7.9	0.0
<i>Nakivale</i>	236	98.9	18.8	13.1	8.9	10.1	27.9	2.1	26.5	1.3	1.3	3.6	0.0
<i>Oruchinga</i>	180	95.0	3.3	25.0	6.7	7.2	21.1	3.3	37.8	5.6	1.7	1.1	0.6
<i>Palorinya</i>	8	20.0	0.0	0.0	9.8	0.0	0.0	11.1	0.0	0.0	0.0	59.1	0.0
<i>Rhino Camp</i>	85	94.9	10.5	42.4	48.9	14.5	34.5	19.2	26.3	11.6	24.0	13.7	2.3
<i>Rwamwanja</i>	241	97.2	13.6	16.3	13.6	9.6	24.7	3.0	29.7	8.9	3.0	2.4	0.0

Source: Refugee FSNA, December 2020

Non GFA Cash Grants

Overall, 13.8% of respondents reportedly benefitted from non GFA cash grants. Bidibidi (27.1%) Lobule (26%) and Oruchinga (20.8%) reported the highest rates. Non GFA cash grants are part of the livelihood initiatives that are currently implemented across the settlements though still on low scale. Palabek and Palorinya had the lowest percentage of HHs benefiting from non GFA cash assistance at 2.7% and 3.7% respectively.

Table 64: Non GFA cash assistance (%)

<i>NON GFA CASH ASSISTANCE (%)</i>				
Location	N	Yes (%)	No (%)	Don't know
<i>All</i>	3347	13.8	85.6	0.6
<i>Adjumani</i>	218	13.3	86.7	0.0
<i>Bidibidi</i>	301	27.1	72.4	0.6
<i>Imvepi</i>	297	14.7	85.0	0.3
<i>Kampala</i>	178	12.0	88.0	0.0
<i>Kiryandongo</i>	251	15.6	84.4	0.0
<i>Kyaka II</i>	237	8.9	90.2	0.9
<i>Kyangwali</i>	179	17.7	82.3	0.0
<i>Lobule</i>	100	26.0	74.0	0.0
<i>Nakivale</i>	289	12.2	87.0	0.8
<i>Oruchinga</i>	168	20.8	79.2	0.0
<i>Palabek</i>	294	2.7	95.7	1.6
<i>Palorinya</i>	280	3.7	95.0	1.3
<i>Rhino Camp</i>	309	15.3	84.1	0.6
<i>Rwamwanja</i>	246	13.4	85.9	0.7

Source: Refugee FSNA, December 2020

Unmet Basic Needs

Overall, the study found that 47.7% of the food needs were unmet followed by hygiene items at 41.2%. The unmet needs for Utilities, Health care and Education were 35%, 32.5% and 24.7% respectively. In Kampala, utilities (62.7%) were the leading unmet needs while health care (64.5%) was the leading unmet need in Lobule. The rest of the settlements reported food as their leading unmet need, which this could be attributed to food ration cuts by 30% at the time of the study.

Table 65: Unmet basic needs (%)

Location	N	Food (%)	Water (%)	Hygiene (%)	Healthcare (%)	Utilities (%)	Energy (%)	Assets (%)	Debt (%)	Savings (%)	Education (%)	Other (%)	Don't Know	None (%)
<i>Overall</i>	3367	47.7	12.6	41.2	32.5	34.0	17.1	24.7	12.0	14.7	24.7	6.1	0.6	6.8
<i>Adjumani</i>	218	52.4	17.4	36.9	46.7	38.1	13.9	33.6	4.7	14.6	35.7	6.6	0.0	11.9
<i>Bidibidi</i>	301	48.0	16.5	45.3	37.9	14.1	28.3	26.5	4.7	18.3	15.9	3.0	0.0	4.8
<i>Imvepi</i>	304	42.2	15.2	61.6	44.5	54.2	23.4	39.4	15.3	17.8	26.5	15.0	0.5	1.9
<i>Kampala</i>	177	40.2	7.7	23.2	27.1	62.7	11.3	10.6	21.4	23.1	15.5	2.5	0.0	18.8
<i>Kiryandongo</i>	253	52.5	21.0	30.5	40.1	21.0	10.0	7.0	12.0	4.1	41.3	5.3	0.7	6.4
<i>Kyaka II</i>	245	51.7	8.4	55.8	21.1	58.5	23.4	44.3	23.6	31.6	18.4	6.9	0.0	4.6
<i>Kyangwali</i>	182	51.6	13.9	51.9	31.7	21.3	5.0	24.8	7.7	2.3	16.2	1.3	0.0	5.8
<i>Lobule</i>	107	61.7	10.3	55.1	64.5	17.8	40.2	23.4	10.3	8.4	29.9	6.5	0.0	1.9
<i>Nakivale</i>	285	58.0	10.5	34.2	15.4	24.5	18.6	16.4	19.1	10.0	23.0	2.5	0.2	5.7
<i>Oruchinga</i>	171	35.1	1.8	33.3	17.5	33.9	17.0	14.0	10.5	29.2	9.9	2.9	0.0	15.2
<i>Palabek</i>	293	47.3	11.1	40.9	39.6	38.4	15.4	33.0	1.1	12.2	28.9	8.7	0.2	8.3
<i>Palorinya</i>	281	40.0	8.3	31.7	21.4	25.3	8.5	19.3	5.4	5.8	24.6	0.3	0.4	4.7
<i>Rhino Camp</i>	307	43.5	24.0	47.8	36.2	41.7	17.9	29.0	13.1	17.7	33.7	13.7	4.5	4.2
<i>Rwamwanja</i>	243	49.1	1.8	26.9	21.5	20.6	11.9	12.9	20.6	11.2	19.2	4.5	0.9	7.2

Source: Refugee FSNA, December 2020

Access to land for agricultural activities

Results of access to land for agricultural production and crops produced are indicated in the demography section. Overall, 53.3% of settlement-based refugee households had access to land for agricultural production in the first season of 2020. The highest number of households was found in Rwamwanja (80.3%) followed by Kiryandongo (78.5%). Limited access to land for agricultural production was more pronounced in Adjumani (34.8%) and Palabek settlement (37.7%).

Most households produced maize and beans with the highest percentage of maize-producing households in Kiryandongo (98.0%). Beans were produced mostly in Rwamwanja, reported by 89.2% of the households.

Table 66: Household Access to agricultural land and crops produced

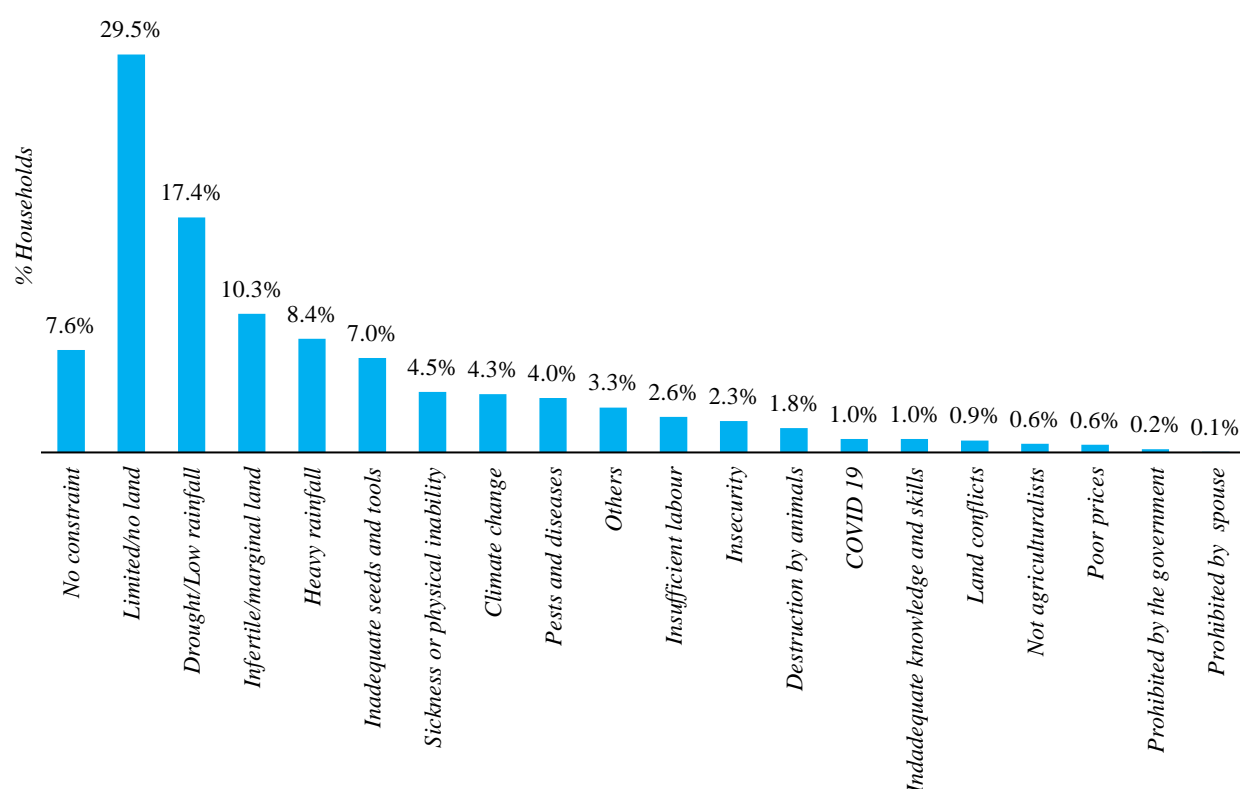
<i>PERCENT ACCESS TO LAND FOR AGRICULTURAL PRODUCTION IN THE FIRST SEASON OF 2020, CROPS PRODUCED, BY SETTLEMENT, REFUGEE FSNA 2020</i>										
Location	N (HHs)	Access to Agric Land	Kitchen Garden	Crops Produced In 2020 Season 1						
		Yes (%)	Yes (%)	Maize (%)	Sorghum (%)	Beans (%)	Ground nuts(%)	Simsim (%)	Cassava (%)	Sweet potatoes
<i>Settlements</i>	3,302	53.3	44.5	69.2	10.6	37.1	10.1	12.9	16.8	8.9
<i>Adjumani</i>	233	34.8	41.6	44.4	17.3	8.6	22.2	18.5	16.0	13.6
<i>Bidibidi</i>	309	59.5	80.3	39.7	21.2	6.0	39.1	35.3	21.2	15.2
<i>Imvepi</i>	311	38.6	61.1	43.3	23.3	0.8	8.3	30.8	2.5	15.8
<i>Kiryandongo</i>	251	78.5	30.3	98.0	0.0	21.8	3.6	0.5	16.2	5.1
<i>Kyaka II</i>	251	62.9	26.7	81.6	0.0	71.5	2.5	0.0	14.6	0.0
<i>Kyangwali</i>	220	56.4	29.5	96.0	0.0	29.8	1.6	0.0	15.3	0.8
<i>Lobule</i>	126	73.0	79.4	39.1	21.7	29.3	5.4	6.5	54.3	16.3
<i>Nakivale</i>	310	50.0	29.4	76.1	0.0	80.0	2.6	0.0	11.0	2.6
<i>Oruchinga</i>	197	76.1	34.0	85.3	5.3	84.7	4.7	0.7	8.0	4.0
<i>Palabek</i>	252	37.7	57.1	42.1	18.9	2.1	6.3	29.5	30.5	30.5
<i>Palorinya</i>	261	47.9	40.2	62.4	20.0	3.2	14.4	31.2	4.0	23.2
<i>Rhino Camp</i>	317	50.2	58.0	49.7	25.8	1.9	18.9	29.6	20.8	5.7
<i>Rwamwanja</i>	264	80.3	42.4	94.3	1.4	89.2	1.9	0.0	17.0	1.4
<i>Kampala</i>	174	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Refugee FSNA, December 2020

Main constraint to crop production

Production constraints influence the amount of food available from own production which in turn influences food security. Figure 25 shows the different constraints households face during crop production in the first season of 2020. About 8% of refugee households reported not to have experienced any constraint to crop production during the first season of 2020. Like in previous FSNA's, the main constraint to crop production has remained limited or no access to land (29.5%). This is followed by drought/low rainfall (17%) and infertile or marginal land (10%). The results suggest that improving access to land may be one of the ways to improve crop production by refugee households.

Figure 25: Main constraint to crop production among refugee households, proportion of households that have access to land, FSNA 2020



Source: Refugee FSNA, December 2020

Livestock Ownership

Ownership and sale of livestock and livestock products contribute to household food security through economic access and consumption of livestock products by the household. Sale of livestock (and assets in general) could also be a coping mechanism in response to shocks. The study found that less than half (48.5%) of settlement-based refugee households owned livestock (Table 67). The highest proportion of households that owned livestock was reported in Lobule (65.9%) and the lowest in Kyangwali (23.6%). About 2 percent of Kampala-based refugee households owned any livestock. Across all locations, most households owned between one to three livestock. The most owned livestock was poultry, with 18.9% owning more than 10 birds.

Table 67: Livestock ownership (%)

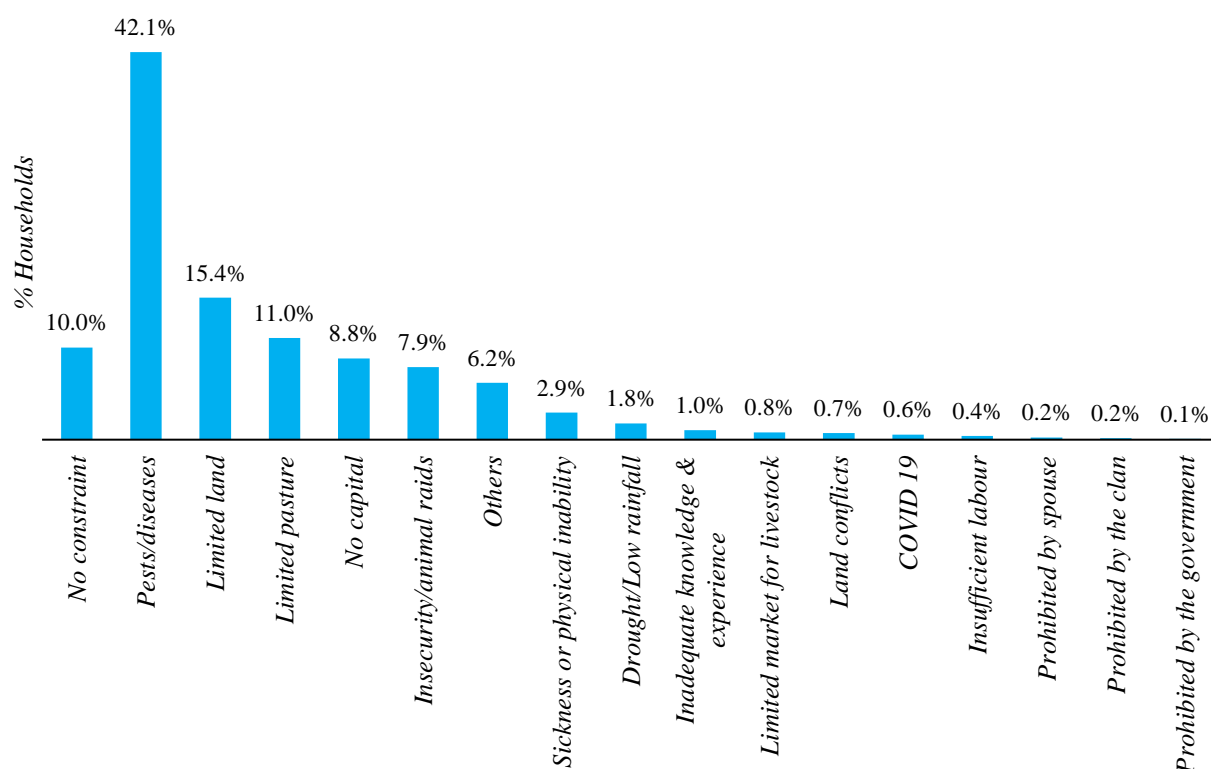
<i>Background Characteristics</i>	<i>All</i>	<i>Adjumani</i>	<i>Bidibidi</i>	<i>Imvepi</i>	<i>Kiryandongo</i>	<i>Kyaka II</i>	<i>Kyangwali</i>	<i>Lobule</i>	<i>Nakivale</i>	<i>Oruchinga</i>	<i>Palabek</i>	<i>Palorinya</i>	<i>Rhino Camp</i>	<i>Rwamwanja</i>	<i>Kampala</i>
# of HHs	3,302	233	309	311	251	251	220	126	310	197	252	261	317	264	174
Own any livestock (%)															
<i>No</i>	59.7	51.5	42.1	40.2	70.9	71.3	76.4	34.1	71.3	68	53.2	59	51.7	58.7	98.3
<i>Yes</i>	40.3	48.5	57.9	59.8	29.1	28.7	23.6	65.9	28.7	32	46.8	41	48.3	41.3	1.7
Cattle owned (%)															
<i>One-Three</i>	69.2	42.9	66.7	0	0	0	100	100	58.3	100	100	66.7	25	100	0
<i>Four-Six</i>	9.6	14.3	33.3	0	0	0	0	0	16.7	0	0	0	25	0	0
<i>Seven-Ten</i>	11.5	14.3	0	100	0	100	0	0	8.3	0	0	33.3	25	0	0
<i>Above Ten</i>	9.6	28.6	0	0	0	0	0	0	16.7	0	0	0	25	0	0
Sheep owned (%)															
<i>One-Three</i>	75.6	100	0	100	100	100	0	80	66.7	100	0	33.3	70	100	0
<i>Four-Six</i>	15.6	0	100	0	0	0	0	20	16.7	0	0	33.3	10	0	0
<i>Seven-Ten</i>	4.4	0	0	0	0	0	0	0	0	0	0	33.3	10	0	0
<i>Above Ten</i>	4.4	0	0	0	0	0	0	0	16.7	0	0	0	10	0	0
Goats owned (%)															
<i>One-Three</i>	69.6	52.5	74.4	69.6	56.3	77.8	90	78.4	63.6	83.3	75.9	56.1	67.6	82.4	0
<i>Four-Six</i>	21.7	27.5	17.1	21.7	25	16.7	10	18.9	18.2	12.5	20.7	39	22.5	17.6	0
<i>Seven-Ten</i>	5.5	10	4.9	7.2	0	5.6	0	2.7	13.6	4.2	0	4.9	6.9	0	0
<i>Above Ten</i>	3.2	10	3.7	1.4	18.8	0	0	0	4.5	0	3.4	0	2.9	0	0
Pigs owned (%)															
<i>One-Three</i>	72.8	57.1	0	66.7	54.5	86.7	80	0	90.9	85.7	64.7	73.9	50	83.3	0
<i>Four-Six</i>	16.6	14.3	0	16.7	9.1	13.3	0	0	0	14.3	23.5	26.1	25	12.5	0
<i>Seven-Ten</i>	4.6	14.3	0	16.7	9.1	0	0	0	9.1	0	5.9	0	12.5	0	0
<i>Above Ten</i>	6	14.3	0	0	27.3	0	20	0	0	0	5.9	0	12.5	4.2	0
Poultry owned (%)															
<i>One-Three</i>	39.1	19.4	34.5	43.3	26.2	53.8	44.4	45.3	68.8	57.7	28.6	38.4	27	47.1	100
<i>Four-Six</i>	26.3	25.5	27	25.6	26.2	25	15.6	29.3	23.4	34.6	22.9	31.4	26.1	28.4	0
<i>Seven-Ten</i>	15.6	17.3	15.5	18.9	21.5	13.5	15.6	14.7	6.3	1.9	15.2	12.8	18.9	19.6	0
<i>Above Ten</i>	18.9	37.8	23	12.2	26.2	7.7	24.4	10.7	1.6	5.8	33.3	17.4	27.9	4.9	0

Source: Refugee FSNA, December 2020

Main Constraints to Livestock production

Only one in 10 households (10.0%) that own livestock reported not to have experienced any constraint to livestock production. Figure 26 shows that pests and diseases are the most important constraint reported by 42.1% of livestock owners. Other key constraints include limited land (15.4%) and limited pasture (11.0%). Livestock interventions addressing these constraints can contribute to improved livestock production.

Figure 26: Main constraint to livestock production among refugee households, proportion of households that own livestock, Refugee FSNA, December 2020



Household Food Stock

Food availability was measured through availability of food stocks. The availability of food stocks in the household is presented in Table 68. Overall, about eight in 10 (76.6%) settlement-based refugee households had food stocks. Food stocks were comparatively more available in Imvepi and Bidibidi and least available in Kampala. Most households (66.0%) reported that food stocks would last less than a month with the highest percentage in Kampala.

Overall, WFP/partner distribution was the main source of available food stocks. Food stocks from the market were mainly reported in Kampala and Nakivale. More households in Oruchinga and Kiryandongo reported own production as their source of food stocks.

Table 68: Household food stocks (households with food stocks, source of the food stocks, average duration food stocks). Refugee FSNA, December 2020

	<i>Has food stocks (%)</i>		<i>How long will food stocks last? (%)</i>		<i>Source of the household food stocks (%)</i>				Number of HHs with stocks
Location	%	N	<1 month	≥1 month	WFP/ partner	Own production	Gifts	Markets	
<i>All</i>	76.6	3,476	65.8	34.2	56.4	32	0.8	24.4	2,607
<i>Adjumani</i>	77.7	233	78.5	21.6	70.2	8.8	0	29.3	181
<i>Bidibidi</i>	94.8	309	60.1	39.9	94.9	16.7	0.7	4.8	293
<i>Imvepi</i>	99.7	311	63.6	36.5	100	11.6	0	2.3	310
<i>Kiryandongo</i>	56.2	251	72.9	27.1	32.6	60.3	0.7	12.8	140
<i>Kyaka</i>	68.9	251	68.8	31.2	1.7	54.3	2.3	51.5	173
<i>Kyangwali</i>	55	220	81.8	18.2	12.4	40.5	0.8	52.1	121
<i>Lobule</i>	80.2	126	69.3	30.7	7.9	58.4	2	44.6	101
<i>Nakivale</i>	58.4	310	84.5	15.5	18.8	33.2	2.8	59.1	181
<i>Oruchinga</i>	66	197	62	38	3.9	63.1	2.3	41.5	129
<i>Palabek</i>	82.1	252	61.5	38.5	93.7	10.6	0	1.9	205
<i>Palorinya</i>	84.3	261	34.6	65.5	94.6	19.6	0	2.7	220
<i>Rhino camp</i>	79.2	317	78.1	21.9	73.3	23.9	0	18.7	251
<i>Rwamwanja</i>	83.3	264	57.3	42.7	5.9	70	0.9	50	220
<i>Kampala</i>	47.7	174	90.2	9.8	3.6	1.2	4.8	92.8	82

Source: Refugee FSNA, December 2020

FOOD ACCESSIBILITY

Household Income Earners

The number of household income earners and amount earned contributes to food security through food purchase. The study found that close to five in nine refugee households (56.8%) had at least an income earner. Rhino camp and Imvepi reported the lowest proportion of households with no income earners.

Only 4.5% of households reported departure of a household member in search for job opportunities within six months preceding the assessment. Bidibidi (7.4%) and Imvepi (7.1%) had the highest proportion of households that reported departure of a member, while Oruchinga (1.5%) reported the lowest. Overall, 45.2% of households with a member who left home reported to receive some remittance from the person who left.

Table 69: Proportion of HH income earners, departure of HH member and remittance of money back, Refugee FSNA, December 2020 (%)

Location	N	Number of HH income earners (%)				Member left in last 6 months for job opportunities (%)		Receiving any money from the person (%)	
		None	One	Two	≥ three	No	Yes	No	Yes
All	3,476	43.2	37.3	15	4.5	95.5	4.5	54.8	45.2
Adjumani	233	49.4	37.8	11.6	1.3	96.1	3.9	66.7	33.3
Bidibidi	309	46.6	41.1	10	2.3	92.6	7.4	56.5	43.5
Imvepi	311	56.9	35	5.1	2.9	92.9	7.1	72.7	27.3
Kiryandongo	251	55.8	30.3	10.4	3.6	96.4	3.6	44.4	55.6
Kyaka II	251	30.3	43.4	21.5	4.8	97.2	2.8	28.6	71.4
Kyangwali	220	53.2	25.9	16.4	4.5	97.7	2.3	60	40
Lobule	126	46.8	39.7	7.9	5.6	90.5	9.5	58.3	41.7
Nakivale	310	28.7	41.9	24.2	5.2	93.9	6.1	52.6	47.4
Oruchinga	197	20.8	45.2	25.4	8.6	98.5	1.5	33.3	66.7
Palabek	252	46.8	43.7	6.0	3.6	97.2	2.8	57.1	42.9
Palorinya	261	49	31	14.2	5.7	95.8	4.2	45.5	54.5
Rhino camp	317	60.3	25.9	10.7	3.2	95.9	4.1	61.5	38.5
Rwamwanja	264	20.8	40.9	32.6	5.7	97	3	50	50
Kampala	174	29.9	46	14.4	9.8	94.8	5.2	33.3	66.7

Main Household Income Sources

Humanitarian cash assistance was the main source of income for settlement-based refugee households, reported by 33.3% of the households. Remittances was reported as the main source of income for Kampala-based refugees. In Kyaka II, 73.3% of households reported humanitarian cash assistance as their main sources of income. This was the highest percentage across all settlements. Imvepi settlement had the highest proportion of households (45.3%) that reported sale of food assistance as their main source of income.

Table 70: Main sources of income for the household - % of HHs by the most important sources of household income, according to settlement and Kampala, Refugee FSNA, December 2020

Main income source	All	Adjumani	Bidibidi	Imvepi	Kiryandongo	Kyaka II	Kyangwali	Lobule	Nakivale	Oruchinga	Palabek	Palorinya	Rhino camp	Rwamwanja	Kampala
Humanitarian cash assistance	33.3	29.2	4.2	12.9	47	73.3	69.1	57.9	54.2	44.2	0.4	1.1	24.3	58.7	9.8
Sale of food assist.	17.9	17.6	37.5	45.3	17.5	0	16.8	10.3	0.3	0	30.2	21.1	30.6	0	0
Food crop production/sales	13.1	10.3	18.1	9.6	20.7	4.4	4.1	14.3	9	21.3	11.1	23	16.7	16.3	0
Petty trading	6.8	7.3	5.5	6.8	0.8	4	1.4	1.6	8.4	6.1	11.1	13.8	3.5	7.2	19.5
Agricultural casual labor	5.7	1.7	4.9	4.2	2.4	9.2	3.6	8.7	12.3	10.7	7.1	6.5	2.8	5.3	0
Skilled labor	3.5	4.3	2.3	2.9	0.8	2.4	0.5	1.6	3.2	5.6	2.8	3.4	3.2	3	16.1
Non-agricultural casual labor	3.4	2.6	4.9	5.1	1.2	2	1.4	0	3.5	5.1	6	6.5	1.3	1.5	5.2
Salaried work	3.2	6.4	3.2	1.9	0.8	2.4	0.5	0	3.5	2.5	3.6	2.7	3.5	4.2	10.3
Remittances	3.1	5.6	2.6	0.3	5.2	0.4	0.5	0	2.3	0	1.6	2.3	1.3	0	28.2
Sale of alcoholic beverages/brewing	2.9	5.2	2.9	4.5	0.8	1.6	0.5	0	0	1.5	14.7	5.7	0.9	0.4	0
Others	7.2	9.9	13.9	6.4	2.8	0.4	1.8	5.6	3.2	3	11.5	13.8	12	3.4	10.9
Number of HHs	3,252	233	305	306	249	250	219	125	306	193	242	257	310	257	171

Common Foods Purchased

The most purchased food groups by refugee households within the thirty-day period preceding the assessment were Sugar/salt/honey by 81.9% of households, followed by cereals/grains and pulses/nuts purchased by 66.7% and 66.1% of households respectively. Purchase of milk and dairy products was the lowest, reported by only 18.9 of refugee households.

Purchase of animal products such as fish, meat, eggs, and poultry were reported by 53.4% of households. Kampala (69.0%) had the highest proportion of households followed by Rwamwanja at 68.2%. Palorinya (25.3%) had the lowest proportion of households that reported purchase of animal products.

Table 71: Common Food Items Purchased by Households (%), Refugee FSNA, December 2020

Proportion of HHs by the most purchased food items, according to settlement and Kampala, Refugee FSNA 2020															
Most purchased foods (%)	Adjumani	Bidibidi	Imvepi	Kiryandongo	Kyaka II	Kyangwali	Lobule	Nakivale	Oruchinga	Palabek	Palorinya	Rhino camp	Rwamwanja	Settlements	Kampala
Cereals and grains	72.1	25.9	51.4	59.4	84.5	71.4	71.4	91.3	83.2	43.7	51.7	62.5	95.5	66.7	92.5
Matooke, roots and tubers	34.8	42.7	47.6	32.3	78.1	71.4	59.5	76.5	74.6	31.7	25.3	43.8	86.0	54.2	67.2
Pulses and nuts	73.8	72.8	52.4	67.7	69.7	84.1	68.3	80.6	68.5	34.9	48.7	65.3	65.5	66.1	81.0
Fruits & veges.	51.5	50.5	52.7	55.8	59.4	43.2	53.2	63.5	64.5	36.1	29.9	46.1	57.6	52.4	81.0
Meat, fish, eggs, and poultry	55.8	64.1	61.1	48.2	54.2	57.3	67.5	40.3	50.3	38.1	28.0	55.8	68.2	53.4	69.0
Oil, fat, butter	71.7	17.2	22.5	82.1	91.2	95.9	92.1	86.1	87.3	37.7	39.5	54.6	96.6	65.4	90.2
Milk and dairy products	22.3	14.6	11.6	22.3	14.3	3.2	17.5	29.4	27.9	12.7	3.1	10.4	37.1	18.9	48.9
Sugar, salt, and honey	83.7	77.7	74.6	84.5	97.6	90.9	98.4	92.6	92.4	61.1	44.8	76.7	97.0	81.9	92.0
Tea and coffee	33.0	80.9	66.6	38.6	13.5	21.8	93.7	31.6	22.3	23.4	29.1	63.1	25.0	43.2	74.1
Number of HHs	233	309	311	251	251	220	126	310	197	252	261	317	264	3,302	174

Source: Refugee FSNA, December 2020

Household finances

Overall, 32.5% of settlement-based refugee households had access to financial services (Table 72). The highest proportion was reported in Rwamwanja (59.5%) followed by Oruchinga (57.4%). The lowest percentage of access to financial services was reported in Kyangwali settlement (16.4%). Overall, 44.8% of refugee households had a debt to repay. Kyaka II (77.3%) had the highest proportion of households with debts and lowest in Palorinya (21.5%).

Buying food (37.6%) and covering health expenses (29.0%) were the major reasons why settlement-based refugees acquired debts. In Kampala, households mainly acquired debts to buy food (31.9%) and to pay rent (25.5%). Savings and Credit Cooperatives (SACCO) or Village Savings and Loans Associations (VSLA) were reported to be the main sources of debts/credit by 29.9% of settlement-based refugees. However, in Kampala, relatives/friends/neighbours (35.1%) and traders/shopkeepers (35.1%) were reported as the most important sources of credit.

Table 72: Proportion of HHs by the most important sources of household income (%), Refugee FSNA, December 2020

REFUGEE FINANCIAL SERVICES															
Background characteristic	<i>Adjumani</i>	<i>Bidibidi</i>	<i>Imvepi</i>	<i>Kiryandongo</i>	<i>Kyaka II</i>	<i>Kyangwali</i>	<i>Lobule</i>	<i>Nakivale</i>	<i>Oruchinga</i>	<i>Palabek</i>	<i>Palorinya</i>	<i>Rhino camp</i>	<i>Rwamwanja</i>	<i>Settlements</i>	<i>Kampala</i>
Have access to financial services															
<i>No</i>	70.4	76.1	70.1	77.3	55.8	83.6	60.3	65.5	42.6	76.6	81.6	72.9	40.5	67.5	59.2
<i>Yes</i>	29.6	23.9	29.9	22.7	44.2	16.4	39.7	34.5	57.4	23.4	18.4	27.1	59.5	32.5	40.8
Have debt or credit to pay															
<i>No</i>	63.5	70.9	71.1	68.9	22.7	60.0	51.6	32.6	27.4	61.1	78.5	66.9	37.1	55.2	46.6
<i>Yes</i>	36.5	29.1	28.9	31.1	77.3	40.0	48.4	67.4	72.6	38.9	21.5	33.1	62.9	44.8	53.4
Amount in debt to repay															
<i><30,000</i>	22.4	43.3	43.3	17.9	20.6	35.2	9.8	17.2	18.9	41.8	28.6	30.5	11.4	23.1	1.1
<i>30,000 to <60,000</i>	17.6	27.8	33.3	24.4	30.4	34.1	19.7	23.0	26.6	26.5	37.5	31.4	19.9	25.1	2.2
<i>60,000 to <90,000</i>	16.5	10.0	10.0	14.1	10.3	10.2	11.5	7.7	13.3	7.1	7.1	8.6	12.0	10.0	2.2
<i>>=90,000</i>	43.5	18.9	13.3	43.6	38.7	20.5	59.0	52.2	41.3	24.5	26.8	29.5	56.6	41.7	94.6
Main reasons for new household debts or credit															
<i>Buy food</i>	41.2	32.2	28.9	32.1	47.4	53.9	49.2	55.5	35.0	20.2	21.4	31.4	24.1	37.6	31.9
<i>Cover health expenses</i>	32.9	33.3	41.1	33.3	21.6	34.8	26.2	19.6	16.8	42.4	41.1	37.1	32.5	29.0	20.2
<i>Invest for other business</i>	3.5	14.4	7.8	2.6	5.2	2.2	3.3	6.2	7.0	14.1	10.7	12.4	6.6	7.1	5.3
<i>Rent or renovate a house</i>	3.5	1.1	3.3	2.6	8.2	0.0	1.6	6.2	17.5	1.0	3.6	1.9	9.6	7.0	25.5
<i>Clothing and footwear</i>	5.9	3.3	6.7	0.0	2.6	1.1	1.6	1.0	4.9	2.0	1.8	1.0	1.8	2.4	0.0
<i>Others</i>	1.2	2.2	5.6	3.8	6.7	3.4	0.0	3.3	6.3	7.1	0.0	4.8	7.8	4.4	1.1
<i>Buy agricultural inputs</i>	1.2	5.6	1.1	2.6	0.0	0.0	1.6	2.9	5.6	4.0	3.6	2.9	4.8	2.6	0.0
<i>Buy animal feed, fodder, veterinary</i>	0.0	0.0	0.0	0.0	1.0	1.1	1.6	0.0	0.0	1.0	0.0	0.0	1.2	0.4	0.0
<i>Buy or rent animals</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.0	0.0	0.0	0.0	0.4	3.2
<i>Buy or rent land</i>	0.0	2.2	0.0	1.3	2.1	0.0	6.6	1.0	1.4	0.0	0.0	1.0	5.4	2.2	9.6
<i>Pay for social events / ceremonies</i>	0.0	3.3	3.3	3.8	2.6	3.4	0.0	1.4	0.0	4.0	1.8	2.9	0.6	1.9	0.0
<i>Pay school, education costs</i>	10.6	2.2	2.2	17.9	2.6	0.0	8.2	2.9	4.9	2.0	16.1	4.8	5.4	5.0	3.2
Main source of debts/credit															
<i>SACCO/VSLA</i>	47.1	32.2	33.3	50.0	18.6	9.0	45.9	14.4	38.5	47.5	26.8	41.0	36.7	29.9	5.3
<i>Relatives/friends/neighbors</i>	28.2	33.3	50.0	19.2	17.5	41.6	26.2	20.1	21.7	32.3	35.7	31.4	22.3	27.5	35.1
<i>Traders/shopkeeper</i>	15.3	30.0	8.9	17.9	39.2	22.5	19.7	50.2	14.0	18.2	19.6	15.2	22.3	26.3	35.1
<i>Bank/ microfinance</i>	0.0	0.0	0.0	0.0	0.5	0.0	0.0	3.3	0.7	0.0	1.8	1.0	0.6	1.1	5.3
<i>Money lender</i>	2.4	1.1	2.2	3.8	21.6	10.1	6.6	10.5	22.4	0.0	0.0	4.8	16.3	9.7	2.1
<i>Telecom companies</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.6	0.2	0.0
<i>Others</i>	7.1	3.3	5.6	9.0	2.6	16.9	1.6	1.4	2.8	2.0	12.5	6.7	1.2	5.3	17.0
<i>Number of households</i>	233	309	311	251	251	220	126	310	197	252	261	317	264	3,302	174

Household Food Expenditure Share

The food expenditure share is a proxy measure for household economic vulnerability under the premise that the greater the importance of food within a household's overall expenditure, the more economically vulnerable the household. Based on the proportion of the total food expenditures to the total household expenditures, households spending <50 of total household expenditure on food were regarded as food secure; 50 - <65 as marginally food secure; 65 - <75 as moderately food insecure; and >75 as severely food insecure. Results are shown in Table 73.

Overall, 17.2% and 55.2% of households were moderately and severely food insecure respectively. Only 11.8% of settlement-based refugee households were food secure. Most refugee household in Kampala were food secure (82.2%) and only 1.7% severely food insecure. Oruchinga (22.8%) had the highest proportion of food secure households whereas Palabek (76.5%) and Palorinya (76.5%) settlements had the highest proportion of households classified as severely food insecure.

Table 73: Household Food Security by Food Expenditure Share (%), Refugee FSNA, December 2020

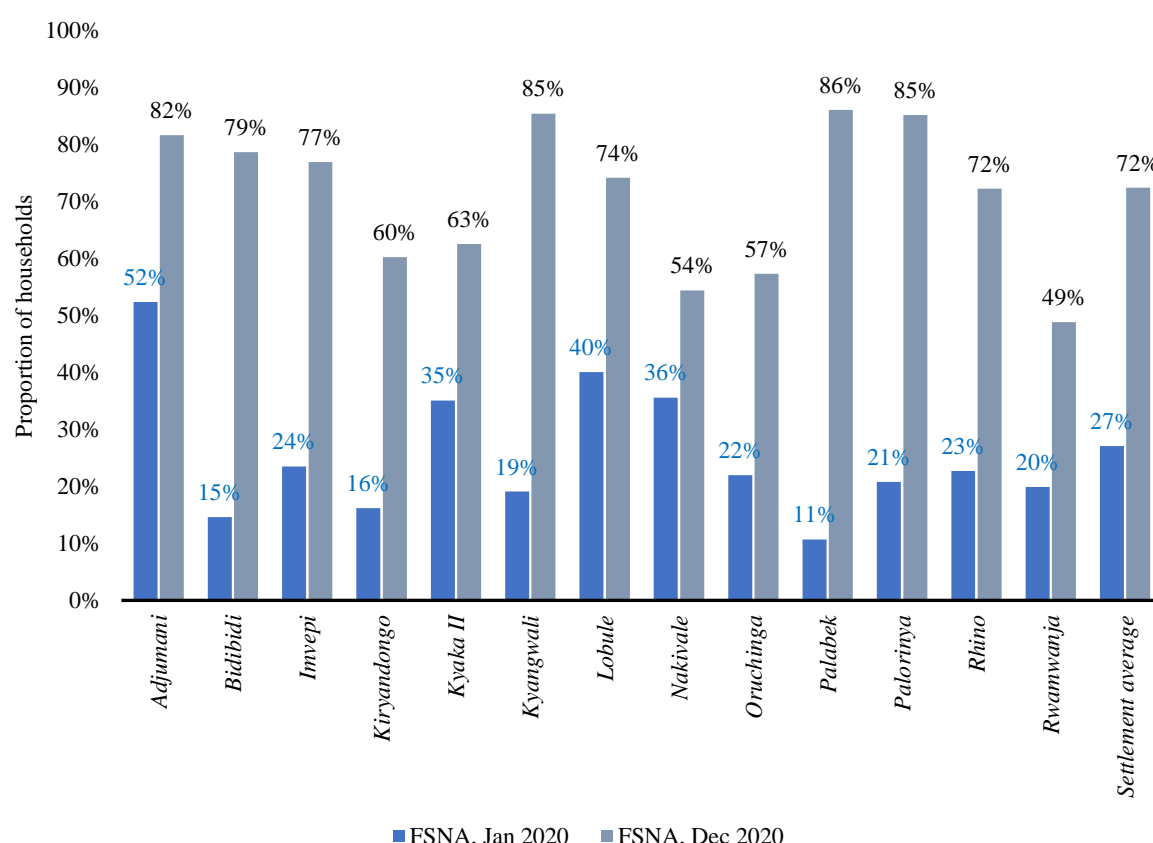
Settlement	Number N	Household Food Security by Food Expenditure Share			
		Food secure (%)	Marginally food secure (%)	Moderately food insecure (%)	Severely food insecure (%)
<i>All</i>	3,252	11.8	15.8	17.2	55.2
<i>Adjumani</i>	233	4.9	13.4	15.2	66.5
<i>Bidibidi</i>	305	8.1	13.2	15.9	62.8
<i>Imvepi</i>	306	7.8	15.3	17.9	59.1
<i>Kiryandongo</i>	249	17.7	22.1	18.5	41.8
<i>Kyaka II</i>	250	14.3	23.1	21.9	40.6
<i>Kyangwali</i>	219	3.2	11.4	18.6	66.8
<i>Lobule</i>	125	9.7	16.1	18.5	55.6
<i>Nakivale</i>	306	18	27.5	23.3	31.1
<i>Oruchinga</i>	193	22.8	19.8	23.9	33.5
<i>Palabek</i>	242	7.6	6.3	9.7	76.5
<i>Palorinya</i>	257	7.8	7	8.6	76.5
<i>Rhino camp</i>	310	13.5	14.2	18.8	53.5
<i>Rwamwanja</i>	257	20.1	31.1	23.1	25.8
<i>Kampala</i>	171	82.18	14.37	1.72	1.72

Source: Refugee FSNA, December 2020

Trend in economic vulnerability

Economic vulnerability is proxied by the share of food expenditure in the total household expenditure. Households spending at least 65.0% of their total expenditure on food are characterized as economically vulnerable. Figure 27 shows the proportion of economically vulnerable households across settlements. Results show that the proportion of economically vulnerable households significantly increased across all the settlements. Overall, there was a 45 percentage points increase in economic vulnerability from January to December 2020. More economically vulnerable households were in Palabek (86.0%), Kyangwali (85.0%) and Palorinya (85.0%). Increased economic vulnerability is likely due to the GFA ration reductions, and decreased spending on non-food items due to the lock-down.

Figure 27: Proportion of households with at least 65% of total expenditure on food



Source: Refugee FSNA, December 2020

Household Dietary Diversity

The Household Dietary Diversity Score (HDDS) is a proxy measure of household food access, described as the number of food groups consumed by a household over a 24-hour reference period (Kennedy *et al.*, 2011¹⁹; Swindale and Bilinsky, 2006²⁰). The 12 food groups used to calculate the HDDS indicator are: cereals; roots and tubers; vegetables; fruits; meat, poultry, offal; eggs; fish and seafood; pulses, legumes, nuts; milk and milk products; oil/fats; sugar/honey and miscellaneous.

Table 74 shows the HHDS of refugee households per settlement categorized into low, medium, and high dietary diversity. Overall, most households (54.0%) had medium dietary diversity (4 to 5 food groups) with an average HDDS of 4.8. Kampala had the highest proportion of households with high dietary diversity (67.8%) as well as the highest mean HDDS (6.2), distantly followed by Rwamwanja (40.2%). Palorinya, Rhino Camp and Kiryandongo settlements performed poorly in terms of dietary diversity with 52.1%, 29.0% and 22.3% of households respectively with low dietary diversity.

¹⁹ Kennedy G, Ballard T & Dop MC (2011) Guidelines for Measuring Household and Individual Dietary Diversity. Rome: FAO.

²⁰ Household Dietary Diversity Score (HDDS) for Measurement of Household Food Access: Indicator Guide (v.2). Washington, D.C.: FHI 360/FANTA.

Table 74: Household Dietary Diversity (HDDS) per settlement, Refugee FSNA, December 2020

Settlement	N	Low diversity (≤3 food groups)	Medium diversity (4-5 food groups)	High diversity (≥6 food groups)	Mean HHDS
<i>All</i>	3476	17.4	54.0	28.7	4.8
<i>Kampala</i>	174	4.0	28.2	67.8	6.2
<i>Adjumani</i>	233	13.7	54.9	31.3	4.9
<i>Bidibidi</i>	309	12.3	50.8	36.9	5.3
<i>Imvepi</i>	311	11.3	57.2	31.5	4.9
<i>Kiryandongo</i>	251	22.3	55.8	21.9	4.6
<i>Kyaka II</i>	251	8.8	67.7	23.5	4.8
<i>Kyangwali</i>	220	15.5	70.5	14.1	4.5
<i>Lobule</i>	126	13.5	48.4	38.1	5.2
<i>Nakivale</i>	310	15.5	56.5	28.1	4.8
<i>Oruchinga</i>	197	12.7	54.3	33.0	5.0
<i>Palabek</i>	252	18.7	67.9	13.5	4.4
<i>Palorinya</i>	261	52.1	42.9	5.0	3.3
<i>Rhino Camp</i>	317	29.0	41.0	30.0	4.6
<i>Rwamwanja</i>	264	5.3	54.6	40.2	5.4
<i>All</i>	3,476	17.4	54.0	28.7	4.8

Source: Refugee FSNA, December 2020

Table 75 below shows the proportion of households that consumed a specific food group during the 24 hours preceding the survey. Results show that refugee households' diets are characterized by mainly staples, pulses and oils. Overall, 91.2%, 71.0% and 83.8% of households consumed staples, pulses, and oils respectively in the 24 hours preceding the survey. There was limited consumption of protein-based products with meat, fish, eggs, and milk consumed by only 5.0%, 12.5%, 4.3%, and 10.7% of households.

Table 75: Percentage of households that consumed a specified food group in 24 hours preceding the survey

Settlement	N	Cereals, roots, and tubers	Pulses, legumes, nuts	Meat, poultry, offal	Fish	Eggs	Milk and milk products	Vegetables	Fruits	Oil/fats	Sugar/ honey	Miscellaneous
<i>All</i>	3,476	91.2	71.0	5.0	12.5	4.3	10.7	61.1	14.1	83.8	36.7	90.2
<i>Kampala</i>	174	93.7	70.1	19.0	11.5	12.1	37.9	71.8	29.3	92.5	79.9	98.3
<i>Adjumani</i>	233	85.8	72.1	3.0	13.3	0.9	19.3	55.4	12.5	91.0	45.1	91.9
<i>Bidibidi</i>	309	95.8	54.7	10.4	21.4	12.0	5.5	73.8	22.3	84.5	56.3	95.8
<i>Imvepi</i>	311	94.9	81.7	3.9	19.0	1.9	2.9	53.4	8.0	90.4	40.2	93.3
<i>Kiryandongo</i>	251	86.1	55.4	2.8	8.4	2.0	12.8	65.7	9.2	82.5	43.0	89.6
<i>Kyaka II</i>	251	99.2	76.9	3.6	16.3	2.8	8.4	61.4	11.6	80.9	16.7	98.0
<i>Kyangwali</i>	220	95.5	68.6	0.5	14.6	3.2	2.7	60.5	5.0	91.4	16.4	89.6
<i>Lobule</i>	126	96.0	61.1	5.6	19.1	8.7	4.8	63.5	27.0	68.3	61.9	100.0
<i>Nakivale</i>	310	94.8	82.6	2.9	5.5	1.6	21.0	58.1	13.9	78.1	29.4	96.5
<i>Oruchinga</i>	197	92.4	89.9	2.5	8.1	1.5	15.2	68.0	23.4	76.7	23.4	99.5
<i>Palabek</i>	252	87.7	70.6	0.4	8.7	0.8	1.6	58.3	6.8	88.1	25.0	91.7
<i>Palorinya</i>	261	77.0	59.4	1.2	2.7	0.4	1.5	37.6	4.2	80.1	22.2	46.7
<i>Rhino</i>	317	83.0	61.2	7.9	13.3	9.2	3.8	59.0	16.1	76.3	44.8	82.7
<i>Rwamwanja</i>	264	98.5	89.0	8.0	13.6	4.9	21.2	75.4	19.3	89.0	25.8	98.9

Source: Refugee FSNA, December 2020

FOOD UTILIZATION

Household Food Consumption Score

The Food Consumption Score (FCS) aggregates household-level data on the diversity and frequency of food groups consumed over seven days preceding the survey, which is then weighted according to the relative nutritional value of the consumed food groups. Based on the FCS, 67.4% of settlement-based refugee households had acceptable food consumption whereas 32.6% had insufficient food consumption (poor and borderline FCS) (Table 76). A higher proportion of households in Imvepi (89.4%), Kampala (89.1%) and Oruchinga (85.3%) had acceptable FCS. Lobule had no household with poor FCS while Palorinya had the highest proportion of households with poor FCS. Table 7 further shows results of the food security-nutrition quality analysis based on consumption of vitamin A-rich foods, Protein rich foods and haem iron rich foods within seven days preceding the survey. Respectively, 20.6% and 48.8% of settlement-based refugee households reported to have consumed vitamin A rich foods and protein rich foods daily within the seven days period preceding the survey. Nakivale settlement had the highest proportion of households that reported to consume vitamin A rich foods daily whereas Oruchinga had the highest proportion of households for protein rich foods.

There was minimal consumption of haem iron rich foods across all settlements. Six in 10 household (61.5%) reported not to have consumed any hem iron-rich foods within the seven days preceding the survey. The proportion was highest in Palorinya (85.8%). Kampala (40.8%) had the highest proportion of households that consumed haem iron rich foods within the seven days preceding the survey.

Table 76: Food Consumption Score (%)

Household consumption of different food groups over the previous seven days, categorised by the Food Consumption Score													
Settlement	Food consumption score			Consumption of Vitamin A-rich foods ²¹			Consumption of Protein-rich foods ²²			Consumption of Haem Iron-rich foods ²³			N
	Acceptable	Borderline	Poor	0 Days	1-6 Days	7 Days	0 Days	1-6 Days	7 Days	0 Days	1-6 Days	7 Days	
All	67.4	26.3	6.4	21.1	58.3	20.6	4.9	46.3	48.8	61.5	37.6	0.9	3,302
Adjumani	74.7	18.5	6.9	32.6	47.2	20.2	6.0	39.1	54.9	63.9	35.6	0.4	233
Bidibidi	56.6	37.2	6.1	10.4	68.0	21.7	6.1	65.4	28.5	48.9	50.5	0.6	309
Imvepi	89.4	9.3	1.3	13.5	73.0	13.5	1.3	31.5	67.2	57.2	41.5	1.3	311
Kiryandongo	53.0	42.6	4.4	13.1	61.0	25.9	6.8	62.9	30.3	65.7	33.9	0.4	251
Kyaka II	79.3	19.9	0.8	9.6	68.1	22.3	1.2	35.5	63.3	59.8	38.2	2.0	251
Kyangwali	62.3	35.5	2.3	9.5	75.5	15.0	2.3	64.1	33.6	52.3	47.3	0.5	220
Lobule	81.0	19.0	0.0	4.0	65.9	30.2	0.0	66.7	33.3	50.8	47.6	1.6	126
Nakivale	80.0	18.4	1.6	22.3	40.3	37.4	1.9	24.5	73.5	77.1	21.0	1.9	310
Oruchinga	85.3	13.7	1.0	7.1	54.8	38.1	1.0	18.3	80.7	65.0	33.5	1.5	197
Palabek	68.7	21.8	9.5	35.7	55.6	8.7	3.6	50.8	45.6	72.2	27.8	0.0	252
Palorinya	49.8	31.8	18.4	57.5	40.6	1.9	13.4	46.7	39.8	85.8	14.2	0.0	261
Rhino camp	53.3	31.2	15.5	19.6	61.5	18.9	6.9	50.5	42.6	54.6	44.2	1.3	317
Rwamwanja	86.4	12.9	0.8	6.1	60.2	33.7	0.0	25.4	74.6	46.6	51.9	1.5	264
Kampala	89.1	9.2	1.7	14.4	37.4	48.3	4.0	23.0	73.0	40.8	54.6	4.6	174

Source: Refugee FSNA, December 2020

²¹ Vitamin A rich foods: Dairy, Organ meat, Eggs, Orange vegetables, Green vegetables and Orange fruits.

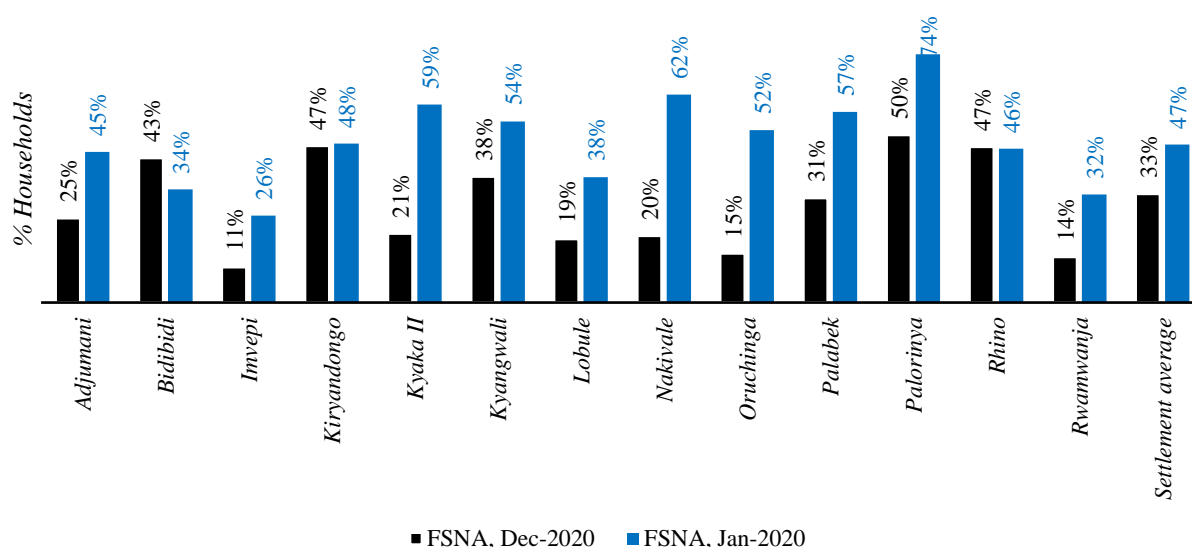
²² Protein rich foods: Pulses, Dairy, Flesh meat, Organ meat, Fish and Eggs.

²³ Hem iron rich foods: Flesh meat, Organ meat, and Fish.

Trend in the Food Consumption Score

Trend results (Figure 28) show that the number of households with insufficient food consumption²⁴ decreased in 11 out of the 13 settlements. Substantial reductions in the proportion of households with insufficient food consumption are in Oruchinga, Nakivale and Kyaka II. Overall, the proportion of households with insufficient food consumption decreased from 47.0% in January 2020 to 33.0% in December 2020. It should be noted that most households had just received their double general food assistance entitlement during the period of data collection which may have increased their food consumption score. Further, above average 2020 second season harvests, ration cuts, and low staple food prices since May 2020 may have also contributed to a decrease in proportion of households with insufficient food consumption.

Figure 28: Trend in proportion (%) of households with insufficient food consumption



Source: Refugee FSNA, December 2020

STABILITY

Reduced Coping Strategy Index

The reduced Coping Strategies Index (rCSI) is used to compare the hardship faced by households through measuring the frequency and severity of food consumption behaviours they engage in when faced with shortages of food or lack of money to buy food (WFP, 2015)²⁵. The rCSI is constructed based on the five coping strategies adopted by the household in the seven days preceding the survey: 1) relied on less preferred, less expensive food, 2) borrowed food or relied on help from friends or relatives, 3) reduced the number of meals eaten per day, 4) reduced portion size of meals, 5) reduction in the quantities consumed by adults/mothers for young children. Households are classified as low, medium, and high coping.

Most settlement-based refugee households were classified as low coping. Only 2.3% of households were classified as high coping. Adjumani settlement (4.7%) followed by Rhino Camp (4.4%) had the highest proportion of households classified as high coping.

²⁴ Insufficient food consumption combines poor and borderline food consumption groups of the FCS.

²⁵ WFP, 2015. Consolidated Approach to Reporting Indicators of Food Security (CARI).

Table 77: Reduce coping strategy index - Household Low Coping, Medium Coping, and High Coping based on the Food Consumption Reduced Coping Strategy Index (%)

Settlement	Low Coping: rCSI≤15 (%)	Medium Coping: 15>rCSI≤40 (%)	High Coping: rCSI>40 (%)	Number of households (%)
<i>All</i>	77.3	20.4	2.3	3,302
<i>Adjumani</i>	82.4	12.9	4.7	233
<i>Bidibidi</i>	86.7	12.6	0.6	309
<i>Imvepi</i>	84.2	15.8	0.0	311
<i>Kiryandongo</i>	77.3	20.3	2.4	251
<i>Kyaka II</i>	57.8	40.2	2.0	251
<i>Kyangwali</i>	91.8	7.7	0.5	220
<i>Lobule</i>	85.7	13.5	0.8	126
<i>Nakivale</i>	59.0	38.1	2.9	310
<i>Oruchinga</i>	75.1	22.8	2.0	197
<i>Palabek</i>	77.8	19.0	3.2	252
<i>Palorinya</i>	81.6	16.5	1.9	261
<i>Rhino camp</i>	68.5	27.1	4.4	317
<i>Rwamwanja</i>	76.9	22.3	0.8	264
<i>Kampala</i>	73.6	24.1	2.3	174

Livelihood Coping Strategy Index

Stress strategies indicate a reduced ability to deal with future shocks due to a current reduction in resources or increase in debts. Crisis strategies directly reduce future productivity, including human capital formation. Emergency strategies affect future productivity and are more difficult to reverse or more dramatic in nature. Stress coping strategies include borrowing money, spending savings, sale of household assets/goods, sending household members to eat elsewhere. Crisis coping strategies include sale of productive assets, withdraw or stopping children from going to school, reduction of expenditure on hygiene, health, or education. Emergency coping strategies include sale of house or land, begging, engaging in illegal/ risky income activities, entire household shifting.

Overall, 17.5% of households were in the category of ‘crisis coping’ and 19.3% employed emergency coping (Table 78). Kampala district (31.6%) recorded the highest proportion of refugee households in the ‘emergency coping strategy’ category. Among the settlement-based refugees, Kyangwali settlement (30.0%) reported the highest proportion of refugee households in the emergency category.

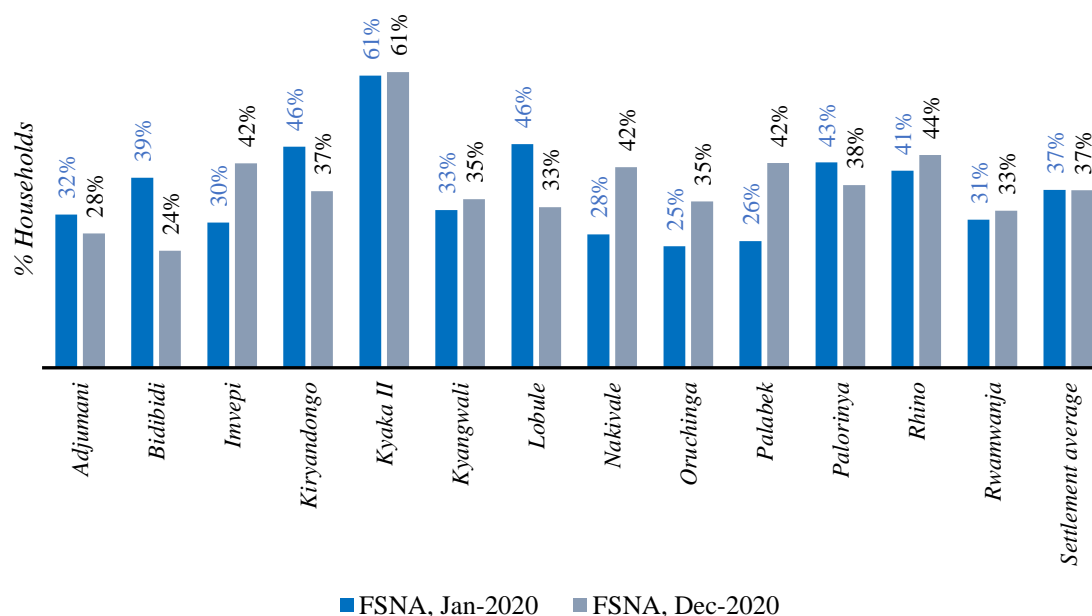
Table 78: Livelihood coping strategy index - Households without any coping strategy, with stress coping, crisis coping and emergency coping using the Livelihood Coping Strategy Index.

Settlement	Not coping (%)	Stress coping (%)	Crisis coping (%)	Emergency coping (%)	Number of households
<i>All</i>	36.3	26.9	17.5	19.3	3,302
<i>Adjumani</i>	32.2	39.9	15.5	12.4	233
<i>Bidibidi</i>	52.4	23.3	13.3	11.0	309
<i>Imvepi</i>	40.5	17.0	27.0	15.4	311
<i>Kiryandongo</i>	40.2	23.1	10.4	26.3	251
<i>Kyaka II</i>	15.5	23.1	37.8	23.5	251
<i>Kyangwali</i>	39.5	25.5	5.0	30.0	220
<i>Lobule</i>	32.5	34.1	15.1	18.3	126
<i>Nakivale</i>	24.5	33.9	17.4	24.2	310
<i>Oruchinga</i>	20.8	44.7	15.7	18.8	197
<i>Palabek</i>	36.5	21.0	23.8	18.7	252
<i>Palorinya</i>	53.3	8.8	11.5	26.4	261
<i>Rhino camp</i>	30.9	24.9	21.1	23.0	317
<i>Rwamwanja</i>	24.2	43.2	20.1	12.5	264
<i>Kampala</i>	13.2	34.5	20.7	31.6	174

Trend in livelihood coping strategy index

Figure 29 shows across majority of locations between January 2020 and December 2020 an increase in the proportion of households applying crisis and emergency coping with Palabek having the most significant increase. While reduction was substantial in Bidibidi and Lobule, a reduction in emergency coping was also recorded in Adjumani. Overall, 37.0% of households were in crisis and emergency coping in January 2020 and December 2020.

Figure 29: Trends in proportion of households with crisis and emergency coping



Source: Refugee FSNA, December 2020

FINAL HOUSEHOLD FOOD SECURITY BY CARI CONSOLE

Food Security Index for Refugee FSNA 2020

The final food security classification combines the Food Expenditure, Food Consumption Score and Livelihood coping strategies to assign a household into the categories of 'Food Secure', 'marginally food secure', 'moderately food insecure' and 'severely food insecure'. Each household is assigned to a Food Security Index group based on a simple averaging process using the 4-point scale scores it attained for each indicator. Specifically, each household's Food Security Index classification is based on a simple average of their current status score and their coping capacity score. The coping capacity score is formed from a simple average of the food expenditure share score and the asset depletion score. Table 79 shows results of each food security indicator used in the overall classification and how each indicator contributed to the overall food security outcome.

Table 79: The CARI console

Domain		Indicator	Food Secure (1)	Marginally Food Secure (2)	Moderately Food Insecure (3)	Severely Food Insecure (4)
Current status	Food consumption	Food consumption group	Acceptable 67.4		Borderline 26.3	Poor 6.4
Coping capacity	Economic vulnerability	Food expenditure share	share <50 11.8	50 - 65 15.8	65 - 75 17.2	Share >75 55.2
	Asset depletion	Livelihood coping strategy categories	36	Stress 27	Crisis 17	Emergency 19
Food Security Index			8.8	55.7	28.4	7.1

Source: Refugee FSNA, December 2020

Table 80 is the guide for the interpretation of the final food security classification of households whereas Table 81 shows results of the food security index per settlement. Overall, 35.5% of settlement-based refugee households are food insecure out of which 7.1% are severely food insecure. Rhino Camp (12.3%) had the highest proportion of severely food insecure households. Four more settlements (Palabek, Kyangwali, Palorinya and Kiryandongo) had more than 10.0% of households categorized as severely food insecure (Table 81).

Table 80: Interpretation of the final prevalence of food insecurity

Food Security Index	Description	Food secure/ Food insecure
Food secure	Able to meet essential food and non-food needs without engaging in atypical coping strategies	Food Secure
Marginally Food Secure	Has minimally adequate food consumption without engaging in irreversible coping strategies; unable to afford some essential non-food expenditures	
Moderately Food Insecure	Has significant food consumption gaps, or marginally able to meet minimum food needs only with irreversible coping strategies	Food Insecure
Severely Food Insecure	Has extreme food consumption gaps, or has extreme loss of livelihood assets will lead to food consumption gaps, or worse	

Refugee households in Kampala were comparatively better off than settlement-based refugees in terms of food security. Only 8.2% of refugee households in Kampala were food insecure compared to an average of 35.5% for settlement-based refugee households.

Table 81: Food security index (%)

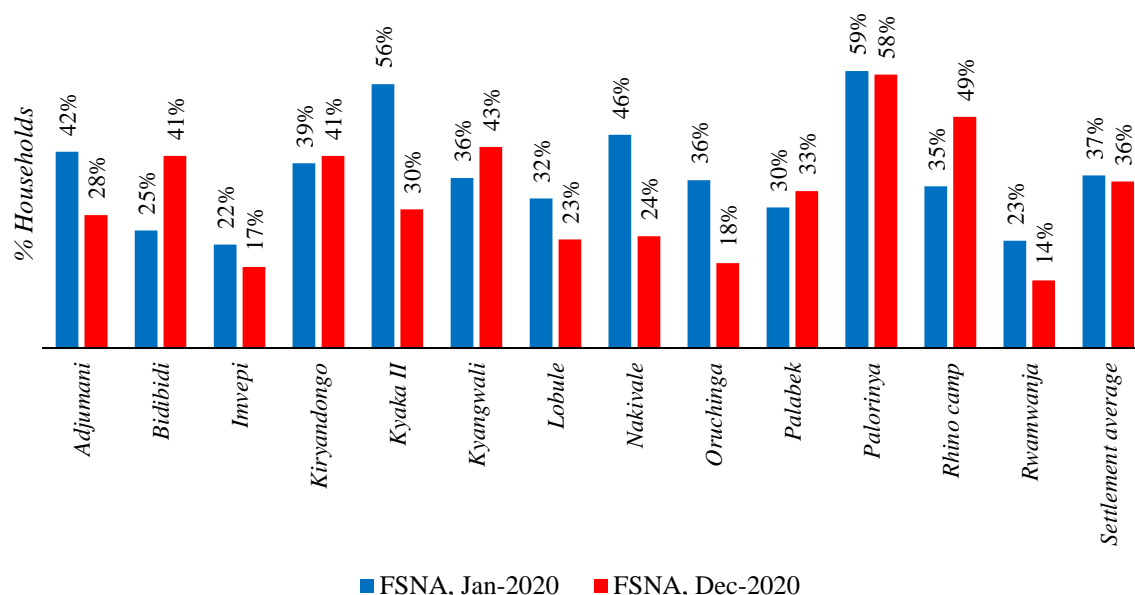
Proportion (%) of households classified for food security based on the CARI console

Settlement	Food Secure	Marginally Food Secure	Moderately Food Insecure	Severely Food Insecure	Food Insecure ²⁶	# of HHs
<i>All</i>	8.8	55.7	28.4	7.1	35.5	3,252
<i>Adjumani</i>	8.6	63.1	18.5	9.9	28.3	233
<i>Bidibidi</i>	8.2	50.8	37.0	3.9	41.0	305
<i>Imvepi</i>	8.2	74.5	15.0	2.3	17.3	306
<i>Kiryandongo</i>	12.0	47.0	30.5	10.4	41.0	249
<i>Kyaka II</i>	7.6	62.8	27.6	2.0	29.6	250
<i>Kyangwali</i>	5.9	51.1	31.1	11.9	42.9	219
<i>Lobule</i>	8.0	68.8	21.6	1.6	23.2	125
<i>Nakivale</i>	14.7	61.4	19.6	4.2	23.9	306
<i>Oruchinga</i>	19.2	62.7	17.1	1.0	18.1	193
<i>Palabek</i>	5.4	61.2	21.9	11.6	33.5	242
<i>Palorinya</i>	2.3	39.3	48.2	10.1	58.4	257
<i>Rhino camp</i>	7.4	43.2	37.1	12.3	49.4	310
<i>Rwamwanja</i>	19.1	66.5	13.2	1.2	14.4	257
<i>Kampala</i>	38.0	53.8	8.2	0.0	8.2	171

Source: Refugee FSNA, December 2020

Trend of Food Security Index

There were mixed changes in the food security status of refugee households in January 2020 and December 2020. The proportion of food insecure households substantially increased in Bidibidi and Rhino camp. Conversely, the proportion of food insecure households decreased substantially in Kyaka II, Nakivale and Oruchinga. Overall, there was a one percentage decrease in the proportion of food insecure households from 37.0% in January 2020 to 36.0% in December 2020.

Figure 30: Proportion of food insecure households based on the CARI, Refugee FSNA, December 2020²⁶ Combines moderately food insecure and severely food insecure categories.

GENDER-BASED VIOLENCE (GBV)

GBV IN THE LAST 6 MONTHS

Overall, 6.9% of household members reported that they experienced GBV linked to humanitarian assistance in the 6 months preceding the study. The recall period for GBV was between June and December 2020. In most settlements, a greater percentage (over 80%) of households reportedly didn't experience any form of GBV between June and December 2020. Palabek and Oruchinga had the highest GBV occurrences due to humanitarian assistance at 16.4% and 10.1% respectively while Kyangwali had the lowest GBV occurrence (1.0%) linked to humanitarian assistance.

Table 82: Humanitarian assistance linked GBV in the last 6 months, Refugee FSNA, December 2020

<i>Location</i>	<i>N</i>	<i>NO (%)</i>	<i>YES (%)</i>
<i>All</i>	7034	93.1	6.9
<i>Adjumani</i>	452	90.8	9.2
<i>Bidibidi</i>	576	93.3	6.7
<i>Imvepi</i>	587	93.4	6.6
<i>Lobule</i>	257	95.7	4.3
<i>Kampala</i>	329	99.5	0.5
<i>Kiryandongo</i>	582	95.6	4.4
<i>Kyaka II</i>	523	91.6	8.4
<i>Kyangwali</i>	450	99.0	1.0
<i>Nakivale</i>	599	92.5	7.5
<i>Oruchinga</i>	406	89.9	10.1
<i>Palabek</i>	601	83.6	16.4
<i>Palorinya</i>	522	92.9	7.1
<i>Rhino Camp</i>	630	94.1	5.9
<i>Rwamwanja</i>	521	96.3	3.7

Frequency of GBV in the last 6 months

Households in 12 of the 14 locations experienced GBV linked to humanitarian assistance 2-3 times in the last 6 months between Jun and Dec 2020, with majority in Kiryandongo (55.7%). Nakivale (33.2%), Kampala (28.9%) and Oruchinga (26.8%) had the highest rates of individuals who experienced GBV linked to humanitarian assistance *more than 6 times* in the last 6 months prior to the study.

Table 83: Frequency of GBV due to humanitarian assistance in the last 6 months, Refugee FSNA, December 2020

<i>LOCATION</i>	<i>N</i>	<i>Once (%)</i>	<i>2-3 times (%)</i>	<i>4-6 times (%)</i>	<i>>6 times (%)</i>
<i>All</i>	484	24.8	46.1	14.2	15.0
<i>Adjumani</i>	41	20.6	54.4	11.8	13.2
<i>Bidibidi</i>	39	24.5	53.7	10.0	11.8
<i>Imvepi</i>	38	30.5	45.6	13.1	10.8
<i>Kampala</i>	12	0.0	42.2	28.9	28.9
<i>Kiryandongo</i>	26	55.7	35.1	5.2	3.9
<i>Kyaka II</i>	44	11.6	45.2	20.2	23.0
<i>Kyangwali</i>	14	43.8	24.6	16.2	15.4
<i>Lobule</i>	11	36.4	54.5	9.1	0.0
<i>Nakivale</i>	45	12.1	46.2	8.4	33.2
<i>Oruchinga</i>	41	26.8	34.1	12.2	26.8
<i>Palabek</i>	99	24.8	45.4	19.4	10.3
<i>Palorinya</i>	37	18.9	60.4	16.2	4.6
<i>Rhino Camp</i>	37	30.0	44.6	9.3	16.2
<i>Rwamwanja</i>	19	29.5	34.7	25.0	10.8

GBV Case Status

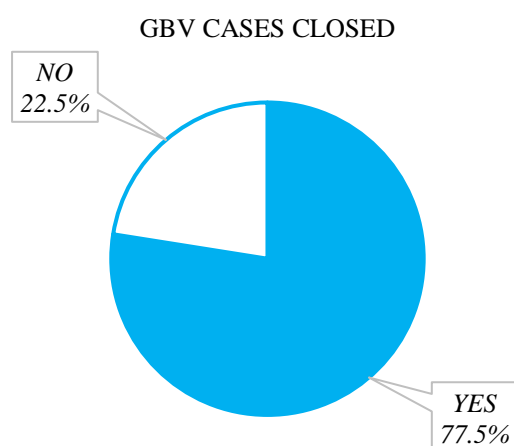
Among the GBV incidents that had occurred between Jun and Dec 2020 and reported, 77.5% of the cases had been closed, the study found. Lobule and Bidibidi had the highest case closure rates at 100% and 92.0% respectively. On the other hand, Kampala, Kyangwali and Palorinya had the lowest proportion of closed GBV cases at 40.7%, 51.6% and 52.0% respectively. All the closed cases reportedly received all the support and services from their respective settlements.

Table 84: GBV case status

<i>GBV CASE CLOSED</i>			
<i>Location</i>	<i>N</i>	<i>YES</i>	<i>NO</i>
<i>All</i>	182	77.5	22.5
<i>Adjumani</i>	8	71.7	28.3
<i>Bidibidi</i>	14	92.0	8.0
<i>Imvepi</i>	14	78.1	21.9
<i>Kampala</i>	1	40.7	59.3
<i>Kiryandongo</i>	11	64.1	35.9
<i>Kyaka II</i>	15	91.7	8.3
<i>Kyangwali</i>	1	51.6	48.4
<i>Lobule</i>	3	100	0.0
<i>Nakivale</i>	14	70.8	29.2
<i>Oruchinga</i>	14	78.6	21.4
<i>Palabek</i>	45	79.8	20.2
<i>Palorinya</i>	12	52.0	48
<i>Rhino Camp</i>	21	87.5	12.5
<i>Rwamwanja</i>	10	62.8	37.2

Source: Refugee FSNA, December 2020

Figure 31: Proportion of GBV cases closed



Source: Refugee FSNA, December 2020

GBV AND HUMANITARIAN ASSISTANCE

Consultation on the use of Humanitarian Assistance

Overall, 65.2% of household heads consult their households on the use of humanitarian assistance. Involvement of the rest of household members on the use of humanitarian assistance was lowest in Kampala (44.2%) and highest in Rwamwanja (77.8%) and Imvepi (76.8%). Limited involvement of other household members in decision making on humanitarian assistance is a possible contributing factor to GBV incidences. It should be noted that the responses in kampala were in reference to the humanitarian assistance extended to Kampala-registered urban refugees during the COVID-19 lockdown.

Awareness of free Humanitarian Assistance

Overall, most (80.1%) respondents were aware that humanitarian assistance is free to all refugees and Asylum seekers in Uganda. However, Kampala (63.1%) and Adjumani (66.3%) had the lowest proportion of respondents who were aware of free humanitarian assistance and services. Knowledge of free humanitarian assistance was highest in Kyaka II at 92.1% followed Kyangwali (89.3%) and Rwamwanja (87.7%). It should be noted that the responses in kampala were in reference to the humanitarian assistance extended to urban refugees registered in kampala during the COVID-19 lockdown.

Table 85: Consultation humanitarian assistance (HA) use by HH heads and awareness of free HA

<i>HUMANITARIAN ASSISTANCE</i>					
<i>Location</i>	<i>N</i>	<i>Consultation of HHs on HA</i>		<i>Aware if HA is free</i>	
		<i>Yes (%)</i>	<i>No (%)</i>	<i>Yes (%)</i>	<i>No (%)</i>
<i>All</i>	7034	65.2	34.8	80.1	19.9
<i>Adjumani</i>	452	60.2	39.8	66.3	33.7
<i>Bidibidi</i>	576	53.0	47.0	83.0	17.0
<i>Imvepi</i>	587	76.8	23.2	87.4	12.6
<i>Kampala</i>	329	44.2	55.8	63.1	36.9
<i>Kiryandongo</i>	582	64.2	35.8	83.2	16.8
<i>Kyaka II</i>	523	69.8	30.2	92.1	7.9
<i>Kyangwali</i>	450	65.5	34.5	89.3	10.7
<i>Lobule</i>	257	58.8	41.2	85.6	14.4
<i>Nakivale</i>	599	67.6	32.4	82.1	17.9
<i>Oruchinga</i>	406	74.1	25.9	87.4	12.6
<i>Palabek</i>	601	69.9	30.1	72.4	27.6
<i>Palorinya</i>	522	59.1	40.9	70.0	30.0
<i>Rhino Camp</i>	630	61.3	38.7	71.1	28.9
<i>Rwamwanja</i>	521	77.8	22.2	87.7	12.3

Source: Refugee FSNA, December 2020

Sex in exchange for Humanitarian Assistance

Overall, 97.2% of the respondents reported not having been asked for sex in exchange for humanitarian assistance while 2.8% reported to having been asked for sex in exchange for humanitarian assistance. The study found that Bidibidi (5.6%), Kiryandongo (4.3%), Nakivale (4.2%), Rhino camp and Palabek (3.4%) had the highest proportion of respondents who were asked for sex in exchange for humanitarian assistance. Kyangwali had the lowest percentage (0.8%) of respondents who reported that they were asked for sex in exchange for humanitarian assistance.

Awareness of where to report GBV

Overall, 66.4 % knew where to report GBV incidences in their respective settlements. Awareness of GBV reporting pathways was highest in Lobule (78.6%) and Kiryandongo (77.4%). Kampala (54.8%), Nakivale (57.0%) and Kyaka II (58.8%) had the lowest awareness of GBV reporting pathways.

Table 86: Sex for Humanitarian Assistance and awareness of where to report GBV, FSNA, December 2020

<i>Location</i>	<i>N</i>	<i>Sex for Hum. Assist.</i>		<i>Know Where to Report</i>	
		<i>No</i>	<i>Yes</i>	<i>Yes</i>	<i>No</i>
<i>All</i>	7034	97.2	2.8	66.4	33.6
<i>Adjumani</i>	452	98.0	2.0	64.7	35.3
<i>Bidibidi</i>	576	94.4	5.6	74.3	25.7
<i>Imvepi</i>	587	98.4	1.6	71.4	28.6
<i>Kampala</i>	329	98.8	1.2	54.8	45.2
<i>Kiryandongo</i>	582	95.7	4.3	77.4	22.6
<i>Kyaka II</i>	523	98.3	1.7	58.8	41.2
<i>Kyangwali</i>	450	99.2	0.8	65.5	34.5
<i>Lobule</i>	257	98.1	1.9	78.6	21.4
<i>Nakivale</i>	599	95.8	4.2	57.0	43.0
<i>Oruchinga</i>	406	97.0	3.0	67.7	32.3
<i>Palabek</i>	601	96.6	3.4	59.4	40.6
<i>Palorinya</i>	522	98.2	1.8	69.9	30.1
<i>Rhino Camp</i>	630	96.6	3.4	68.4	31.6
<i>Rwamwanja</i>	521	98.0	2.0	63.3	36.7

GBV reporting

As much as 66.4% knew where to report GBV cases, a small proportion of them reported the cases i.e. To NGOs handling GBV (3.8%), to OPM (2.1%), to police (3.5%), the refugee welfare committees (RWCs) (8.5%), and through the FRRM (0.7%). All 47.8% of GBV cases were resolved internally as HHs, 18% through clean leaders, while 10.6% did nothing. The data indicates that refugees were more open to resolving GBV cases amongst themselves, and when they reported, this was mostly through refugee leadership structures like RWCs.

Table 87: GBV reporting (%), Refugee FSNA, December 2020

	<i>Do nothing</i>	<i>Resolve internally</i>	<i>Others Specify</i>	<i>Reported to clan leaders to mediate</i>	<i>Reported to NGOs</i>	<i>Reported to OPM</i>	<i>Reported to Police</i>	<i>Reported to RWC</i>	<i>Reported to the FRRM Helpline</i>
<i>All</i>	10.6	47.4	5.4	18.0	3.8	2.1	3.5	8.5	0.7
<i>Adjumani</i>	6.6	72.9	0.0	17.1	0.0	0.0	0.0	3.5	0.0
<i>Bidibidi</i>	21.1	41.4	2.3	11.2	8.6	0.0	2.9	12.4	0.0
<i>Imvepi</i>	10.7	39.8	19.9	14.6	4.7	0.0	1.1	9.0	0.0
<i>Kampala</i>	0.0	28.9	0.0	0.0	0.0	42.2	0.0	0.0	28.9
<i>Kiryandongo</i>	13.6	44.0	0.0	17.2	8.0	3.3	6.9	7.0	0.0
<i>Kyaka II</i>	3.0	56.3	7.8	12.3	0.0	0.0	0.0	20.7	0.0
<i>Kyangwali</i>	21.9	51.9	3.9	11.5	0.0	0.0	10.8	0.0	0.0
<i>Lobule</i>	0.0	72.7	0.0	27.3	0.0	0.0	0.0	0.0	0.0
<i>Nakivale</i>	1.6	53.0	16.3	15.9	0.0	4.8	0.0	8.5	0.0
<i>Oruchinga</i>	4.9	58.5	2.4	14.6	7.3	0.0	4.9	2.4	4.9
<i>Palabek</i>	5.9	46.6	1.9	23.6	5.6	6.5	3.4	6.5	0.0
<i>Palorinya</i>	24.2	44.1	0.0	11.4	7.4	0.0	3.2	9.8	0.0
<i>Rhino Camp</i>	25.7	20.0	2.1	30.6	0.0	0.0	6.9	11.9	2.8
<i>Rwamwanja</i>	18.6	15.8	14.6	25.3	0.0	0.0	19.9	5.7	0.0

Tension linkage factors

Overall, tension due to disagreement in making decisions on the use the assistance for accounted for 22.1% with Lobule (36.4%) and Kyaka II (36.3%) reporting highest. Kampala had no cases related to this factor while Adjumani reported only 3.7%.

Tension because of misuse of assistance overall was 16.0% with Rwamwanja (40.3%) and Kyangwali (4.0%) registering highest and lowest respectively. Tension linked to prioritizing household needs was at 18.5% with Kampala (71.1%) and Rhino Camp (5%) the highest and lowest respectively.

Assistance not being adequate for intended use accounted for 23.2% and was highest in Bidibidi with (52.8%) and lowest in Oruchinga (7.3%). Kampala, Kiryandongo and Kyangwali had no tension linked to inadequate assistance. For the 20.3% that reported *others specify*, tension was linked to adultery, alcoholism, COVID-19, stress, drug abuse etc.

Table 88: Tension Linkage Factors (%)

<i>Location</i>	N	Disagree in making decisions on assistance	Assistance not adequate for the intended use	Misuse of assistance	Prioritizing household needs	Others Specify
<i>All</i>	484	22.1	23.2	16.0	18.5	20.3
<i>Adjumani</i>	41	3.7	52.8	12.7	19.7	11.1
<i>Bidibidi</i>	39	28.6	45.4	5.5	9.4	11.1
<i>Imvepi</i>	38	12.5	42.1	6.4	18.9	20.1
<i>Kampala</i>	2	0.0	0.0	0.0	71.1	28.9
<i>Kiryandongo</i>	26	29.1	0.0	12.8	34.3	23.8
<i>Kyaka II</i>	44	36.3	14.7	24.9	8.5	15.6
<i>Kyangwali</i>	4	16.0	0.0	4.0	51.9	28.0
<i>Lobule</i>	11	36.4	27.3	9.1	18.2	9.1
<i>Nakivale</i>	45	17.9	10.9	30.3	10.8	30.0
<i>Oruchinga</i>	41	26.8	7.3	24.4	19.5	22.0
<i>Palabek</i>	99	25.7	16.6	9.3	30.6	17.8
<i>Palorinya</i>	37	16.7	14.8	20.8	15.4	32.3
<i>Rhino Camp</i>	37	13.3	37.8	9.8	5.0	34.1
<i>Rwamwanja</i>	19	29.9	15.9	40.3	9.2	4.8

Source: Refugee FSNA, December 2020

ENERGY

Cooking fuel source

Overall, firewood (62.1%) and charcoal (36.1%) were the major sources of cooking fuel across all locations. Charcoal use was highest in urban (Kampala) at 73.5% while firewood accounting for only 5.3% of cooking fuel sources. This trend reversed in settlements where majority of households relied mainly on firewood fuel for cooking; Palorinya and Lobule had the highest firewood energy use at 95.6% and 93.7% respectively. Alternative energy sources for cooking only accounted for 1%. There is need to scaleup the use of alternative, perhaps more environmentally sustainable energy sources for cooking. This also serves to positively impact peaceful coexistence with host communities linked to sharing on common resources.

Table 89: Cooking Fuel source (%)

Location	Fire Wood (%)	Charcoal (%)	Biogas (%)	Other (%)	LPG (%)	Don't know (%)	Kerosene (%)	Briquettes (%)	Ethanol (%)
<i>Overall</i>	62.1	36.1	0.7	0.7	0.2	0.1	0.1	0	0
<i>Adjumani</i>	57	43	0	0	0	0	0	0	0
<i>Bidibidi</i>	74.9	24.7	0	0	0	0	0	0.3	0
<i>Imvepi</i>	75.2	24.8	0	0	0	0	0	0	0
<i>Kampala</i>	5.3	73.5	12.8	2.8	3.2	0.6	1.4	0	0.5
<i>Kiryandongo</i>	61.6	36.4	0	2	0	0	0	0	0
<i>Kyaka II</i>	36.8	62.6	0	0.6	0	0	0	0	0
<i>Kyangwali</i>	74.8	25.2	0	0	0	0	0	0	0
<i>Lobule</i>	93.7	5.6	0	0.8	0	0	0	0	0
<i>Nakivale</i>	36.3	61.2	0	2	0	0.5	0	0	0
<i>Oruchinga</i>	38.1	60.4	0	1.5	0	0	0	0	0
<i>Palabek</i>	82.8	17.2	0	0	0	0	0	0	0
<i>Palorinya</i>	95.6	4.2	0	0	0	0	0	0	0.2
<i>Rhino Camp</i>	84.1	15.3	0	0	0	0.3	0.3	0	0
<i>Rwamwanja</i>	39.6	59.6	0	0.4	0	0.4	0	0	0

Source: Refugee FSNA, December 2020

Cooking fuel assistance

Cooking fuel assistance was very low across all settlements and overall, only 2.2% reported to have received cooking fuel assistance. Lobule and Nakivale settlements reported 0% for those benefiting from cooking fuel assistance. Oruchinga, Adjumani and Kyangwali settlements had the highest percentage of individuals benefiting from cooking fuel assistance at 8.4%, 6.9% and 5.5% respectively.

Table 90: Cooking Fuel Assistance

Location	N	No (%)	Yes (%)	Don't know (%)
<i>All</i>	3632	97.6	2.2	0.2
<i>Adjumani</i>	231	93.1	6.9	0
<i>Bidibidi</i>	305	99.4	0.6	0
<i>Imvepi</i>	309	99	0.6	0.3
<i>Kampala</i>	188	99	0.5	0.6
<i>Kiryandongo</i>	300	99.7	0.3	0
<i>Kyaka II</i>	260	99.1	0.4	0.5
<i>Kyangwali</i>	228	94.5	5.5	0
<i>Lobule</i>	126	100	0	0
<i>Nakivale</i>	308	100	0	0
<i>Oruchinga</i>	202	91.6	8.4	0
<i>Palabek</i>	294	95.8	4.2	0
<i>Palorinya</i>	283	96.8	2.7	0.6
<i>Rhino Camp</i>	324	0.5	98	1.5
<i>Rwamwanja</i>	273	0.4	98.6	1

Source: Refugee FSNA, December 2020

Duration of Household Cooking Fuel

Overall, 38.2% reported that their cooking fuel would last 2-3 weeks. In Kyangwali, 78.4% of the respondents said that the available cooking fuel would only last 1 week. In Kampala and Kiryandongo, all respondents said their cooking fuel was able to last for a duration of 2-3 weeks. Similarly, all respondents in Kyaka II and Palabek had cooking fuel last for 3-4 weeks. Palorinya (100%) and Rhino camp (28.7%), cooking fuel would last for >4 weeks.

Table 91: Household Cooking Fuel Duration (%)

Location	1 week (%)	1-2 weeks (%)	2-3 weeks (%)	3-4 weeks (%)	>4 weeks (%)
<i>All</i>	26.2	22.5	38.2	5.4	7.7
<i>Bidibidi</i>	0	57.9	0	42.1	0
<i>Imvepi</i>	51.2	48.8	0	0	0
<i>Kampala</i>	0	0	100	0	0
<i>Kiryandongo</i>	0	0	100	0	0
<i>Kyaka II</i>	0	0	0	100	0
<i>Kyangwali</i>	78.4	3.5	18.1	0	0
<i>Oruchinga</i>	0	35.3	64.7	0	0
<i>Palabek</i>	0	0	0	100	0
<i>Palorinya</i>	0	0	0	0	100
<i>Rhino Camp</i>	19	8.5	43.8	0	28.7
<i>Rwamwanja</i>	0	100	0	0	0

Source: Refugee FSNA, December 2020

Appendices

Appendix 1. Trends

Table 92: GAM Trend Analysis (children U5)

<i>Location</i>	<i>GAM WHZ (<-2 Z-scores & or Oedema)</i>					<i>SAM WHZ (<-3 z-scores & or Oedema)</i>			
	2014	2015	2016	2017	2020	2015	2016	2017	2020
<i>Adjumani</i>	6.9	11.0	9.6	11.8	8.3	0.8	1.5	0.6	1.4
<i>Bidibidi</i>			7.6	11.8	6.7		1.3	0.2	1.5
<i>Imvepi</i>					4.3				0.9
<i>Lobule</i>	1.9	2.6	7.5	6.1	3.5	0.0	0.9	0.4	0.0
<i>Kampala</i>	0.0			9.0	3.7			0.0	1.0
<i>Kiryandongo</i>	8.6	9.7	8.2	7.5	8.7	0.5	0.4	0.5	2.1
<i>Kyaka II</i>	6.0	6.8	3.3	4.0	1.2	0.5	0.0	0.0	0.2
<i>Kyangwali</i>	3.2	4.4	2.1	3.2	1.1	0.6	0.0	0.0	0.3
<i>Nakivale</i>	3.6	5.5	3.2	3.8	2.2	0.3	0.0	0.2	1.2
<i>Oruchinga</i>	4.3	4.5	4.0	4.1	2.1	0.5	0.0	0.3	0.4
<i>Palabek</i>				12.3	8.2			0.5	2.3
<i>Palorinya</i>				11.1	5.3			0.4	0.4
<i>Rhino Camp</i>	5.2	10.5	14.2	10.3	6.9	1.1	1.7	0.5	1.1
<i>Rwamwanja</i>	3.4	4.3	1.6	3.8	2.2	0.5	0.0	0.3	1.4

Table 93: Stunting and Underweight Trends

LOCATION	Underweight (WFA <-2 Z-Score)					Stunting (HFA <-2 Z-Score)				
	2014	2015	2016	2017	2020	2014	2015	2016	2017	2020
ADJUMANI	8.8	14.1	7.2	5.8	5.9	17.6	16.7	12.7	14.0	11.5
BIDIBIDI			1.1	9.6	7.5			18.4	16.1	12.1
IMVEPI					7.0					18.3
LOBULE	7.8	11.0	3.0	10.0	11.9	29.4	27.2	9.8	17.9	19.2
KAMPALA				7.5	4.9				19.8	9.4
KIRYANDONGO	7.7	17.7	4.4	7.0	4.2	13.3	17.7	6.5	8.4	7.5
O										
KYAKA II	13.7	6.8	8.3	6.8	10.7	45.7	31.2	35.7	22.3	48.7
KYANGWALI	13.9	4.4	6.9	5.4	7.2	47.7	2.7	39.6	32.6	38.1
NAKIVALE	11.7	11.2	7.2	6.4	4.4	39.8	37.7	23.0	21.6	31.8
ORUCHINGA	17.3	4.8	8.6	6.7	6.9	44.4	17.6	34.2	27.9	28.4
PALABEK				16.7	11.4				21.9	24.2
PALORINYA				9.0	6.7				16.6	12.0
RHINO CAMP	4.8	11.2	4.7	8.2	3.8	11.4	15.1	7.5	9.2	12.7
RWAMWANJA	16.6	4.3	9.1	4.3	12.3	45.1	4.2	39.8	25.0	45.2

Table 94: Total Anemia Trends

LOCATION	Children 6-59 (Hb <11 g/dL)						WRA Non-Pregnant 6-59 (Hb <12 g/dL)					
	2014	2015	2016	2017	Jan 20	Dec 20	2014	2015	2016	2017	Jan 20	Dec 20
<i>ADJUMANI</i>	59.7	54.2	47.7	42.3	54.0	57.5	38.2	35.6	48.1	34.4	21.9	50.3
<i>BIDIBIDI</i>			72.4	56.6	54.5	73.8			56.5	27.5	42.6	49.2
<i>IMVEPI</i>				46.0	62.7	47.2					41.5	28.7
<i>LOBULE</i>	64.5	63.9	72.2	53.0	64.8	79.2	39.1	30	21.8	30	33.1	48.7
<i>KAMPALA</i>				36.6		24.9				26.6		21.2
<i>KIRYANDONGO</i>	41.1	43.9	59.3	44.1	55.1	52.4	42.3	37.3	39.4	30.6	32.5	39.2
<i>KYAKA II</i>	48.3	52.2	51.1	44.1	55.1	47.5	30.4	43.2	42.1	38.8	47.3	35.4
<i>KYANGWALI</i>	52.5	41.1	44.8	41.8	42.7	59.0	37.5	30.8	23.1	30.7	42.9	45.9
<i>NAKIVALE</i>	36.5	41.0	26.1	24.7	44.8	37.6	26.9	27.8	44.4	29.6	43	32.4
<i>ORUCHINGA</i>	43.1	39.4	39.1	37.1	38.3	32.6	20.4	30.4	34.9	27	26	25.1
<i>PALABEK</i>				45.9	57.7	62.9				47.3	33.2	53.2
<i>PALORINYA</i>				48.4	65.7	57.8				33.8	49.2	56.5
<i>RHINO CAMP</i>	67.7	49.8	65.0	46.0	55.5	56.7	58.6	37.5	38.5	24.5	16.8	34.8
<i>RWAMWANJA</i>	49.2	50.2	51.7	43.0	23.1	46.1	25.1	33.8	47.8	31.1	27	31.7

Table 95: Regional Anemia Trends

Regions	2014	2015	2016	2017	Jan 2020	Dec 2020
<i>All</i>	50.71	47.49	52.26	45.04	52.35	55.37
<i>West Nile</i>	56.17	49.30	61.10	48.44	56.98	61.96
<i>South West</i>	46.63	46.13	43.43	35.44	43.47	47.48

Table 96: Vitamin A supplementation Trend Analysis

VITAMIN A SUPPLEMENTATION IN THE LAST 6 MONTHS					
Location	2015	2016	2017	Jan 20	Dec 20
<i>Adjumani</i>	89.8	94.5	90.7	68.9	59.4
<i>Bidibidi</i>		69.5	90.9	81.1	79.0
<i>Imvepi</i>				77.7	73.8
<i>Lobule</i>	89.9	95.8	85.8	57.9	78.1
<i>Kampala</i>			63.8		66.3
<i>Kiryandongo</i>	88.2	73.1	90.7	64.2	63.6
<i>Kyaka II</i>	88.4	91.1	92.1	57.3	84.7
<i>Kyangwali</i>	87.1	76.9	80.4	64.9	72.4
<i>Nakivale</i>	91.4	92.3	79.7	85.4	73.3
<i>Oruchinga</i>	91.6	85.9	90.7	77.9	73.6
<i>Palorinya</i>			88.5	78.7	51.8
<i>Palabek</i>			78.5	81.6	79.1
<i>Rhino Camp</i>	92.5	95.0	85.6	79.5	63.4
<i>Rwamwanja</i>	88.8	97.4	94.4	72.2	77.2

Table 97: IYCF Indicators

	2014	2015	2016	2017	Jan-20	Dec-20
<i>Exclusive BF</i>	90.7	70.5	76.4	73	65	62.3
<i>BF <1 Hour</i>	83.9	76	87.3	80.5	-	74.4
<i>BF at 1 Year</i>	78.9	90.1	93.5	92	95	82.4
<i>BF at 2 Year</i>	68.1	72.4	72.6	79	62	58.8
<i>Intro CF (6-8 mo)</i>	54.3	47.9	58.6	80.5	75	70
<i>Iron-Rich Foods</i>	39.8	53.2	61.8	94.4	-	23.9
<i>Bottle feeding</i>	-	13.2	12.1	19.2	-	8.2

Table 98: Trend Analysis for Deworming Coverage (children 12-59 months)

<i>TREND ANALYSIS FOR DEWORMING COVERAGE (12-59 MONTHS)</i>					
<i>Location</i>	2015	2016	2017	Jan 20	Dec 20
<i>Adjumani</i>	87.4	92.5	87.7	66.5	68.1
<i>Bidibidi</i>		68.3	84.6	76.5	84.2
<i>Imvepi</i>			78.9	73.8	81.8
<i>Lobule</i>	89.0	91.9	81.5	65.4	83.9
<i>Kampala</i>					55.7
<i>Kiryandongo</i>	85.8	73.3	85.6	66.3	64.4
<i>Kyaka II</i>	86.2	87.0	84.6	59.7	86.9
<i>Kyangwali</i>	83.9	75.1	81.1	84.1	78.8
<i>Nakivale</i>	90.3	92.2	72.6	85.8	75.6
<i>Oruchinga</i>	87.3	84.5	86.6	85.1	90.2
<i>Palabek</i>			75.1	79.8	80.2
<i>Palorinya</i>			88.1	75.9	89.1
<i>Rhino Camp</i>	90.4	90.0		72.5	75.4
<i>Rwamwanja</i>	84.3	97.4	83.9	90.5	76.3

Table 99: Trend analysis of household ownership of any type of mosquito net and ITN

<i>HOUSEHOLD NET OWNERSHIP BY TYPE</i>							
Locations	<i>At least one - Any type</i>			<i>At least one -ITN</i>			% Change Since Jan 20
	Oct 17	Jan 20	Dec 20	Oct 17	Jan 20	Dec 20	
<i>All</i>	50.3	59.7	75.7	37.4	50.7	75.7	25
<i>Adjumani</i>	35.8	85.3	91	21.9	77.1	91	13.9
<i>Bidibidi</i>	60.6	64.6	92.6	37	49.1	92.6	43.5
<i>Imvepi</i>	-	57.5	98.9		49.8	98.9	49.1
<i>Kampala</i>	-	-	43.8	-	-	43.8	43.8
<i>Kiryandongo</i>	32.2	68.6	79.9	26.2	57.6	79.9	22.3
<i>Kyaka II</i>	14.8	28.8	27.1	9.6	24.1	27.1	3
<i>Kyangwali</i>	17.5	63	82.9	11.8	56	82.9	26.9
<i>Lobule</i>	32.1	73.6	99.2	23.9	72.5	99.2	26.7
<i>Nakivale</i>	46.3	28.7	84.9	34.9	15.4	84.9	69.5
<i>Oruchinga</i>	84.9	55.4	94.6	84.7	49.5	94.6	45.1
<i>Palabek</i>	96.6	79.3	64.8	64.5	68.2	64.8	-3.4
<i>Palorinya</i>	78.7	52.5	61.9	63.1	45.8	61.9	16.1
<i>Rhino Camp</i>	38.2	60.3	57.4	26.4	42.4	57.4	15
<i>Rwamwanja</i>	65.7	58.8	95.8	44.4	52.1	95.8	43.7

Table 100: Average number of ITN per household and average number of people per net

<i>AVERAGE ITN</i>							
<i>Location</i>	<i>Average ITN per household</i>				<i>Average persons per net</i>		
	2016	Oct 17	Jan 20	Dec 20	2016	Oct 17	Dec 20
<i>All</i>	0.9	1.9	1.8	3.0	3.1	3.5	3.0
<i>Adjumani</i>	2.02	2.4	2.3	3.3	3.1	3.1	3.0
<i>Bidibidi</i>	0.39	2.6	1.7	3.9	3.9	3.7	3.1
<i>Imvepi</i>	-	-	1.6	3.8	-	-	2.6
<i>Kampala</i>	-	1.8	-	1.8	-	3.7	2.8
<i>Kiryandongo</i>	0.74	2.2	2.0	3.6	3.6	2.9	2.8
<i>Kyaka II</i>	0.78	1.4	1.3	1.7	3.5	3.7	3.1
<i>Kyangwali</i>	0.73	1.6	1.7	2.3	3.1	3.4	2.9
<i>Lobule</i>	1.12	1.7	2.0	3.9	4.1	4.6	3.0
<i>Nakivale</i>	1.2	1.6	0.8	2.7	3.2	3.7	3.1
<i>Oruchinga</i>	1.26	1.8	1.6	2.5	2.8	2.4	3.0
<i>Palabek</i>	-	1.9	2.0	2.3	-	2.8	3.0
<i>Palorinya</i>	-	2.3	1.5	2.6	-	3.4	3.0
<i>Rhino Camp</i>	0.94	2.5	1.6	2.3	3.5	4.2	2.6
<i>Rwamwanja</i>	0.58	1.5	1.4	2.8	3.2	3.6	3.2

Table 101: Trend analysis of water consumption (liters/person/day)

<i>TREND ANALYSIS LITERS PER PERSON PER DAY</i>								
<i>Location</i>	<i>Mean l/p/p/d</i>				<i>Households ≥ 20l/p/p/d (WHO)</i>			
	2016	Oct-17	Jan-20	Dec-20 (median)	2016	Oct-17	Jan-20	Dec-20
<i>All</i>	15.8	18.1	19.4	15.8	34.2	35.1	40.6	42.0
<i>Adjumani</i>	19.4	16.0	21.4	20.0	40.4	25.9	54.0	55.3
<i>Bidibidi</i>	20.0	14.4	19.5	15.4	52.7	23.6	38.3	42.2
<i>Imvepi</i>				15.6			52.6	39.0
<i>Kampala</i>		25.0		12.0	59.6			36.6
<i>Kiryandongo</i>	16.4	18.9	19.8	20.0	28.0	40.3	41.0	54.1
<i>Kyaka II</i>	13.5	13.3	15.4	13.3	25.2	20.0	26.4	38.5
<i>Kyangwali</i>	15.1	16.1	17.6	17.8	32.9	26.9	34.3	48.8
<i>Lobule</i>	15.8	20.4	19.5	16.0	33.3	38.1	43.2	44.8
<i>Nakivale</i>	13.4	15.1	16.3	10.0	23.6	29.1	30.4	23.3
<i>Oruchinga</i>	14.1	37.5	16.4	13.3	23.6	41.6	36.9	34.3
<i>Palabek</i>		27.2	24.0	16.7		68.2	54.1	48.8
<i>Palorinya</i>		18.1	19.5	20.0		37.7	41.0	52.4
<i>Rhino camp</i>	15.4	18.0	24.3	17.5	34.1	37.0		48.2
<i>Rwamwanja</i>	13.0	17.2	16.5	10.9	23.2	32.8	34.8	21.6

Table 102: Trend of Households Collecting Drinking/Potable Water from Protected Sources*Households Collecting Drinking Water from Protected Source*

Location	2016	2017	Jan-20	Dec-20
<i>Total</i>	97.3	87.1	93.5	91.4
<i>Adjumani</i>	99.6	91.0	100.0	99.0
<i>Bidibidi</i>	89.8	84.0	99.0	97.3
<i>Imvepi</i>	-	-	97.0	97.7
<i>Lobule</i>	100.0	100.0	100.0	99.2
<i>Kampala</i>	0.0	78.5	-	87.3
<i>Kiryandongo</i>	99.7	75.0	100.0	96.5
<i>Kyaka II</i>	98.4	84.0	80.0	76.1
<i>Kyangwali</i>	99.7	86.0	94.0	70.4
<i>Nakivale</i>	95.5	87.0	75.0	84.0
<i>Oruchinga</i>	90.3	88.0	91.0	91.0
<i>Palabek</i>	-	98.0	100.0	97.0
<i>Palorinya</i>	-	100.0	100.0	97.9
<i>Rhino Camp</i>	100.0	61.0	-	95.5
<i>Rwamwanja</i>	99.8	100.0	86.0	90.9

Table 103: Highest Education Level of Household Members

HIGHEST EDUCATION LEVEL OF HOUSEHOLD MEMBERS							
Location	N	None	Primary	Lower Secondary	Upper Secondary	Tertiary	Don't Know
<i>All</i>	36801	31.3	56.0	9.0	2.2	1.4	0.2
<i>Adjumani</i>	2735	27.1	57.5	9.9	3.2	1.2	1.1
<i>Bidibidi</i>	3565	21.8	64.5	10.1	2.5	0.6	0.4
<i>Imvepi</i>	3548	28.4	62.4	8.3	0.7	0.3	0.0
<i>Kampala</i>	1379	35.7	31.7	17.9	6.7	8.0	0.0
<i>Kiryandongo</i>	3798	26.5	58.2	12.7	1.2	1.4	0.0
<i>Kyaka II</i>	2136	43.9	46.7	4.9	2.2	2.3	0.0
<i>Kyangwali</i>	1819	53.3	43.4	2.5	0.5	0.2	0.0
<i>Lobule</i>	1435	20.7	70.0	7.0	2.2	0.1	0.0
<i>Nakivale</i>	2727	41.9	45.9	7.8	2.4	2.0	0.0
<i>Oruchinga</i>	1667	33.3	57.6	5.3	2.2	1.6	0.0
<i>Palabek</i>	2906	26.7	63.3	6.7	1.9	0.9	0.6
<i>Palorinya</i>	2696	27.6	55.2	13.5	2.5	1.0	0.2
<i>Rhino Camp</i>	3894	28.4	59.5	9.9	1.0	1.2	0.0
<i>Rwamwanja</i>	2496	38.7	48.4	7.0	4.1	1.9	0.0

Table 104: Combined GAM (WHZ <-2 and/or MUAC < 125 mm and/or oedema)

		PREVALENCE			IN NEED OF TREATMENT		
Location	N	GAM	MAM	SAM	GAM	MAM	SAM
<i>All</i>	<i>5541</i>	7.1	5.5	1.6	35721	27273	8447
<i>Adjumani</i>	<i>290</i>	11.7	9.6	2.1	7716	6331	1385
<i>Bidibidi</i>	<i>553</i>	7.6	5.6	2.0	5302	3907	1395
<i>Imvepi</i>	<i>571</i>	4.9	4.0	0.9	1266	1033	233
<i>Lobule</i>	<i>177</i>	5.1	4.0	1.1	115	91	25
<i>Kampala</i>	<i>194</i>	4.6	3.1	1.5	847	570	276
<i>Kiryandongo</i>	<i>429</i>	12.4	9.8	2.6	3744	2959	785
<i>Kyaka II</i>	<i>445</i>	3.6	2.5	1.1	1752	1217	535
<i>Kyangwali</i>	<i>384</i>	4.2	3.4	0.8	2637	2135	502
<i>Nakivale</i>	<i>509</i>	3.5	2.1	1.4	2002	1201	801
<i>Oruchinga</i>	<i>297</i>	3.0	2.0	1.0	109	73	36
<i>Palabek</i>	<i>359</i>	9.7	6.4	3.3	1982	1308	674
<i>Palorinya</i>	<i>285</i>	7.4	6.7	0.7	2817	2550	266
<i>Rhino Camp</i>	<i>530</i>	9.2	7.3	1.9	3605	2861	745
<i>Rwamwanja</i>	<i>518</i>	4.4	2.5	1.9	1826	1037	788

Appendix 2. List of participants

Names	Organisation	Duty station
Jjuuko Allan	ACF/CIDI	Kyangwali
Tumusiime Bob	HFU	Kyangwali
Waiswa Brian	HFU	Kyangwali
Balagadde Aron	MTI	Kyangwali
Kemigisa Evelyn	MTI	Kyangwali
Kayebire Paul	MTI	Kyangwali
Nakabugo Monica	MTI	Kyangwali
Racheal Boona	ACF	Kiryandongo
David Namisi	IRC	Kiryandongo
Nalunkuma Sharon	ACF	Kiryandongo
Otika Martin	ACF	Kiryandongo
Kanga Joan	ACF	Kiryandongo
Lanyero Gloria	OPWIG	Kiryandongo
Tece Jesus stephen	AFI	Kiryandongo
Kagoza joshua	IRC	Kiryandongo
Abraham Gima A	OPWIG	Kiryandongo
Nadonghaa Antony	IRC	Kiryandongo
Mukalasi Ronald	ACF	Kiryandongo
Sijal mustafa	IRC	Kiryandongo
Kayemba Henry	ACF	Kiryandongo
Omara Francis	IRC	Palabek
Enap Ronald Bob	FHU	Palabek
Lanyero Flavia	IRC	Palabek
Agno-Rwot Flavia Sharon	IRC	Palabek
David Opus	FHU	Palabek
Akot Mary	OPM	Lamwo
Omona Patrick	OPM	Lamwo
Ongom Hudson	PACHEDO	Palabek
Odong Peter	FHU	Palabek
Atimango Jenneth	DLG	Lamwo
Ijjo Fred	DLG	Adjumani
Idrifua Godfrey	DLG	Adjumani
Mama		Adjumani
Atim Gloria	ACF	Adjumani
Okot Christopher	MTI	Adjumani
Andama Alex	ADLG	Adjumani
Orech Bonny	MTI	Adjumani
Rubangakene Robert	MTI	Adjumani
Omviti Jimmy		Adjumani
Kata	MTI	Palorinya
Chandiga Justine		Palorinya
Gamish	MTI	Palorinya
Kisathum Brenda		Palorinya
Ochaki	MTI	Palorinya

Anguerebo Roy		
Howard	MTI	Palorinya
Nawanga Zainah	MTI	Palorinya
Magala Kenneth	MTI	Palorinya
Abraham Kaggwa	MTI	Palorinya
Turinawe Henry	MTI	Palorinya
Bubolo Paul	LWF	Palorinya
Edimu David		
Mark	MTI	Palorinya
Namagembe		
Rhoda Patricia	DLG	Kiryandongo
Waiswa Oscar	DLG	Kiryandongo
Bukirwa Irene		
Bridget	DLG	Kiryandongo
Driciru Irene	WFP	Koboko FO
Apangubo Patrick	WFP	Koboko FO
	PALM	
Ujadio Patricia	CORPS	Palorinya
Kisakye Dorcus	IRC	Yumbe
Asa Muhozi	IRC	Yumbe
Mambo Nesto	IRC	Yumbe
Olega Ashiraf	IRC	Yumbe
Aliganyira Jonus	ACF	Yumbe
Musitwa Grace	ACF	Yumbe
Irachan Peace	ACF	Yumbe
Olela Daniel	ACF	Yumbe
Mucraish Saharu	ACF	Yumbe
Likicho Zubeda	DLG	Yumbe
Acen Catherine	DLG	Yumbe
Job Arnold	AFI	Imvepi
Nelson Mandela	AFI	Imvepi
Olega Stephen	AFI	Imvepi
Draburu Gasper	AFI	Imvepi
Kadooli Rachael	AFI	Imvepi
Taban Alfred	AFI	Imvepi
Adongo Ritah	IRC	Imvepi
Indeku Sam	IRC	Imvepi
Butele Samuel	IRC	Imvepi
Nakasagga Flavia	IRC	Imvepi
Yumati Alfred	IRC	Rhino Camp
Ngongo Samuel	IRC	Rhino Camp
Lukundo Kizito	IRC	Rhino Camp
Ogwang Brendah	IRC	Rhino Camp
Asa Tumuhire	IRC	Rhino Camp
Rasasi John	SCI	Rhino Camp
Tarusi Jean	SCI	Rhino Camp
Clement Yolee	SCI	Rhino Camp
Robert Bunduki	SCI	Rhino Camp
Amie Betty	SCI	Rhino Camp
Chandiga		
Emmanuel	PAG	Rhino Camp

Tumusiime Richard	MTI	<i>Nakivale</i>
Yabata Twaha	MTI	<i>Rwamwanja</i>
Emmanuel Tumusiime	MTI	<i>Rwamwanja</i>
Abenaitwe Anna	DLG	<i>Isingiro</i>
Kahuma JohnBaptist	AVSI	<i>Rwamwanja</i>
Otimnimungu Henry	MTI	<i>Nakivale</i>
Adella Kamusiime	MTI	<i>Nakivale</i>
EVA KAJUMBI	MTI	<i>Rwamwanja</i>
Etoma Gilbert	MTI	<i>Nakivale</i>
Anywa Robert		
Martin	MTI	<i>Rwamwanja</i>
Nyamwiza Rosean	MTI	<i>Rwamwanja</i>
Subira Swabura	MTI	<i>Nakivale</i>
Atukunda Jonard	MTI	<i>Nakivale</i>
Uwera Caroline	KRC	<i>Kyaka II</i>
Mugerwa Moses	MTI	<i>Nakivale</i>
Oryema Bosco	AIRD	<i>Nakivale</i>
Mutabazi Moses	RRH	<i>Kabale</i>
Sharon Bagaaya	RRH	<i>Mubende</i>
Masaba Econi J	MTI	<i>Nakivale</i>
Ssembatya Methodius	MTI	<i>Oruchinga</i>
Eyoko Richard	MTI	<i>Kyaka II</i>
Kalyoma Sophia	MTI	<i>Kyaka II</i>
Senoga Timothy	MTI	<i>Kyaka II</i>
Kevin Namirimo	MTI	<i>Rwamwanja</i>
Babala Denis	MTI	<i>Kyaka II</i>
Asiimwe Peter	MTI	<i>Oruchinga</i>
Ssebwato Paul	MTI	<i>Nakivale</i>
Brian Ndyabagye	MTI	<i>Nakivale</i>
Kenan Olia	MTI	<i>Nakivale</i>
Lucy Katushabe	MTI	<i>Oruchinga</i>
Kizza Frank	MTI	<i>Nakivale</i>
Orishaba Christine	MTI	<i>Nakivale</i>
Nyakato Daisy	DLG	<i>Isingiro</i>
Wasswa Yosia	MTI	<i>Nakivale</i>
Masekura Frank (Driver)	AIRD	<i>Nakivale</i>
Mubajje Henry (Driver)	AIRD	<i>Nakivale</i>
Mugerwa Moses (Driver)	MTI	<i>Nakivale</i>
Calvin Murungi	AHA	<i>Kampala</i>
Namawejeje Mariam	AHA	<i>Kampala</i>
Vincent Ssenono	UBOS	<i>HQ</i>
Samalie		
Namukose	MOH	<i>HQ</i>
Laura Ahumuza	MOH	<i>HQ</i>

Tom Aliti	MOH	<i>HQ</i>
Florence		<i>Country</i>
Turyashemererwa	UNICEF	<i>Office</i>
Nelly Birungi	UNICEF	<i>Country</i>
Francis Obote	WFP	<i>Office</i>
Emmanuel Ajobe	WFP	<i>Koboko FO</i>
Drani Samuel	WFP	<i>Koboko FO</i>
Faridi Federic	WFP	<i>Koboko FO</i>
Michael Lakwera	WFP	<i>Adjumani FO</i>
Leah Akoli	WFP	<i>Adjumani FO</i>
Stanslus Okurut	WFP	<i>Country</i>
Nathan		<i>Office</i>
Lowanyang	WFP	<i>Country</i>
Joseph Kyanjo	WFP	<i>Office</i>
Ivan Ikwayo	WFP	<i>Country</i>
Bosco Muhindo	UNHCR	<i>Mbarara AO</i>
Okello Patrick	UNHCR	<i>Adjumani SO</i>
Samuel Onyaiti	UNHCR	<i>Moyo SO</i>
Emmanuel		<i>Yumbe SO</i>
Kerukadho	UNHCR	<i>Arua SO</i>
Ronarld Lubega	UNHCR	<i>Kyangwali SO</i>
Allan Amandu	UNHCR	<i>SO</i>
Andrew Okeng	UNHCR	<i>Kyaka II FO</i>
Gerald Naluwairo	UNHCR	<i>Mbarara SO</i>
Peter Eliru	UNHCR	<i>Nakivale FO</i>
Barbrah		<i>Arua SO</i>
Nabutanda	UNHCR	
Julius Kasozi	UNHCR	<i>Mbarara SO</i>
Ronald Nyakoojo	UNHCR	<i>Country RO</i>
Emmanuel		<i>Country RO</i>
Omwony	UNHCR	
Ahmed Balayo	UNHCR	<i>Country RO</i>
Ibrahim		
Wadembere	UNHCR	<i>Country RO</i>
Charles Herbert		
Matovu	UNHCR	<i>Country RO</i>
Micheal Abusa	UNHCR	<i>Arua SO</i>
Hillary Mumbere	UNHCR	<i>Country RO</i>
Isaac Kabazzi	UNHCR	<i>Country RO</i>

Appendix 3. Plausibility Checks

Quality checks

The quality scores of weight-for-height anthropometric data was satisfactory for all locations

Table 105: WHZ Quality Scores

Settlement	Plausibility score	Cut-off
<i>Bidibidi</i>	6%	Excellent
<i>Lobule</i>	11%	Good
<i>Rhino Camp</i>	7%	Excellent
<i>Palorinya</i>	4%	Excellent
<i>Imvepi</i>	8%	Excellent
<i>Palabek</i>	14%	Good
<i>Adjumani</i>	16%	Acceptable
<i>Kyangwali</i>	1%	Excellent
<i>Kampala</i>	15%	Acceptable
<i>Kyaka II</i>	2%	Excellent
<i>Rwamwanja</i>	7%	Excellent
<i>Nakivale</i>	4%	Excellent
<i>Oruchinga</i>	9%	Excellent
<i>Kiryandongo</i>	11%	Good

1-9 <i>excellent</i>	10-14 <i>good</i>	15-24 <i>acceptable</i>	≥25 <i>Problematic</i>
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Plausibility check for: FSNA ADJUMANI.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	0 (0.0 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.725)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	2 (p=0.082)
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	2 (12)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (12)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
.		and		and	or		
.	Excl	SD	>0.9	>0.85	>0.80	<=0.80	
			0	5	10	20	5 (1.13)
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	1 (-0.33)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<=0.001	
			0	1	3	5	3 (p=0.002)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	16 %

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

There were no duplicate entries detected.

Percentage of children with no exact birthday: 27 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=52/ID=4559: HAZ (-4.001), Height may be incorrect
 Line=84/ID=126: HAZ (3.568), Age may be incorrect
 Line=146/ID=622: HAZ (5.874), Age may be incorrect

Percentage of values flagged with SMART flags: WHZ: 0.0 %, HAZ: 1.0 %, WAZ: 0.0 %

Plausibility check for: FSNA BIDIBIDI.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

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** (0.7 %)

Overall Sex ratio Incl p >0.1 >0.05 >0.001 <=0.001
(Significant chi square) 0 2 4 10 **0** (p=0.328)

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=0.344)

Dig pref score - weight Incl # 0-7 8-12 13-20 > 20
0 2 4 10 **0** (4)

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 **2** (12)

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 **0** (-0.07)

Kurtosis WHZ Excl # <±0.2 <±0.4 <±0.6 >=±0.6
0 1 3 5 **0** (0.04)

Poisson dist WHZ-2 Excl p >0.05 >0.01 >0.001 <=0.001
0 1 3 5 **0** (p=0.058)

OVERALL SCORE WHZ = 0-9 10-14 15-24 >25 **6** %

The overall score of this survey is 6 %, this is excellent.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 14 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=13/ID=1520: HAZ (-5.105), WAZ (-3.553), Age may be incorrect

Line=27/ID=1854: HAZ (3.635), Age may be incorrect

Line=53/ID=1956: **WHZ (-3.582)**, HAZ (-3.684), WAZ (-4.186)

Line=54/ID=1957: HAZ (7.922), WAZ (4.236), Age may be incorrect

Line=89/ID=2118: **WHZ (-4.252)**, Weight may be incorrect

Line=118/ID=2268: HAZ (3.756), Age may be incorrect

Percentage of values flagged with SMART flags: WHZ: 0.7 %, HAZ: 3.1 %, WAZ: 0.9 %

Plausibility check for: FSNA IMVEPI.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	0 (2.1 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.103)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.594)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (5)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (9)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (6)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
			and	and	or		
	Excl	SD	>0.9	>0.85	>0.80	<=0.80	
			0	5	10	20	5 (1.12)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (0.10)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.27)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<=0.001	
			0	1	3	5	0 (p=0.586)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	8 %

The overall score of this survey is 8 %, this is excellent.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 20 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=1/ID=133: HAZ (8.948), Height may be incorrect
 Line=16/ID=188: **WHZ (5.806)**, HAZ (-5.964), Height may be incorrect
 Line=28/ID=218: HAZ (2.704), Age may be incorrect
 Line=35/ID=266: **WHZ (-4.559)**, Weight may be incorrect
 Line=36/ID=267: **WHZ (-3.708)**, WAZ (-3.883), Weight may be incorrect
 Line=40/ID=272: HAZ (4.027), Age may be incorrect
 Line=48/ID=321: HAZ (2.393), Age may be incorrect
 Line=65/ID=347: **WHZ (3.726)**, WAZ (3.620), Weight may be incorrect
 Line=77/ID=386: HAZ (2.294), Height may be incorrect
 Line=88/ID=436: HAZ (-4.629), Age may be incorrect
 Percentage of values flagged with SMART flags: WHZ: 2.1 %, HAZ: 7.0 %, WAZ: 1.8 %

Plausibility check for: FSNA KAMPALA.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	0 (1.6 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.667)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.578)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (6)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (8)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (10)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
			and	and	or		
	Excl	SD	>0.9	>0.85	>0.80	<=0.80	
			0	5	10	20	10 (1.18)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (0.13)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.35)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<=0.001	
			0	1	3	5	0 (p=0.701)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	15 %

The overall score of this survey is 15 %, this is acceptable.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 34 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=1/ID=1: HAZ (3.455), Age may be incorrect

Line=23/ID=26: HAZ (-4.788), Height may be incorrect

Line=28/ID=32: HAZ (5.605), WAZ (3.719), Age may be incorrect

Line=29/ID=33: **WHZ (-3.776)**, HAZ (4.403), Height may be incorrect

Line=34/ID=38: HAZ (8.063), WAZ (5.277), Age may be incorrect

Line=37/ID=52: HAZ (2.818), Age may be incorrect

Percentage of values flagged with SMART flags: WHZ: 1.6 %, HAZ: 11.9 %, WAZ: 4.7 %

Plausibility check for: FSNA KYAKA II.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	0 (2.5 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.201)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.959)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (5)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (7)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (9)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
			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	0 (0.03)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (-0.13)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<=0.001	
			0	1	3	5	0 (p=0.094)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	2 %

The overall score of this survey is 2 %, this is excellent.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 30 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=1/ID=800: HAZ (-5.242), WAZ (-3.695), Age may be incorrect
 Line=4/ID=799: HAZ (4.543), Age may be incorrect
 Line=7/ID=798: HAZ (1.404), Age may be incorrect
 Line=8/ID=4850: HAZ (1.811), Age may be incorrect
 Line=18/ID=6715: HAZ (2.302), Height may be incorrect
 Line=23/ID=396: HAZ (2.570), Age may be incorrect
 Percentage of values flagged with SMART flags: WHZ: 2.5 %, HAZ: 7.6 %, WAZ: 3.2 %

Plausibility check for: FSNA KYANGWALI.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

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** (2.4 %)

Overall Sex ratio Incl p >0.1 >0.05 >0.001 <=0.001
(Significant chi square) 0 2 4 10 **0** (p=0.153)

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=0.715)

Dig pref score - weight Incl # 0-7 8-12 13-20 > 20
0 2 4 10 **0** (5)

Dig pref score - height Incl # 0-7 8-12 13-20 > 20
0 2 4 10 **0** (7)

Dig pref score - MUAC Incl # 0-7 8-12 13-20 > 20
0 2 4 10 **0** (7)

Standard Dev WHZ Excl SD <1.1 <1.15 <1.20 >=1.20
. and and and or
. Excl SD >0.9 >0.85 >0.80 <=0.80
0 5 10 20 **0** (0.95)

Skewness WHZ Excl # <±0.2 <±0.4 <±0.6 >=±0.6
0 1 3 5 **0** (0.01)

Kurtosis WHZ Excl # <±0.2 <±0.4 <±0.6 >=±0.6
0 1 3 5 **1** (0.36)

Poisson dist WHZ-2 Excl p >0.05 >0.01 >0.001 <=0.001
0 1 3 5 **0** (p=0.585)

OVERALL SCORE WHZ = 0-9 10-14 15-24 >25 **1** %

The overall score of this survey is 1 %, this is excellent.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 12 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=5/ID=6845: HAZ (-5.862), Age may be incorrect

Line=7/ID=415: HAZ (-5.923), WAZ (-3.673), Age may be incorrect

Line=9/ID=681: HAZ (-7.326), WAZ (-4.213), Age may be incorrect

Line=48/ID=5481: HAZ (-5.000), Age may be incorrect

Line=53/ID=1096: **WHZ (-3.310)**, Weight may be incorrect

Line=76/ID=6702: HAZ (1.846), Age may be incorrect

Percentage of values flagged with SMART flags: WHZ: 2.4 %, HAZ: 5.7 %, WAZ: 2.1 %

Plausibility check for: FSNA LOBULE.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	0 (2.3 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.260)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.422)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
	0	2	4	10			0 (6)
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			2 (9)
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			5 (1.13)
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			1 (-0.26)
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	11 %

The overall score of this survey is 11 %, this is good.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 16 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=1/ID=489: **WHZ (-3.380)**, Weight may be incorrect
 Line=9/ID=569: **HAZ (-4.024)**, Age may be incorrect
 Line=36/ID=1040: **HAZ (3.084)**, Age may be incorrect
 Line=42/ID=1070: **HAZ (2.433)**, Height may be incorrect
 Line=46/ID=1075: **HAZ (4.168)**, Age may be incorrect
 Percentage of values flagged with SMART flags: WHZ: 2.3 %, HAZ: 2.8 %, WAZ: 0.0 %

Plausibility check for: FSNA NAKIVALE.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	0 (2.4 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.626)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.178)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (2)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (8)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (8)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
			and	and	or		
	Excl	SD	>0.9	>0.85	>0.80	<=0.80	
			0	5	10	20	0 (1.00)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (-0.01)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (0.16)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<=0.001	
			0	1	3	5	0 (p=0.146)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	4 %

The overall score of this survey is 4 %, this is excellent.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 20 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=3/ID=3472: **WHZ (4.976)**, HAZ (-6.615), Height may be incorrect
 Line=38/ID=3036: HAZ (-4.583), Age may be incorrect
 Line=91/ID=3429: **WHZ (-4.317)**, Weight may be incorrect
 Line=121/ID=3696: **WHZ (-7.442)**, WAZ (-5.320), Weight may be incorrect
 Line=202/ID=3956: **WHZ (4.619)**, Weight may be incorrect
 Line=216/ID=4083: **WHZ (-2.597)**, Weight may be incorrect
 Line=219/ID=4088: **WHZ (6.362)**, HAZ (-4.567), Height may be incorrect
 Line=229/ID=4202: HAZ (2.128), Age may be incorrect
 Percentage of values flagged with SMART flags: WHZ: 2.4 %, HAZ: 3.5 %, WAZ: 0.8 %

Plausibility check for: FSNA ORUCHINGA.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	5 (3.7 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.451)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.320)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (5)
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	2 (9)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
			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	0 (-0.17)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (-0.17)
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	9 %

The overall score of this survey is 9 %, this is excellent.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 14 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=12/ID=2936: HAZ (10.200), Height may be incorrect
 Line=13/ID=2937: **WHZ (-5.271)**, HAZ (8.145), Height may be incorrect
 Line=16/ID=2940: **WHZ (-3.882)**, HAZ (3.918), Height may be incorrect
 Line=17/ID=2942: **WHZ (3.614)**, HAZ (-4.422), Height may be incorrect
 Line=19/ID=2944: HAZ (2.740), Age may be incorrect
 Line=21/ID=2973: **WHZ (-3.333)**, WAZ (-4.369), Weight may be incorrect
 Percentage of values flagged with SMART flags: WHZ: 3.7 %, HAZ: 8.8 %, WAZ: 1.7 %

Plausibility check for: FSNA PALABEK.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	0 (1.7 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.268)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.137)
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	4 (18)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (11)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
			and	and	or		
	Excl	SD	>0.9	>0.85	>0.80	<=0.80	
			0	5	10	20	5 (1.11)
Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (-0.04)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	1 (-0.35)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<=0.001	
			0	1	3	5	0 (p=0.095)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	14 %

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

There were no duplicate entries detected.

Percentage of children with no exact birthday: 25 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=17/ID=1983: HAZ (2.111), Height may be incorrect
Line=21/ID=1990: HAZ (2.154), Age may be incorrect
Line=59/ID=2690: HAZ (-5.301), Height may be incorrect
Line=66/ID=2700: **WHZ (-3.580)**, HAZ (-5.598), WAZ (-5.109)
Line=115/ID=3012: **WHZ (2.800)**, Weight may be incorrect
Line=134/ID=3179: HAZ (-6.126), Age may be incorrect
Line=153/ID=3343: **WHZ (-5.449)**, HAZ (2.447), Height may be incorrect
Line=171/ID=3489: **WHZ (-3.350)**, Weight may be incorrect
Percentage of values flagged with SMART flags: WHZ: 1.7 %, HAZ: 3.3 %, WAZ: 0.6 %

Plausibility check for: FSNA PALORINYA.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	0 (0.7 %)
Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.859)
Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.193)
Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (4)
Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (8)
Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	2 (9)
Standard Dev WHZ .	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
			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	0 (-0.10)
Kurtosis WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (-0.04)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<=0.001	
			0	1	3	5	0 (p=0.164)
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	4 %

The overall score of this survey is 4 %, this is excellent.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 12 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=6/ID=1916: **WHZ (-3.158)**, Weight may be incorrect

Line=7/ID=1919: **WHZ (-3.421)**, Weight may be incorrect

Line=206/ID=5405: **WAZ (-3.512)**, Age may be incorrect

Line=240/ID=5772: **HAZ (-3.763)**, Height may be incorrect

Percentage of values flagged with SMART flags: WHZ: 0.7 %, HAZ: 0.4 %, WAZ: 0.4 %

Plausibility check for: FSNA RWAMWANJA.as

Standard/Reference used for z-score calculation: WHO standards 2006

(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept	Problematic	Score
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Flagged data (% of out of range subjects)	Incl	%	0-2.5	>2.5-5.0	>5.0-7.5	>7.5	
			0	5	10	20	5 (3.3 %)

Overall Sex ratio (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	2 (p=0.079)

Age ratio(6-29 vs 30-59) (Significant chi square)	Incl	p	>0.1	>0.05	>0.001	<=0.001	
			0	2	4	10	0 (p=0.860)

Dig pref score - weight	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (5)

Dig pref score - height	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (3)

Dig pref score - MUAC	Incl	#	0-7	8-12	13-20	> 20	
			0	2	4	10	0 (7)

Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>=1.20	
			and	and	and	or	
	Excl	SD	>0.9	>0.85	>0.80	<=0.80	
			0	5	10	20	0 (0.98)

Skewness WHZ	Excl	#	<±0.2	<±0.4	<±0.6	>=±0.6	
			0	1	3	5	0 (-0.07)

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=0.639)

OVERALL SCORE WHZ =		0-9	10-14	15-24	>25	7 %
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The overall score of this survey is 7 %, this is excellent.

There were no duplicate entries detected.

Percentage of children with no exact birthday: 21 %

Anthropometric Indices likely to be in error (-3 to 3 for WHZ, -3 to 3 for HAZ, -3 to 3 for WAZ, from observed mean - chosen in Options panel - these values will be flagged and should be excluded from analysis for a nutrition survey in emergencies. For other surveys this might not be the best procedure e.g. when the percentage of overweight children has to be calculated):

Line=5/ID=299: **WHZ (9.623)**, WAZ (7.520), Weight may be incorrect

Line=11/ID=307: HAZ (-5.015), Age may be incorrect

Line=19/ID=316: HAZ (1.686), Age may be incorrect

Line=33/ID=627: HAZ (1.358), Age may be incorrect

Line=52/ID=660: **WHZ (6.876)**, HAZ (-6.917), Height may be incorrect

Line=63/ID=760: **WHZ (7.180)**, HAZ (-6.602), Height may be incorrect

Percentage of values flagged with SMART flags: WHZ: 3.3 %, HAZ: 5.6 %, WAZ: 1.4 %

Appendix 4. Gallery



Appendix 5. Questionnaire

Refugee Food Security and Nutrition Assessment questionnaire

December 2020



Greeting and reading of rights:

THIS STATEMENT IS TO BE READ TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSE BEFORE THE INTERVIEW. DEFINE HEAD OF HOUSEHOLD AS MEMBER OF THE FAMILY WHO MANAGES THE FAMILY RESOURCES AND IS THE FINAL DECISION MAKER IN THE HOUSE.

- Hello, my name is _____ and I work with *[organization/institution]*. We would like to invite your household to participate in a survey that is looking at the nutrition and health status of people living in this *[camp / survey area]*.
- UNHCR is funding this nutrition survey with support of the Government of Uganda, WFP, and UNICEF.
- Taking part in this survey is totally your choice. You can decide to not participate, or if you do participate you can stop taking part in this survey at any time for any reason. If you stop being in this survey, it will not have any negative effects on how you or your household is treated or what assistance you receive.
- If you agree to participate, we will ask you some questions about your family and we will also measure all the children in the household who are older than 6 months and younger than 5 years *[and/or women]*. In addition to these assessments, we will test a small amount of blood from the finger of the children and women to see if they have anaemia.
- Before we start to ask you any questions or take any measurements, we will ask you to give us your verbal consent. Be assured that any information that you will provide will be kept strictly confidential.
- You can ask me any question that you have about this survey before you decide to participate or not.
- If you do not understand the information or if your questions were not answered to your satisfaction, do not declare your consent on this form. Thank you.

CAPITAL LETTERS refer to instructions for the surveyors. They should not be deleted from the questionnaire and should not be read to the respondent during the interview.

DEMOGRAPHY

1 questionnaire per household

THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSEHOLD.

No	QUESTION	ANSWER CODES
SECTION IDENTIFICATION THIS SECTION IS TO BE COMPLETED IN ALL SELECTED HOUSEHOLDS. THIS MODULE IS MANDATORY TO COMPLETE.		
ID1	Settlement/ District SETNAME or DISTNAM	<input type="text"/>
ID2	Section Code / Number SECTION	<input type="text"/>
ID3	Zone Code / Number ZONE	<input type="text"/>
ID4	Block Code / Number BLOCK	<input type="text"/>
ID5	Date of interview (dd/mm/yyyy) SURVDAT	Day/Month/Year..... <input type="text"/> / <input type="text"/> / <input type="text"/>
ID6	Cluster Number CLUSTER	<input type="text"/>
ID7	Team Number TEAM	<input type="text"/>
ID8	Household Number HH	<input type="text"/>

No	QUESTION	ANSWER CODES
SECTION DM1: Household Head Information		
Note	THESE QUESTIONS NEED TO BE ASKED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSEHOLD.	
DM1A	Was consent given for conducting the interview? ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW. DMCONST	Yes 1 No 2 Absent 3 <input type="text"/> IF ANSWER IS 2 or 3 STOP HERE
DM1B	Was consent given for conducting the interview using Mobile Data Collection (use of smartphone or tablet)? ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW. MDCCONST	Yes 1 No 2 Absent 3 <input type="text"/> IF ANSWER IS 2 or 3 STOP HERE

	Phone number of HH Head		
	Alternative phone number if HH Head has no phone		
	Other physical feature that can be used to locate the household.		
DM4	What is the country of origin of the household head? (OPTIONAL) HHHCTRY	South Sudan 1 DRC..... 2 Burundi..... 3 Somalia 4 Eritrea..... 5 Other..... 6 Don't know..... 8	<input type="text"/>
Note	THESE QUESTIONS NEED TO BE ASKED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSEHOLD. EXPLAIN TO THE RESPONDENT THAT THESE QUESTIONS WILL BE KEPT CONFIDENTIAL.		

SECTION DM3: Survey of Household Members (Household Roster)			
DM5	What is the total number of household members? Lower limit=1 Upper limit=30 DMHHSIZE	RECORD THE NUMBER.	<input type="text"/> <input type="text"/> people
Note	ASK INTERVIEWEE IF THOSE ARE ALL THE MEMBERS IN THE HOUSEHOLD AND THAT NO ONE IS MISSING. THESE QUESTIONS NEED TO BE COMPLETED FOR EACH HH MEMBER WHO LIVES IN THE HOUSEHOLD.		

SECTION DM3: Survey of Household Members (Household Roster)

DM6	MD7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19
Name of household member	Sex (M/F)	Age of HH	Relationship of HH	Education (Complete Years of Education for Household member)	Is the HH member actively involved in economic activities that earn the household an income?	Does Household Member actively participate in Household agriculture practices	Is the household member currently pregnant?	Joined after:	Left on or after:	Born on or after:	Died on or after:	Cause of death	Location of death
ONLY WRITE FIRST NAME.	HHMSEX	YOU DO NOT NEED TO SEE PROOF OF AGE.	Father		Yes=1	Household Member actively participate in Household agriculture practices	Yes=1	(Start date of recall period)					
NAME		Lower limit=0	Mother	HHEDUC	Yes=1	Household Member actively participate in Household agriculture practices	No=2	WRITE 'Y' for YES. Leave BLANK if NO.					
		Upper limit=98	Son		No=2	Yes=1	Don't know=8						
		HHMAGE	Grandmother		Don't know=8	No=2							
		Record the number in years if known.	Grandfather		HHINCOM	Don't know=8							
		if age is less than 1 year, record 0.	Mother in law				HHMPREG						
		record 97 if 97 years or older.	Father in law			HHAGRIC							
		record 98 if unknown.	Auntie										
			Uncle										
			Cousin										
			Other										
			HHREL										

a) List all the household members that are **currently living** in this household.

b) List all the household members that have left this household (out migrants) since the start of the recall period. (90 days recall period)

c) List all the household members who **died** since the start of the recall period.

SECTION DM4: Time of Arrival in Country of Asylum

Note	EXPLAIN TO THE RESPONDENT THAT THESE QUESTIONS WILL BE KEPT CONFIDENTIAL AND WILL NOT AFFECT THE ASSISTANCE THEY RECEIVE / ARE ENTITLED TO.		
DM20	Did all household members arrive to [camp name / country of asylum] at the same time? (OPTIONAL/IF APPLICABLE) ARRIVE	Yes..... 1 No.....2 Don't know..... 8	<input type="text"/> IF ANSWER IS 2 GO TO DM15
DM21	When did the household arrive to [camp name / country of asylum]? (OPTIONAL/IF APPLICABLE) ARRIDATE	1 month ago [INSERT MONTH].....01 2 months ago [INSERT MONTH]02 3 months ago [INSERT MONTH]03 4 months ago [INSERT MONTH]04 5 months ago [INSERT MONTH]05 6 months ago [INSERT MONTH]06 7 months ago [INSERT MONTH]07 8 months ago [INSERT MONTH]08 9 months ago [INSERT MONTH]09 10 months ago [INSERT MONTH]10 11 months ago [INSERT MONTH]11 12 months ago [INSERT MONTH]12 1-2 years ago.....13 2-3 years ago.....14 >3 years ago.....15 Other [TO BE ADAPTED]16 Don't know98	<input type="text"/> <input type="text"/> <input type="text"/>

Summary messages

WRITE DOWN THE SUMMARY DATA PROVIDED BELOW ON THE PARTICIPANTS AND MEASURES CONTROL SHEET.

	Total number of children under 5 (0-4 years) <input type="text"/> <input type="text"/> <input type="text"/> children under-5 TOTU5
	Total number of women aged 15-49 years <input type="text"/> <input type="text"/> <input type="text"/> women TOTWM
	Total number of pregnant women aged 15-49 years <input type="text"/> <input type="text"/> <input type="text"/> pregnant women TOTPREG
	Interviewer: I confirm that questionnaire is complete: yes/no
	Supervisor: I confirm that questionnaire is complete.: yes/no
MESSAGE TO INTERVIEWER: DO NOT ANSWER THIS QUESTION.	

Summary			
Years old	Female	Male	Total
U2 (0-1 years)	<input type="text"/> <input type="text"/> <input type="text"/> TOTFU2	<input type="text"/> <input type="text"/> <input type="text"/> TOTMU2	<input type="text"/> <input type="text"/> <input type="text"/> TOTU2
U5 (0-4 years)	<input type="text"/> <input type="text"/> <input type="text"/> TOTFU5	<input type="text"/> <input type="text"/> <input type="text"/> TOTMU5	<input type="text"/> <input type="text"/> <input type="text"/> TOTU5

5-14 (5-14 years)	<input type="text"/> TOTF514	<input type="text"/> TOTM514	<input type="text"/> TOT514
14 years or younger (0-14 years)	<input type="text"/> TOTFU15	<input type="text"/> TOTMU15	<input type="text"/> TOTU15
Between 15 years and 64 years	<input type="text"/> TOTF1564	<input type="text"/> TOTM1564	<input type="text"/> TOT1564
65 years and older	<input type="text"/> TOTF65OLD	<input type="text"/> TOTM65OLD	<input type="text"/> TOT65OLD
Total household size (all ages)	<input type="text"/> HHFSIZE	<input type="text"/> HHMSIZE	<input type="text"/> DMHHSIZE

FOOD SECURITY

ACCESS TO LAND						
HC 11. DO YOU HAVE ACCESS TO AGRICULTURAL LAND (ARABLE LAND FOR CULTIVATION)?		<i>Yes..... 1</i> <i>No..... 2</i>			2DHC13	
HC12A. HOW MANY ACRES OF AGRICULTURAL LAND DOES THIS HOUSEHOLD HAVE ACCESS TO? <i>If less than 1, record "00". If 95 or more, record '95'. If unknown, record '98'.</i>		OWNED ___/___/___ Acres RENTED ___/___/___ Acres USE FOR FREE ___/___/___ Acres DK..... 98				
CROP PRODUCTION						
CROPS (SEE CROP CODES)	Grown crop (Y/N)	ACRES	ACRES	QTY HARVESTED	UNITS OF HARVEST	WEIGHT PER HARVEST UNIT (KGS)
HC13. DO YOU HAVE KITCHEN GARDEN?		<i>Yes..... 1</i> <i>No..... 2</i>				
HC14. WHAT TYPE OF PLANTS OR VEGETABLES DID YOU GROW IN LAST 12 MONTHS?		PLANTS/VEGETABLES	YES	NO	ACRES	
		ANY DARK GREEN, LEAFY VEGETABLES? (DODO, NAKATI, SPINACH, AMARANTH, BUGGA, SUNSA, JOBYO, MARAKWANG, SUKUMA, WIKI, NSUGGA, GGOBE, TIMPA)				
		VITAMIN A RICH VEGETABLES AND TUBERS PUMPKIN, CARROTS, SQUASH OR SWEET POTATOES THAT ARE YELLOW OR ORANGE INSIDE				

	OTHER VEGETABLES? CAULIFLOWER, CABBAGE, EGGPLANT, GREEN PAPAYA, RADISH, ONION			
HC15. WHAT WAS THE BIGGEST CONSTRAINT TO CROP PRODUCTION IN THE PAST SIX MONTHS?	<i>No constraints</i> 1 <i>Insecurity</i> 2 <i>I have been prohibited by the clan</i> 3 <i>I have been prohibited by my husband</i> 4 <i>The land is infertile/marginal</i> 5 <i>I have been prohibited by the government</i> 6 <i>Sickness or physical inability</i> 7 <i>I did not have adequate seeds and tools</i> 8 <i>I do not have sufficient family/household labour</i> 9 <i>We are not agriculturalists</i> 10 <i>Land conflicts</i> 11 <i>Drought/Low rainfall</i> 12 IANDEWUATE KNOWLEDGE & SKILLS 13 <i>Drought/Low rainfall</i> 14 COVID 19 15 <i>climate change</i> 16 <i>limited/NO LAND</i> 17 <i>Other. Please specify:</i> 96			
HC16. DOES THIS HOUSEHOLD OWN ANY LIVESTOCK, HERDS, OTHER FARM ANIMALS, OR POULTRY?	<i>Yes</i> 1 <i>No</i> 2	2ðHC15		
C17. WHICH ANIMALS/BIRDS DO YOU OWN (Y/N) [A] CATTLE, MILK COWS, OR BULLS? [B] HORSES, DONKEYS, OR MULES? [C] GOATS? [D] SHEEP? [E] CHICKEN/DUCKS /PIGEON? [F] PIGS/SWINE? If none, record '00'. If 95 or more, record '95'. If unknown, record '98'.	HOW MANY OF THE FOLLOWING ANIMALS DOES THIS HOUSEHOLD HAVE? <i>Milk cows, or bulls</i> ____ <i>Horses, donkeys, or mules</i> ____ <i>Goats</i> ____ <i>Sheep</i> ____ <i>Chicken/ducks/pigeon</i> ____ <i>Pigs</i> ____			

H18. WHAT WAS THE BIGGEST CONSTRAINT TO AGRICULTURE IN THE PAST 12 MONTHS?	<i>No constraints</i> 0 <i>Insecurity/animal raids</i> 1 <i>I have been prohibited by the clan</i> 2 <i>I have been prohibited by my husband</i> 3 <i>NO CAPITAL</i> 4 <i>I have been prohibited by the government</i> 5 <i>Sickness or physical inability</i> 6 <i>I did not have adequate KNOWLEDGE & experience</i>7 <i>I do not have sufficient family/household labour</i> 8 <i>We are not agriculturalists</i> 9 <i>Land conflicts</i> 10 <i>Drought/Low rainfall</i> 11 <i>PESTS/</i> <i>DISEASES</i>12 <i>Limited MARKET FO LIVESTOCK</i>13 <i>COVID</i>1914 <i>LIMITED PASTURE</i> 15 <i>LIMITED LAND</i>16 <i>Other. Please specify:</i> 96
H19. DO YOU HAVE ANY FOOD STOCKS IN YOUR HOUSEHOLD AT THE MOMENT?	<i>Yes</i> 1 <i>No</i> 2
H20. HOW MUCH CROP IS IN YOUR CURRENT STOCK INCLUDING UNHARVESTED CROPS (CASSAVA POTATOES AND MATOOKE)?	<div style="display: flex; justify-content: space-between;"> <div> <input type="text"/> <input type="text"/> <input type="text"/> kg </div> <div>.....IN THE STORE</div> </div> <div style="display: flex; justify-content: space-between;"> <div> <input type="text"/> <input type="text"/> <input type="text"/> kg </div> <div>.....IN THE FIELD</div> </div>
H20. WHAT WAS THE MAIN SOURCE OF THESE STOCKS IN THE STORE?	<i>WFP/Partner food distribution</i> 1 <i>Own production</i> 2 <i>Gifts</i> 3 <i>Markets</i> 4 <i>Other. Please specify:</i> 5
H21. HOW LONG WILL THE STOCKS OWNED BY YOUR HOUSEHOLD LAST (BOTH IN STORE AND IN THE FIELD)?	<i>less than 1 month</i> 1 <i>Enough for 1 month</i> 2 <i>Enough for 2/3 month</i> 3 <i>Enough for 4 or more months</i> 4
INCOME	
H 22. HOW MANY MEMBERS OF THE HOUSEHOLD EARN AN INCOME?	<input style="width: 50px;" type="text"/>
H23. HAS ANY MEMBER OF THE HOUSEHOLD LEFT THE HOUSEHOLD IN THE LAST SIX MONTHS IN SEARCH OF JOB OPPORTUNITIES AND HAS NOT RETURNED?	<i>Yes</i>1 <i>No</i>2
H24. IF YES, WHERE DID THEY MIGRATE TO?	<i>Main town in the district</i>1 <i>Neighboring district</i>2 <i>Other district/town within Uganda</i>3

	Foreign country.....4 Other. Please specify:96	
H25. ARE YOU RECEIVING ANY MONEY FROM THE PERSON WHO MIGRATED?	Yes1 No2	
<p>H26. DURING THE PAST 30 DAYS, WHAT WERE YOUR HOUSEHOLD'S MOST IMPORTANT LIVELIHOOD SOURCES? (USE INCOME SOURCE CODES, UP TO 3 ACTIVITIES)</p> <p>USING PROPORTIONAL PILING OR 'DIVIDE THE PIE' METHODS, PLEASE ESTIMATE THE RELATIVE CONTRIBUTION TO TOTAL INCOME OF EACH SOURCE (%)</p>		
A	MOST IMPORTANT	<div> <div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div> </div>
B	SECOND (LEAVE BLANK IF NONE)	<div> <div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div> </div>
C	THIRD (LEAVE BLANK IF NONE)	<div> <div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div> </div>
<p>INCOME SOURCE CODES:</p> <div> <div> <p>1 = Food crop production/sales (maize...)</p> <p>2=Cash crop production/sale (e.g. coffee)</p> <p>3 = Income derived from sale of livestock and / or animal products</p> <p>4=sale of alcoholic beverages/brewing</p> <p>5=casual labour related to agricultural activities</p> </div> <div> <p>7=other non-agricultural casual labour (porter, domestic labour etc)</p> <p>8=skilled labour-masonry, mechanic, tailoring etc</p> <p>9=salaried work</p> <p>11=sale of grass</p> <p>12=fishing and sale of fish</p> <p>13=other petty trading (tea seller, kiosk, sale of handicraft etc)</p> <p>14=kinship/gifts from family friends</p> </div> <div> <p>15=Remittances</p> <p>16=Gifts/begging</p> <p>18=sale of food assistance (received from NGOs, WFP, Government)</p> <p>19=borrowing</p> <p>20 = Pension, government allowances</p> <p>21=other, specify</p> </div> </div>		
H27 IF ANSWER TO QUESTION IS 15, PLEASE INDICATE WHERE THE REMITTANCES WERE RECEIVED FROM	<p>1. MAIN TOWN IN THE DISTRICT</p> <p>2. NEIGHBORING DISTRICT</p> <p>3. OTHER DISTRICT/TOWN WITHIN UGANDA</p> <p>4. COUNTRY OUTSIDE UGANDA</p> <p>5. OTHER. PLEASE SPECIFY:</p>	
INCOME EARNED IN 2020 (UGX)		
H28	What is the total income your household earned from crop cultivation/sales in season 1 of 2020?	
H29	What is the total income your household earned from crop cultivation/sales in season 2 of 2020?	
H30	What is the total income your household earns on average per month from non-agricultural/off farm activities employment in 2020?	
H31	What is the total income (UGX) obtained from the sale of land in 2020?	
H32	What is the total income (UGX) obtained from the sale of household assets in 2020?	
H33	What is the total income (UGX) obtained from the sale of livestock(animals) in 2020?	
H35	What is the total income (UGX) obtained from the sale of poultry in 2020?	
	Other income earned from other sources in 2020	

FOOD SOURCES AND FOOD CONSUMPTION				
<p>COULD YOU PLEASE TELL ME HOW MANY DAYS IN THE PAST ONE WEEK (SEVEN DAYS) YOUR HOUSEHOLD HAS EATEN THE FOLLOWING FOODS AND WHAT THE MAIN SOURCE WAS (USE CODES AT THE BOTTOM OF THE TABLE, WRITE 0 FOR ITEMS NOT EATEN OVER THE LAST 7 DAYS).</p> <p>READ THE LIST OF FOODS AND DO NOT PROBE. ONLY RECORD THE CONSUMPTION OF SIGNIFICANT QUANTITIES OF FOOD BY THE HOUSEHOLD. WRITE '0' IF NOT CONSUMED IN THE LAST 7 DAYS. ASK LINE BY LINE FOR EACH ITEM BOTH QUESTIONS</p>				
	FOOD ITEM	A. # OF DAYS EATEN DURING LAST 7 DAYS	B. MAIN SOURCE (USE FOOD SOURCE CODES AT THE BOTTOM OF THE TABLE)	C. WAS FOOD ITEM EATEN IN PAST 24 HOURS 1=Yes 0=No
G.1	CEREALS, GRAINS AND MATOKE: RICE, BREAD / CAKE AND / OR DONUTS.	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.2	ROOTS AND TUBERS: POTATO, YAM, CASSAVA, SWEET POTATO, AND / OR OTHER	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.3	PULSES: BEANS, COWPEAS, LENTILS, SOY, PIGEON PEA	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.4	NUTS: GROUND NUTS, PEANUTS, SIM SIM, COCONUTS	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.5	ORANGE VEGETABLES (VEGETABLES RICH IN VITAMIN A): CUCUMBER, RADISHES, GREEN BEANS,	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.6	GREEN LEAFY VEGETABLES: SPINACH, BROCCOLI, AMARANTH AND / OR OTHER DARK GREEN	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.7	OTHER VEGETABLES: ONION, TOMATOES, CUCUMBER, RADISHES, GREEN BEANS,	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.8	ORANGE FRUITS (FRUITS RICH IN VITAMIN A): MANGO,	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.9	OTHER FRUITS (FRUITS RICH IN VITAMIN A): BANANA, APPLE, LEMON, TANGERINE	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.10	MEAT: GOAT, BEEF, CHICKEN, PORK (REPORT ONLY MEAT CONSUMED IN LARGE QUANTITIES AND NOT AS A CONDIMENT)	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.11	ORGAN MEAT: LIVER, KIDNEY, HEART AND / OR OTHER ORGAN MEATS AND BLOOD	<input type="text"/>	<input type="text"/>	<input type="text"/>

G.12	FISH / SHELLFISH: FISH, INCLUDING CANNED TUNA, AND/OR OTHER SEAFOOD (REPORT ONLY FISH CONSUMED IN LARGE QUANTITIES AND NOT AS A CONDIMENT)	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.13	EGGS	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.14	MILK AND OTHER DAIRY PRODUCTS: FRESH MILK / SOUR, YOGURT, CHEESE, OTHER DAIRY PRODUCTS (EXCLUDE MARGARINE / BUTTER OR SMALL AMOUNTS OF MILK FOR TEA / COFFEE)	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.15	OIL / FAT / BUTTER: VEGETABLE OIL, PALM OIL, SHEA BUTTER, MARGARINE, OTHER FATS / OIL	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.16	SUGAR, OR SWEET: SUGAR, HONEY, JAM, CAKES, CANDY, COOKIES, PASTRIES, CAKES AND OTHER SWEET (SUGARY DRINKS)	<input type="text"/>	<input type="text"/>	<input type="text"/>
G.17	CONDIMENTS / SPICES: TEA, COFFEE / COCOA, SALT, GARLIC, SPICES, YEAST / BAKING POWDER, LAMUN, TOMATO / SAUCE, MEAT OR FISH AS A CONDIMENT, CONDIMENTS INCLUDING SMALL AMOUNT OF MILK / TEA COFFEE.	<input type="text"/>	<input type="text"/>	<input type="text"/>
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. EXCHANGE LABOUR OR ITEMS FOR FOOD 8. BEG FOR FOOD 9. GIFT (FOOD) FROM FAMILY RELATIVES OR FRIENDS 10. FOOD AID FROM CIVIL SOCIETY, NGOS, GOVERNMENT, WFP ETC.		
	10. In the past 7 days, how many days did your household eat any [INSERT SPECIALIZED NUTRITIOUS FOODS AVAILABLE] (e.g. CSB, Super Cereals) (IF APPLICABLE) SPENUTF	<input type="text"/> Lower limit=0 Upper limit=7		
FS30	How was this food acquired?	Purchase (using cash grants and/or with their own cash)..... 01 Own production (crops, livestock,		<input type="text"/> <input type="text"/>

		fishing/hunting, gathering)..... 02 Traded goods/services, barter 03 Borrowed (loan/credit from traders) 04 Receive as gift (from family relatives or friend/neighbor 05 In-kind or voucher-based food assistance 06 Other 96 Don't know 98	
	FOODSOU		
	FOOD BASED/REDUCED COPSING STRATEGIES		
Note	Now I will ask you about the number of days, in the last 7 days, that your household may have done some of the following actions to cope with lack of food or money to buy food.		
FS24	In the past 7 days, did your household rely on less preferred and/or less expensive food due to lack of food or money to buy food? (Y/N) LESSEXP		For how many days in the past 7 days did your household rely on less preferred and/or less expensive food due to lack of food or money to buy food? Lower limit=0 Upper limit=7 LESSEXP
FS25	In the past 7 days, did your household borrow food or rely on help from a friend or relative due to lack of food or money to buy food? (Y/N)		For how many days in the past 7 days did your household borrow food or rely on help from a friend or relative due to lack of food or money to buy food? Lower limit=0 Upper limit=7 BRW
FS26	In the past 7 days, did your household reduce the number of meals eaten in a day due to lack of food or money to buy food? (Y/N)		For how many days in the past 7 days did your household reduce the number of meals eaten in a day due to lack of food or money to buy food? Lower limit=0 Upper limit=7 LESSMEAL
FS27	In the past 7 days, did your household limit portion sizes at mealtime due to lack of food or money to buy food? (Y/N)		For how many days in the past 7 days did your household limit portion sizes at mealtime due to lack of food or money to buy food? Lower limit=0 Upper limit=7 REDMEAL
FS28	In the past 7 days, did your household reduce consumption by adults so children could eat, due to lack of food or money to buy food? IN HOUSEHOLDS WIHTOUT CHILDREN UNDER 5 YEARS OF AGE, THE ANSWER SHOULD BE '0'.		For how many days in the past 7 days did your household reduce consumption by adults so children could eat, due to lack of food or money to buy food? IN HOUSEHOLDS WIHTOUT CHILDREN UNDER 5 YEARS OF AGE, THE ANSWER SHOULD BE '0'. Lower limit=0 Upper limit=7 REDADULT
	Have you/your children taken any type of alcohol to cope with the lack of food or money to buy food? (y/n)		

LIVELIHOOD COPING STRATEGIES				
FOOD EXPENDITURE				
	F.1 – 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)			F.2 – 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, UGX)	(CREDIT, UGX)	(LOCAL CURRENCY)
1.	CEREALS (MAIZE, RICE, SORGHUM, WHEAT,			
2.	TUBERS (SWEET			
3.	PULSES (BEANS, PEAS,			
4.	FRUITS & VEGETABLES			
5.	FISH/MEAT/EGGS/POULT			
6.	OIL, FAT, BUTTER			
7.	MILK, CHEESE, YOGURT			
8.	SUGAR/SALT			
9.	TEA/COFFEE			
10.	OTHER MEALS/SNACKS CONSUMED OUTSIDE THE HOME			
NON-FOOD EXPENDITURE				
F.3 – DID YOU PURCHASE THE FOLLOWING ITEMS DURING THE LAST 30 DAYS FOR DOMESTIC CONSUMPTION? IF NONE, WRITE 0 AND GO TO NEXT ITEM	F.3.1 – ESTIMATE EXPENDITURE DURING THE LAST 30 DAYS (REGISTER THE EXPENSES ACCORDING TO THE CURRENCY IN WHICH IT WAS DONE)	F.3.2 – IN THE PAST 6 MONTHS HOW MUCH MONEY HAVE YOU SPENT ON EACH OF THE FOLLOWING ITEMS OR SERVICE? <i>USE THE FOLLOWING TABLE, WRITE 0 IF NO EXPENDITURE.</i>		F.3.3– ESTIMATE EXPENDITURE DURING THE LAST SIX MONTHS
		(UGX)		(UGX)
1	RENT		10	MEDICAL EXPENSES, HEALTH CARE

2	SOAP & HH		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/LI		15	AGRICULTURAL INPUTS	
7	COMMUNICATIO		16	SAVINGS	
9	ALCOHOL/PALM WINE &		17	CONSTRUCTIONS/HOUSE REPAIRS	
F.4	DO YOU HAVE ANY DEBT OR CREDIT TO REPAY AT THE	<i>Yes</i> 1 <i>No</i> 2			
F.4a	DURING THE LAST THREE MONTHS DID YOU HAVE ACCESS TO FINANCIAL	<i>Yes</i> 1 <i>No</i> 2			
F.5	IF YES, APPROXIMATE THE AMOUNT OF CURRENT DEBT IN UGANDA SHILLINGSUGX			
F.6	DO YOU HAVE TO PAY INTEREST ON YOUR CURRENT LOAN? IF 'No', GO TO NEXT SECTION	<i>Yes</i> 1 <i>No</i> 2			
F.7	IF YES, HOW MUCH IS THE TOTAL INTEREST YOU OWE ON THE LOAN?UGX			
F.8	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. SPECIFY:	MAIN REASON			
F.9	WHO IS THE MAIN SOURCE OF CREDIT FOR ALL DEBTS AND LOANS? 1. RELATIVES 2. TRADERS/SHOP-KEEPER 3. BANK/MICROFINANCE 4. SACCO/VSLA 5. TELECOM COMPANY 6. MONEY LENDER 7. OTHER. SPECIFY:	Main source			
SHOCKS AND COPING					SC
H1. WHAT HAVE BEEN YOUR MAIN DIFFICULTIES OR SHOCKS IN THE PAST 30 DAYS		1ST DIFFICULTY Y __	2ND DIFFICULTY __	3RD DIFFICULTY __	

Do NOT LIST, LEAVE THE HOUSEHOLD ANSWER SPONTANEOUSLY. ONCE DONE, ASK THE HOUSEHOLD TO RANK THE 2 MOST IMPORTANT ONES				
<p><i>Codes for H1</i></p> <p>1=Irregular Rains 2=Floods / water logging 3=Landslides 4=Erosion 5=Unusually High Level of Crop Pests & Disease 6=Unusually High Level of Livestock Disease 7=Unusually High Costs of Agricultural Inputs 8=Unusually Low Prices for Agricultural Output 9=Reduction in the Earnings of Currently (Off-Farm) Employed Household Member(s)</p>	<p>10=Loss of Employment of Previously Employed Household Member(s) (Not Due to Illness or Accident) 11=Serious Illness or Accident of Income Earner(s) 12=Serious Illness or Accident of Other Household Member(s) 13=Death of Income Earner(s) 14=Death of Other Household Member(s) 15=Theft of Money/Valuables/Non-Agricultural Assets 16=Theft of Agricultural Assets/Output (Crop or Livestock) 17=Conflict/Violence /Raiding</p>	<p>18=Fire 19=Reduced water availability for animals 20=Reduced water availability for people 21=Reduction of grazing area/ unusually low quality of pasture 22=Unusually high level of livestock death 23=Unusually high prices of food 24=Unusually Low Prices for livestock 25=Reduced sale or export of livestock 26=Insecurity 27=Reduced/no access to credit 28=Alcoholism of a household member 29=Other (Specify)</p>		
<p>H2. HOW DID YOUR HOUSEHOLD COPE WITH THIS [SHOCK]? (RESTRICT TO THE MAIN COPING STRATEGY ONLY) (USE THE CODES BELOW)</p>				
<p><i>Codes for H2</i></p> <p>1= Unconditional help provided by relatives/friends 2= Unconditional help provided by local government 3= Changed dietary patterns involuntarily (Relied on less preferred food options, reduced the proportion or number of meals per day, skipped days without eating, etc...)</p>	<p>4= Changed cropping practices (crop choices or technology) 5= Household member(s) took on more non-farm (wage- or self-) employment 6= Household member(s) took on more farm wage employment 7= Household member(s) migrated 8 = Relied on savings 9= Obtained credit</p>	<p>10 = Sold durable household assets (agricultural or non-agricultural) 11= Sold land/building 12= Rented out land/building 13= Distress sales of animal stock 14= Sent children to live elsewhere 15= Reduced expenditures on health and education 96 = Other (specify)</p>		
<p>SECTION FS1: Food assistance and cooking fuel (if applicable)</p>				
Note	THIS QUESTIONNAIRE NEED TO BE ASKED TO THE MAIN CARETAKER WHO IS RESPONSIBLE FOR COOKING THE MEALS.			
FS1	Was consent given for conducting the interview?	Yes	1	
		No.....	2	<input type="text"/>

	ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW. FSCONST	Absent 3	IF ANSWER IS 2 or 3 STOP HERE
FS2	What is your household's assistance category? (IF APPLICABLE) HHASSIST	Category A 1 Category B 2 Category C 3 Category D 4 Other 6 Don't know 8	_ _
FS3	Does your household receive food assistance (general in-kind food distribution and/or cash grants and/or food vouchers) [INSERT LOCAL NAMES OF FOOD ASSISTANCE PROGRAMMES]? FOODASS	Yes 1 No 2 Don't know 8	_ _ IF ANSWER IS 1 OR 8 GO TO FS5
	If yes, which modality of food assistance	In-kind cash	
	If in-kind, How many days did the food from the general in-kind food distribution from the [INSERT] cycle of [INSERT LAST CYCLE MONTH] last? (IF APPLICABLE)		
	If cash, How many days did the cash food assistance from the last distribution from the [INSERT] cycle of [INSERT LAST CYCLE MONTH] last? (IF APPLICABLE)		
FS4	Why do you not have access to the food assistance programmes [INSERT LOCAL NAMES OF FOOD ASSISTANCE PROGRAMMES]? YNOFOODA	Ration card and/or cash grants and/or food voucher not given even if eligible 1 Not registered 2 Registered but determined not eligible 3 Other 6 Not eligible for GFA Don't know 8	_ _ GO TO FS10
FS5	How many days did the food from the general in-kind food distribution from the [INSERT] cycle of [INSERT LAST CYCLE MONTH] last? (IF APPLICABLE) Lower limit=1 Upper limit=98 GFDLAST	RECORD THE NUMBER OF DAYS IF KNOWN. RECORD 98 IF UNKNOWN.	_ _ _
FS6	Does your household receive cash grants to meet basic needs [INSERT LOCAL NAME FOR CASH GRANTS]? (IF APPLICABLE) CASH	Yes 1 No 2 Don't know 8	_ _ IF ANSWER IS 2 OR 8 GO TO FS8
FS7	How did you spend the cash grants you received in [INSERT LAST CYCLE MONTH OR DISTRIBUTION]? (IF APPLICABLE)	Food 01 Water 02 Hygiene items, clothes, shoes 03 Health costs (including	_ _ _

	<p>SELECT ALL THAT APPLY.</p> <p>CASHSPNT: FOOD / WATER / HYGIENE / HEALTH / HOUSE / FUELA / LIVELI / DEBTS / SAVING / EDUCA / OTHER / DKN</p>	<p>medicines).....04</p> <p>Rent, shelter repair, household items (e.g. mattress, blanket, jerrycan), utilities and bills (e.g. electricity, water bills, phone calling credit).....05</p> <p>Firewood/fuel for cooking or heating.....06</p> <p>Assets for a livelihood activity (e.g. seeds, tools, farming, fishing, petty trade, etc.).....07</p> <p>Debt repayment.....08</p> <p>Save some money or gave to other family members, relatives, friends09</p> <p>Education (e.g. school fees, uniform, books).....10</p> <p>Other96</p> <p>Don't know98</p>	
FS10	<p>Which of your household's basic needs can you not meet?</p> <p>DO NOT READ THE ANSWERS. SELECT ALL THAT APPLY.</p> <p>NEEDSNOT: FOODB / WATERB / HYGIENEB / HEALTHB / HOUSEB / FUELB / LIVELIB / DEBTSB / SAVINGB / EDUCAB / NEEDSMET / OTHERB / DKNB</p>	<p>Food01</p> <p>Water.....02</p> <p>Hygiene items, clothes, shoes 03</p> <p>Health costs (including medicines).....04</p> <p>Rent, shelter repair, household items (e.g. mattress, blanket, jerrycan), utilities and bills (e.g. electricity, water bills, phone calling credit).....05</p> <p>Firewood/fuel for cooking or heating.....06</p> <p>Assets for a livelihood activity (e.g. seeds, tools, farming, fishing, petty trade, etc.).....07</p> <p>Debt repayment.....08</p> <p>Save some money or support other family members, relatives, friends09</p> <p>Education (e.g. school fees, uniform, books).....10</p> <p>All basic needs are met11</p> <p>Other96</p> <p>Don't know98</p>	<p> </p>
Energy			
FS11	<p>What cooking fuel does your household usually use? (IF APPLICABLE)</p> <p>HHFUEL</p>	<p>Wood.....01</p> <p>Charcoal02</p> <p>Kerosene03</p> <p>Biogas04</p> <p>Liquid petroleum gas (LPG) ..05</p> <p>Ethanol06</p> <p>Briquettes07</p> <p>Other96</p> <p>Don't know98</p>	<p> </p>
FS12	<p>Does your household receive cooking fuel assistance? (IF APPLICABLE)</p>	<p>Yes1</p> <p>No.....2</p>	<p> </p>

	FUEL	Don't know 8	IF ANSWER IS 2 or 8 GO TO FS14
FS13	How many days did the fuel from the [INSERT] cycle of [INSERT LAST CYCLE MONTH] last? (IF APPLICABLE) Lower limit=1 Upper limit=98 FUELLAST	RECORD THE NUMBER OF DAYS IF KNOWN (RECORD 98 IF UNKNOWN)	____

MOSQUITO NET COVERAGE

1 questionnaire per household

THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSEHOLD.

No	QUESTION	ANSWER CODES	
SECTION TN1: Details on the Household			
TN2	What is the total number of household numbers? RECORD NUMBER. TNHHSIZE		____
TN3	How many people live in this household and slept here last night? RECORD NUMBER. TOTHH		____
TN4	How many children 0-59 months live in this household and slept here last night? RECORD NUMBER OR TYPE 0 IF THERE AREN'T ANY CHILDREN BELOW 5 YEARS. TOTCH		____
TN5	How many pregnant women live in this household and slept here last night? RECORD NUMBER OR TYPE 0 IF THERE AREN'T ANY PREGNANT WOMEN. TOTPW		____
TN6	Did you have your house sprayed with insecticide in an indoor residual spray campaign in the past 6/12 months? (IF APPLICABLE) EXPLAIN THAT THIS IS NOT THE CAN OF INSECTICIDE THAT CAN BE SPRAYED IN THE HOUSE. HHIRS	Yes..... 1 No 2 Don't know 8	____
TN7	Do you have mosquito bed nets in this household that can be used while sleeping? MOSNETS	Yes..... 1 No 2 Don't know 8	____ IF ANSWER IS 2 OR 8 STOP NOW

TN8	How many of these mosquito bed nets that can be used while sleeping does your household have? PROBE FOR ANY NETS CURRENTLY NOT IN USE THAT ARE BEING SAVED OR STORED (STILL IN THEIR PACKAGE). RECORD REPORTED NUMBER. Lower limit=1 Upper limit=10 NUMNETS	IN WHAT FORM OF VIOLENCE DID THIS TENSION MANIFEST?	_____ Nets
SECTION TN2: Observation of Bed Nets THIS SECTION IS TO BE COMPLETED FOR ALL BED NETS USED FOR SLEEPING REPORTED BY THE RESPONDENT.			
Note	THESE QUESTIONS ARE ASKED FOR EACH BED NET USED FOR SLEEPING REPORTED BY THE RESPONDENT.		
TN9	Can the bed net be observed? ASK RESPONDENT TO SHOW YOU THE NET IN THE HOUSEHOLD. NETSOBS	Yes..... 1 No 2	____ IF ANSWER IS 2 SKIP TO TN12
TN10	What is the brand of the net observed? LOOK AT THE TAG ON THE NET. IF THERE IS NONE OR IS UNREADABLE, SELECT 'UNIDENTIFIABLE'/'DON'T KNOW'. NETBRAND	DAWAPLUS 01 DURANET 02 INTERCEPTOR 03 LIFENET 04 MAGNET 05 MIRANET 06 OLYSET 07 PANDANET 08 PERMANET 09 ROYALSENTRY 10 SAFENET 11 VEERALIN 12 YALE 13 YORKOOL 14 Insecticide treated net (ITN) NAME #1 15 ITN NAME #2 16 ITN NAME #3 17 Other (please specify) 96 Unidentifiable/Don't know 98	____ IF ANSWER IS 96 GO TO TN11
TN11	If other, please specify the brand name of net BRANDOTH	_____	
	TOTLN		____
SECTION TN3: Survey of household members THIS SECTION IS TO BE COMPLETED FOR EACH HH MEMBER WHO LIVES HERE AND SLEPT HERE LAST NIGHT.			
Note	THESE QUESTIONS NEED TO BE COMPLETED FOR EACH HH MEMBER WHO LIVES IN THE HOUSEHOLD AND SLEPT HERE LAST NIGHT.		
TN12	ID of household member HHMID		
TN13	What is the sex of the household member?	Male m Female f	

	HHMSEX		
TN14	How old is the household member? HHMAGE	<5 years..... 1 ≥5 years..... 2	
TN15	Is the household member currently pregnant? HHMPREG	Yes 1 No 2 Don't know 8	
TN16	Did the household member sleep under a net last night? SLPNET	Yes 1 No..... 2 Don't know..... 8	_
TN17	Select the brand of the net under which the household member slept ASK THE RESPONDENT TO PHYSICALLY IDENTIFY WHICH OF THE OBSERVED NETS S/HE SLEPT UNDER. SLPBRAND	RESPONSES FROM TN10 SHOWN HERE. EXAMPLE: NETBRAND1-PERMANET NETBRAND2-PERMANET NETBRAND3-Unidentifiable/Don't know NETBRAND4- OLYSET	_ _
	The total number of children in the household declared at the beginning of the form (TN4) does not match the number of children you have entered in the group (TN14). Please review to ensure they match.		
	The total number of pregnant women in the household you declared at the beginning of the form (TN5) does not match the number of pregnant woman you have entered (TN15). Please review to ensure they match.		

	Summary		
	Total household members	Total <5	Total Pregnant
Slept under a net of any type	TN18 _ _ TOTSLPNT	TN20 _ _ TOTCHNT	TN22 _ _ TOTPWNT
Slept under an LLIN	TN19 _ _ TOTSLPLN	TN21 _ _ TOTCHLN	TN23 _ _ TOTPWLN

WASH

1 questionnaire per household

THIS QUESTIONNAIRE IS TO BE ADMINISTERED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSEHOLD.

No	QUESTION	ANSWER CODES
SECTION WS1: WASH interview questions		
Note	THESE QUESTIONS NEED TO BE ASKED TO THE HEAD OF THE HOUSEHOLD OR, IF THEY ARE ABSENT, ANOTHER ADULT MEMBER OF THE HOUSEHOLD.	

WS3	<p>What is the principal source of drinking water for members of your household?</p> <p>SELECT ONE BUT DO NOT PROMPT WITH RESPONSES. CONSIDER DRINKING WATER ONLY.</p> <p>SOURCE</p>	<p>Public tap/standpipe.....01 Handpumps/boreholes02 Water seller/kiosks.....03 Piped connection to house (or neighbor's house).....04 Protected spring05 Bottled water, water sachets 06 Tanker trucks07 Unprotected hand-dug well. 08 Surface water (lake, pond, dam, river).....09 Unprotected spring.....10 Rainwater collection11 Other96 Don't know98</p>	<p>____ </p>
WS4	<p>Where do you and your household members (excluding children under 5) usually go to defecate?</p> <p>SELECT ONE BUT DO NOT PROMPT WITH RESPONSES.</p> <p>TOILET</p>	<p>Household latrine.....1 Communal latrine2 Open defecation3 Plastic bag4 Bucket toilet.....5 Other6 Don't know8</p>	<p>____ </p>
SECTION WS2: WASH observation questions			
Note	<p>EXPLAIN TO THE RESPONDENT THAT THESE QUESTIONS RELATE TO WATER USED FOR DOMESTIC PURPOSES. THIS INCLUDES: DRINKING, COOKING/FOOD PREPARATION, BATHING, AND PERSONAL HYGIENE PLUS LAUNDRY AND OTHER HOUSEHOLD CLEANING. EXCLUDED FROM THIS ARE ANIMAL USE, BRICKMAKING OR OTHER INDUSTRY, OR AGRICULTURE/GARDENING (NON-DOMESTIC).</p>		
WS5	<p>Please show me the soap you have in the household.</p> <p>SOAP</p>	<p>Presented within one minute. 1 Not presented within one minute/no soap2</p>	<p>____ </p>
WS6	<p>How many containers do you have to <u>collect</u> or <u>store</u> water for domestic purposes for your house? Please show me all of them one by one RECORD ONE BY ONE. CHECK FOR ALL OF THE CONTAINERS. DO NOT INCLUDE BROKEN, LEAKING, OR NON-FUNCTIONAL CONTAINERS. Lower limit=0 Upper limit=25 CONTAINER</p>		<p>____ </p>
WS7	<p>What is the type of container?</p> <p>TYPE</p>	<p>Jerry can.....01 Bucket02 Basin03 Bottle04 Saucepan05 Drums06 Other96</p>	<p>____ </p>
WS8	<p>What is the volume of container? ENTER THE AMOUNT OF LITRES THIS CONTAINER CAN HOLD TO THE NEAREST 0.5L Lower limit=0.5L Upper limit=300.0L LITER</p>		<p>____ ____ litres</p>

WS9	Is the container covered? PROTECT	Yes 1 No 2 Don't know 8	<input type="text"/>
WS10	Number of journeys made with container for the collection of water for domestic purposes yesterday? This includes all water collected morning, afternoon and evening. PLEASE ENTER '0' IF HOUSEHOLD DID NOT FILL IT YESTERDAY. Lower limit=0 Upper limit=10 NUMTRIPS		<input type="text"/> <input type="text"/> journeys
Interviewer: I confirm that questionnaire is complete: yes/no			

CHILDREN 0-59 ANTHROPOMETRY, HEALTH, IYCF & ANAEMIA
1 questionnaire per child 0-59 months

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

No	QUESTION	ANSWER CODES	
SECTION CHILD1: Details of the Child 0-59 months or 6-59 months THIS SECTION IS TO BE ADMINISTERED TO ALL CHILDREN IN THE SELECTED HOUSEHOLDS BETWEEN 0-59 MONTHS OR 6-59 MONTHS: DEPENDING ON WHICH SENS MODULE IS INCLUDED.			
Note	THESE QUESTIONS NEED TO BE ASKED TO THE MOTHER OR THE MAIN CAREGIVER.		
CH1	ID Number ID		<input type="text"/> <input type="text"/>
CH2	Was consent given for conducting the interview and the measurements? ENSURE THAT YOU HAVE INTRODUCED THE TEAM AND INFORMED THEM ABOUT THE INTERVIEW AND THE MEASUREMENTS. CHCONST	Yes 1 No 2	<input type="text"/> IF ANSWER IS 2 STOP HERE
CH3	Name of the child ONLY WRITE FIRST NAME. CHNAME	<input type="text"/>	
CH4	Sex of [NAME OF CHILD]? SEX	Male m Female f	<input type="text"/>
CH5	Do you have an official age documentation for [NAME OF CHILD]? XDOBK	Yes 1 No 2	<input type="text"/> IF ANSWER IS 2 GO TO CH7
CH6	[NAME OF CHILD]'s date of birth THE EXACT BIRTH DATE SHOULD ONLY BE TAKEN FROM AN AGE DOCUMENTATION SHOWING DAY, MONTH AND YEAR OF BIRTH. FOR PAPER-BASED SURVEYS: RECORD FROM AGE DOCUMENTATION. LEAVE BLANK IF NO VALID AGE DOCUMENTATION. BIRTHDAT	Day/Month/Year..... <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/>	

CH 7	Age of [NAME OF CHILD] in months Lower limit=0 months (or 6 months if the IYCF module is not included) Upper limit=59.99 months MONTHS	SINCE NO AGE DOCUMENTATION IS AVAILABLE, ESTIMATE AGE USING A LOCAL EVENTS CALENDAR. FOR PAPER-BASED SURVEYS: IF AGE DOCUMENTATION IS AVAILABLE, RECORD THE AGE IN MONTHS FROM THE DATE OF BIRTH.	____ ____ months
Note	Verify that the child is \${MONTHS} months old. Remember, if they are older than 59 months; they are not eligible for inclusion and you should stop here.		
SECTION CHILD3: Nutrition, Health and Anaemia Status of the Child 6-59 months THIS SECTION IS TO BE ADMINISTERED TO ALL CHILDREN BETWEEN 6 AND 59 MONTHS OF AGE. EXCLUDE HB MEASUREMENTS IF SENS MODULE 3 (ANAEMIA MODULE) IS NOT INCLUDED. IN MDC SURVEYS, THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (<6 MONTHS).			
CH 9	Is [NAME OF CHILD] currently present in the household? CHPRES	Yes 1 No..... 2	____ IF ANSWER IS 2 GO TO CH16
CH 10	[NAME OF CHILD]'s weight in kilograms (± 0.1 kg) DON'T FORGET THE DECIMAL. Lower limit=3.0kg Upper limit=31.0kg WEIGHT		____ ____ . ____ kg
CH 11	Was the [NAME OF CHILD] dressed with clothes for the weight measurement? (OPTIONAL) CLOTHES	Yes y No..... n	____
CH 12	[NAME OF CHILD]'s length/height in cm (± 0.1 cm) DON'T FORGET THE DECIMAL. Lower limit=54.0cm Upper limit=124.0cm HEIGHT		____ ____ ____ . ____ cm
CH 13	Was [NAME OF CHILD] measured lying down or standing up? MEASURE	Child lying down..... 1 Child standing up h	____
CH 14	Clinical examination: Does the [NAME OF CHILD] present bilateral pitting oedema? EDEMA	Yes y No..... n	____
CH 15	[NAME OF CHILD]'s middle upper arm circumference (MUAC) in mm (± 1 mm) or cm (± 0.1 cm) MEASURE LEFT ARM. APPLICABLE ONLY IF MUAC MEASURED IN CM: DON'T FORGET THE DECIMAL. Lower limit=70mm Upper limit=235mm MUAC		____ ____ ____ mm OR ____ ____ . ____ cm
CH 16	Is [NAME OF CHILD] currently being treated in [NAME OF NUTRITION PROGRAMMES] for malnutrition?	Yes TSFP 1 Yes TFP (OTP/SC) 2 No..... 3	____

	SHOW COMMODITY GIVEN IN TSFP AND TFP (OTP/SC). ENROL	Don't know 8	
CH 17	Is [NAME OF CHILD] currently enrolled in the MCHN? (IF APPLICABLE) SHOW COMMODITY/PACKAGING GIVEN IN BSFP. MCHN	Yes 1 No..... 2 Don't know 8	<input type="text"/>
CH 18	Has [NAME OF CHILD] been vaccinated against measles? CHECK VACCINATION CARD (ONLY FOR CHILDREN OLDER THAN 9 MONTHS). MEASLES	Yes, card..... 1 Yes, recall..... 2 No or don't know 3	<input type="text"/>
CH 19	Has [NAME OF CHILD] received a vitamin A capsule in the past six months? CHECK VACCINATION/HEALTH CARD AND SHOW CAPSULE. VITA	Yes, card..... 1 Yes, recall..... 2 No or don't know 3	<input type="text"/>
CH 20	Was [NAME OF CHILD] given any drug for intestinal worms in the last six months? SHOW TABLET. DEWORM	Yes 1 No..... 2 Don't know 8	<input type="text"/>
CH 21	Has [NAME OF CHILD] had diarrhoea in the past 2 weeks? CASE DEFINITION: THREE OR MORE LOOSE OR LIQUID STOOLS DURING 24 HOURS. DIAR	Yes 1 No..... 2 Don't know 8	<input type="text"/> IF ANSWER IS 2 OR 8 GO TO CH23
CH 22	Did you give [INSERT LOCAL NAME FOR WHO ORS] to [NAME OF CHILD] when s/he had diarrhoea? (OPTIONAL) SHOW ORS SACHET. DIARORS	Yes 1 No..... 2 Don't know 8	<input type="text"/>
CH 23	Did you give zinc tablets or syrup to [NAME OF CHILD] when s/he had diarrhea? SHOW ZINC TABLET OR SYRUP. DIARZINC	Yes 1 No..... 2 Don't know 8	<input type="text"/>
CH 24	Units of measurement of your HemoCue device (g/dL or g/L) HBUNIT	g/dL gdl g/L gl	<input type="text"/>
CH 25	[NAME OF CHILD]'s haemoglobin (Hb) in g/dL (± 0.1 g/dL) or in g/L (± 1 g/L) APPLICABLE ONLY IF HB MEASURED IN G/DL: DON'T FORGET THE DECIMAL. Lower limit=2.0g/dL Upper limit=22.0g/dL CHHB		<input type="text"/> . <input type="text"/> g/dL OR <input type="text"/> g/L
CH 26	Automatic referral for child with signs of acute malnutrition who is not already enrolled in a nutrition programme: <ul style="list-style-type: none"> Child needs to be referred for moderate acute malnutrition (if MUAC<125mm and MUAC\geq115 mm and/or WHZ<-2 and WHZ\geq-3 and if ENROL equals to 3 or 8). Child needs to be referred for severe acute malnutrition (if MUAC<115mm and/or WHZ<-3 and/or bilateral pitting oedema is yes and if ENROL equals to 3 or 8). FILL OUT A REFERRAL FORM: ONE SLIP IS FOR THE MOTHER/CAREGIVER AND THE OTHER IS FOR THE HEALTH FACILITY.		

	REFMAM/REFSAM		
CH 27	Automatic referral for child who has severe anaemia: <ul style="list-style-type: none"> Child needs to be referred for severe anaemia (if Hb<7.0g/dL). FILL OUT A REFERRAL FORM: ONE SLIP IS FOR THE MOTHER/CAREGIVER AND THE OTHER IS FOR THE HEALTH FACILITY. REFANEM		
SECTION IYCF1: Breastfeeding Status of the Child 0-23 months (part 1) THIS SECTION IS TO BE ADMINISTERED TO THE MOTHER OR THE MAIN CAREGIVER WHO IS RESPONSIBLE FOR FEEDING THE CHILD AND THE CHILD SHOULD BE BETWEEN 0 AND 23 MONTHS OF AGE. EXCLUDE IF SENS MODULE 3 (IYCF MODULE) IS NOT INCLUDED. IN MDC SURVEYS, THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (≥ 24 MONTHS).			
Note	THESE QUESTIONS NEED TO BE ASKED TO THE MOTHER OR THE MAIN CAREGIVER WHO IS RESPONSIBLE FOR FEEDING THE CHILD.		
IF1	Has [NAME OF CHILD] ever been breastfed?	Yes 1 No..... 2 Don't know 8	<input type="checkbox"/> IF ANSWER IS 2 or 8 GO TO IF4
	EVERBF		
IF2	How long after birth did you first put [NAME OF CHILD] to the breast?	Less than one hour 1 Between 1 and 23 hours 2 More than 24 hours 3 Don't know 8	<input type="checkbox"/>
	INITBF		
IF3	Was [NAME OF CHILD] breastfed yesterday during the day or at night?	Yes 1 No..... 2 Don't know 8	<input type="checkbox"/>
	YESTBF		

SECTION IYCF2: Breastfeeding Status of the Child 0-23 months (part 2) THIS SECTION IS TO BE ADMINISTERED TO THE MOTHER OR THE MAIN CAREGIVER WHO IS RESPONSIBLE FOR FEEDING THE CHILD AND THE CHILD SHOULD BE BETWEEN 0 AND 23 MONTHS OF AGE. EXCLUDE IF SENS MODULE 3 (IYCF MODULE) IS NOT INCLUDED. THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (≥ 24 MONTHS). Now I would like to ask you about liquids that [NAME OF CHILD] may have had yesterday during the day and at night. I am interested in whether your child had the item even if it was combined with other foods. Yesterday, during the day or at night, did [NAME] receive any of the following? ASK ABOUT EVERY LIQUID. EVERY QUESTION MUST HAVE AN ANSWER. IF ITEM WAS GIVEN, SELECT 'YES'. IF ITEM WAS NOT GIVEN, SELECT 'NO'. IF CAREGIVER DOES NOT KNOW, SELECT 'DON'T KNOW'.				
		Yes	No	DK
[A] PLAIN WATER?	PLAIN WATER	1	2	8
[B] FRESH FRUIT JUICE OR JUICE ONCENTRATE?	JUICE OR JUICE DRINKS	1	2	8
[C] CLEAR BROTH?	SOUP	1	2	8
[D] MILK SUCH AS TINNED, POWDERED, OR FRESH ANIMAL MILK?	MILK	1	2	8
<i>IF YES: HOW MANY TIMES DID (NAME) DRINK MILK? IF 7 OR MORE TIMES, RECORD '7'. If unknown, record '8'.</i>		NUMBER OF TIMES DRANK MILK		—
[E] INFANT FORMULA LIKE LACTOGEN?	INFANT FORMULA	1	2	8
<i>IF YES: HOW MANY TIMES DID (NAME) DRINK INFANT FORMULA? If 7 OR MORE TIMES, RECORD '7'. If unknown, record '8'.</i>		NUMBER OF TIMES DRANK INFANT FORMULA		—
[F] ANY OTHER LIQUIDS LIKE PLANE TEA, COFFEE?	OTHER LIQUIDS	1	2	8

SECTION IYCF3: Bottle Feeding for the Child 0-23 months

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

Did [NAME OF CHILD] drink anything from a bottle with a nipple yesterday during the day or at night?	Yes.....1 No..... 2 DON'T KNOW..... 8	<input type="text"/>
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SECTION IYCF4: Iron -fortified or Iron-rich Foods for the Child 6-23 months

THIS SECTION IS AUTOMATICALLY SKIPPED FOR THE CHILDREN NOT ELIGIBLE BASED ON AGE (<6 MONTHS AND ≥ 24 MONTHS).

Now I would like to ask you about some particular foods [NAME OF CHILD] may eat. I am interested in whether your child had the item even if it was combined with other foods. Yesterday, during the day or at night, did [NAME] consume any of the following?

ASK ABOUT EVERY ITEM. EVERY QUESTION MUST HAVE AN ANSWER.

IF ITEM WAS GIVEN, SELECT 'YES'. IF ITEM WAS NOT GIVEN, SELECT 'NO'. IF CAREGIVER DOES NOT KNOW, SELECT 'DON'T KNOW'.

DID (NAME) EAT (NAME OF FOOD) YESTERDAY DURING THE DAY OR THE NIGHT:		Yes	No	DK
[A] YOGURT?	YOGURT	1	2	8
<i>IF YES: HOW MANY TIMES DID (NAME) DRINK OR EAT YOGURT? IF 7 OR MORE TIMES, RECORD '7'. If unknown, record '8'.</i>	NUMBER OF TIMES DRANK/ATE YOGURT	—		
[B] ANY COMMERCIALLY FORTIFIED BABY FOOD, E.G., CERELAC?	CERELAC	1	2	8
[C] RICE, POSHO, KAARO, PORRIDGE, BREAD, CHAPATI, PASTA, MACARONI, NOODLES OR OTHER FOODS (MANDAZI, DOUGHNUTS, PANCAKES, WEETABIX, CORNFLAKES) MADE FROM GRAINS (MILLET, SORGHUM, MAIZE, RICE, WHEAT)?	FOODS MADE FROM GRAINS?	1	2	8
[D] PUMPKIN, CARROTS, SQUASH OR SWEET POTATOES THAT ARE YELLOW OR ORANGE INSIDE?	PUMPKIN, CARROTS, SQUASH, ETC.	1	2	8
[E] CASSAVA, YAMS (JUUNI, NDAGGU, BALUGGU), WHITE SWEET POTATOES, IRISH POTATOES, MANIOC OR ANY OTHER ROOTS OR TUBERS?	WHITE POTATOES, WHITE YAMS, MANIOC, CASSAVA, ETC.	1	2	8
[F] BANANA, (MATOOKE, NDIZI, GONJA)?				
[G] ANY DARK GREEN, LEAFY VEGETABLES (DODO, NKATI, SPINACH, AMARANTH, BUGGA, SUNSA, JOBYO, MARAKWANG, SUKUMA, WIKI, NSUGGA, GGOBE, TIMPA)?	DARK GREEN, LEAFY VEGETABLES	1	2	8
[H] RIPE MANGOES, PAWPAWS?	RIPE MANGOES	1	2	8
[I] ANY OTHER FRUITS OR VEGETABLES (PASSION FRUIT, JACK FRUIT, PINEAPPLE, ORANGES, SUGARCANE)?	OTHER FRUITS OR VEGETABLES	1	2	8
[J] LIVER, KIDNEY, HEART OR OTHER ORGAN MEATS?	LIVER, KIDNEY, HEART OR OTHER ORGAN MEATS	1	2	8
[K] ANY BEEF, PORK, LAMB OR GOAT (KEBABS, SAUSAGES, CHAPS)?	MEAT, SUCH AS BEEF, PORK, LAMB, GOAT, ETC.	1	2	8
[K] ANY CHICKEN, DUCK, TURKEY, PIGEON OR OTHER POULTRY?				
[K] EGGS (FROM CHICKENS, DUCKS OR OTHER POULTRY)?	EGGS	1	2	8
[L] FRESH OR DRIED FISH OR SHELLFISH (MUKENE, KENJE)	FRESH OR DRIED FISH	1	2	8
[M] ANY FOODS MADE FROM BEANS, PEAS, LENTILS, OR NUTS?	FOODS MADE FROM BEANS, PEAS, ETC.	1	2	8
[N] FRESH AND DRIED CHEESE, PANEER OR OTHER FOOD MADE FROM MILK?	CHEESE OR OTHER FOOD MADE FROM MILK	1	2	8
[O] ANY SUGARY FOODS SUCH AS CHOCOLATES, SWEETS, CANDIES, PASTRIES, CAKES OR BISCUITS?	CHEESE OR OTHER FOOD MADE FROM MILK	1	2	8
[P] ANY COOKING OIL, MARGARINE, BUTTER OR OTHER OILS/FATS?	CHEESE OR OTHER FOOD MADE FROM MILK	1	2	8
[Q] ANY OTHER SOLID, SEMI-SOLID, OR SOFT FOOD THAT I HAVE NOT MENTIONED?	OTHER SOLID, SEMI-SOLID, OR SOFT FOOD	1	2	8

WM8	How many weeks or months pregnant were you when you first received ANC for this pregnancy? (ask for ANC card) Record the answer as stated by respondent. ANCVST	Weeks..... 1 Months..... 2 Don't know 98	
WM9	How many times did you receive antenatal care during this pregnancy? ANCNUMB	Number of times Don't know..... 98	_ _
WM10	Are you currently breastfeeding? LACTAT	Yes1 No2 Don't know8	_ _ IF ANSWER IS 2 OR 8 GO TO WM13
WM11	Is the child you are breastfeeding younger than 6 months old? LACTATU6	Yes1 No2 Don't know8	_ _
	Did you attend ANC while pregnant? (for breastfeeding mothers)	Yes1 No2	_ _
	How many times did you attend?	Number of times Don't know.....98	_ _
WM12	Are you currently enrolled in the MCHN? SHOW COMMODITY/PACKAGING GIVEN IN MCHN. (pregnant women, lactating women with children below 6 months) WMMCHN	Yes1 No2 Don't know8	_ _
WM13	[NAME OF WOMAN]'s MUAC in mm (±1mm) or cm (±0.1cm) (PLWs) MEASURE LEFT ARM. APPLICABLE ONLY IF MUAC MEASURED IN CM: DON'T FORGET THE DECIMAL. Lower limit=160 mm Upper limit=500 mm WMMUAC		_ _ _ mm OR _ _ _ . _ _ cm
WM14	Units of measurement of your HemoCue device (g/dL or g/L) (IF APPLICABLE) WMHBUNIT	g/dL.....gdl g/L.....gl	_ _
WM15	[NAME OF WOMAN]'s haemoglobin in g/dL (±0.1 g/dL) or in g/L (±1g/L) APPLICABLE ONLY IF HB MEASURED IN G/DL: DON'T FORGET THE DECIMAL. Lower limit=2.0g/gL Upper limit=22.0g/dL WMHB		_ _ _ . _ _ g/dL OR _ _ _ _ g/L
WM16	Have you ever used any family planning method? FP	Yes..... 1 No..... 2	_ _ IF ANSWER IS 1 GO TO WM17 IF ANSWER IS 2 GO TO WM19
WM17	If Yes, which method do you prefer? FPMETH	Depo Provera.....1 Implant..... 2 COCs.....3 POPs..... 4 IUD.....5 Condoms.....6	_ _

		Other (specify)96		
WM18	Why do you prefer this method? FPPREF	Less side effects.....1 Easy to use.....2 Takes longer in the body.....3 It is readily available.....4 Not easy to identify if using.. 5 Other specify.....96	_ _	
WM19	If no, why haven't you used family? FPNOT	Don't know about FP.....1 My culture doesn't permit to use FP....2 Not available at the facility.....3 Side effect of FP.....4 Still want to have children.....5 Partner is against it.....6 Don't know where to access it...7 Other (specify).....96	_ _	
WM20	Automatic referral for woman with signs of acute malnutrition: <ul style="list-style-type: none"> Woman needs to be referred for acute malnutrition (if MUAC< [INSERT VALUE] mm) (TO BE INCLUDED ONLY IF MUAC IS MEASURED). FILL OUT A REFERRAL FORM: ONE SLIP IS FOR THE WOMAN AND THE OTHER IS FOR THE HEALTH FACILITY. WMREFMAL			
WM21	Automatic referral for woman who has severe anaemia: <ul style="list-style-type: none"> Woman needs to be referred for severe anaemia (if Hb<8.0g/dL). FILL OUT A REFERRAL FORM: ONE SLIP IS FOR THE WOMAN AND THE OTHER IS FOR THE HEALTH FACILITY. WMREFAN			
Maternal feeding				
BD8. NOW I WOULD LIKE TO ASK YOU ABOUT (OTHER) FOODS THAT YOU ATE OR DRANK YESTERDAY DURING THE DAY OR THE NIGHT. AGAIN, I AM INTERESTED TO KNOW WHETHER (NAME) HAD THE ITEM EVEN IF COMBINED WITH OTHER FOODS. Please include foods consumed outside of your home.				
DID YOU EAT OR DRINK YESTERDAY DURING THE DAY OR THE NIGHT:		Yes	No	DK
[A] RICE, POSHO, KAARO, PORRIDGE, BREAD, CHAPATI, PASTA, MACARONI, NOODLES OR OTHER FOODS (MANDAZI, DOUGHNUTS, PANCAKES, WEETABIX, CORNFLAKES) MADE FROM GRAINS (MILLET, SORGHUM, MAIZE, RICE, WHEAT)?		1	2	8
[B] PUMPKIN, CARROTS, SQUASH OR SWEET POTATOES THAT ARE YELLOW OR ORANGE INSIDE?		1	2	8
[C] CASSAVA, YAMS (JUUNI, NDAGGU, BALUGGU), WHITE SWEET POTATOES, IRISH POTATOES, MANIOC OR ANY OTHER ROOTS OR TUBERS?		1	2	8
[C] BANANA, (MATOOKE, NDIZI, GONJA)?				
[D] ANY DARK GREEN, LEAFY VEGETABLES (DODO, NKATI, SPINACH, AMARANTH, BUGGA, SUNSA, JOBYO, MARAKWANG, SUKUMA, WIKI, NSUGGA, GGOBE, TIMPA)?		1	2	8
[E] ANY OTHER VEGETABLES?		1	2	8
[F] RIPE MANGOES OR RIPE PAWPAWS?		1	2	8
[G] ANY OTHER FRUITS SUCH AS ?		1	2	8
[H] LIVER, KIDNEY, HEART OR OTHER ORGAN MEATS?		1	2	8
[I] ANY BEEF, PORK, LAMB OR GOAT (KEBABS, SAUSAGES, CHAPS)?		1	2	8
[I] ANY CHICKEN, DUCK, TURKEY, PIGEON OR OTHER POULTRY?				

[J] EGGS (FROM CHICKENS, DUCKS OR OTHER POULTRY?	EGGS	1	2	8
[K] FRESH OR DRIED FISH OR SHELLFISH (MUKENE, KENJE)	FRESH OR DRIED FISH	1	2	8
[L] ANY FOODS MADE FROM BEANS, PEAS, LENTILS, OR NUTS?	FOODS MADE FROM BEANS, PEAS, ETC.	1	2	8
[M] ANY NUTS OR SEEDS, SUCH AS ANY TREE NUT, GROUNDNUT, PEANUT, OR CERTAIN SEEDS OR NUT OR SEED "BUTTERS" OR PASTES?	ANY NUTS OR SEEDS	1	2	8
[N] ANY MILK OR MILK PRODUCTS, SUCH AS MILK, CHEESE, YOGURT, OR OTHER MILK PRODUCTS, BUT NOT INCLUDING BUTTER, ICE CREAM, CREAM, OR SOUR CREAM?	MILK OR MILK PRODUCTS	1	2	8
[O] ANY SUGARY FOODS SUCH AS CHOCOLATES, SWEETS, CANDIES, PASTRIES, CAKES OR BISCUITS, ICE CREAMS?	SUGARY FOODS	1	2	8
[P] CHIPS, CRISPS, PUFFS, FRENCH FRIES, FRIED DOUGH?	CHIPS, CRISPS	1	2	8
[Q] ANY SUGARY DRINKS SUCH AS COLA, PEPSI, SPRITE?	SUGARY DRINKS	1	2	8
[Q] ANY OTHER BEVERAGE AND FOOD?	OTHER BEVERAGE OR FOOD	1	2	8
Was consent given for taking the GPS coordinates of the household? GPSCONST				
Interviewer: I confirm that questionnaire is complete: yes/no				
Supervisor: I confirm that questionnaire is complete.: yes/no MESSAGE TO INTERVIEWER: DO NOT ANSWER THIS QUESTION.				

